DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

The Chair Factory Site – Village of Haverstraw
January 8, 2024

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1. EXECUTIVE SUMMARY

1.1. DESCRIPTION OF THE PROPOSED ACTION

This Draft Environmental Impact Statement (DEIS) has been prepared pursuant to the standards and requirements of the New York State Environmental Quality Review Act (SEQRA) and its implementing regulations contained in part 617, Title 6 of the New York's Code of Rules and Regulations (6 NYCCRR 617).

The Proposed Action includes the redevelopment of the Chair Factory Site (the Project Site) and the establishment and "landing" of a new zoning overlay district, the Planned Development District. The redevelopment of the site will consist of a mix of residential, hotel, commercial, public, and open space uses as well as related infrastructure and public amenities. The zoning overlay is based upon recommendations in the Village of Haverstraw's 2021 Comprehensive Plan and includes form-based zoning regulations that foster a predictable built environment and high-quality public realm by using physical form, rather than separation of uses. The zoning overlay is proposed to be applied to defined Development Districts (the Chair Factory Site, or Subject Site, is the first and only defined Development District described in the Zoning Overlay).

1.2. SITE DESCRIPTION

The Project Site is located on the Haverstraw waterfront, adjacent to the Hudson River and having frontage on Allison Avenue, Liberty Street and Broad Street. The Project Site is approximately 13.4 acres (including submerged land) A portion of the Site includes four residential properties. The majority of the property is heavily disturbed, overgrown by non-native species, and contains large amounts of fill materials and debris (see **Appendix B, Site Plans**).

1.3. PROJECT SITE LAYOUT

The Project Site immediately adjoins the Hudson River to the east, with Village parkland adjacent to the Site to the west and south, and a residential neighborhood with a mix of single-, two-, three- and multi-family residences to the west. The site is the location of the former Empire Chair Factory, which was. The Project Site involves a total of 12 parcels. Eight of the parcels are currently owned by the Village, and the Project Sponsor is in the process of securing ownership of four residential properties fronting on Allison Avenue and Broad Street.

The Project Site is located within two Zoning Districts: the eastern portion of the Site, located east of Allison Avenue, is in the Waterfront Development District (WD), and the western portion of the Site, fronting on Broad Street, is in the Third Residence District (R-3)..

The Project Sponsor is proposing (i) 450 multi-family residential units, with approximately 43 percent of said units qualifying as affordable units (with 30 percent of these at 30 to 80 percent AMI and 13 percent at 80 to 110 percent AMI) as determined by New York State Homes and Community Renewal, and in compliance with the Village's affordability requirements, (ii) 13,000 square feet of community and commercial space, (iii) 589 parking spaces in a mix of structured and surface parking, and (iv) an 69,000 square feet hotel . In addition, the Preferred Plan includes infrastructure and public amenities, including 4.2 acres of parkland with a waterfront multi-use trail, dog park, and amphitheater.

1.4. PROJECT PURPOSE, NEEDS, AND BENEFITS

The Project Site was identified in the Comprehensive Plan, adopted in July 2021, as a strategic site for redevelopment. The goal of redevelopment was to improve a long-blighted site with pedestrian-friendly, mixed-use development with public and private amenities that would serve as an anchor for the Village's Downtown by attracting economic activity to the area year-round.

As noted in the Comprehensive Plan, several desired public improvements were highlighted to be associated with redevelopment of the Project Site including: extension of Henry Hudson Quadricentennial Park trail to Emeline Park, public assembly space, and affordable housing. The proposed Project looks to achieve many of these outlined goals, while ensuring that the development complements the uses and scale of the Village and Downtown Haverstraw. The proposed waterfront improvements will serve as a public assembly space. Additionally, with thirty to forty percent of the units being affordable, the Project looks to fill a gap in the housing market for the Village. The Comprehensive Plan also identified multi-family, mixed, and hotel uses as preferred uses for the Project Site, all of which are proposed as a part of the Project.

1.5. REQUIRED APPROVALS AND PERMITS

A number of permits and approvals are required over the course of the Proposed Action from the Village of Haverstraw, Rockland County, New York State and federal agencies. These are outlined below:

Table 1.1: Permits and Approvals

AGENCY	APPROVAL/REVIEW
Village of Haverstraw Village Board	• **Zoning Text Amendment** • **Site Plan**
Village of Haverstraw Building Department	• **Street Opening Permit**
Village of Haverstraw Architectural Review Board	• **Review and Approval of Architectural** • **Plans**
Village of Haverstraw Planning Board	• **Subdivision** • **Review and Recommendation on Site Plan**
Rockland County Health Department	• **Water and Sanitary Sewer service**
New York State Department of Environmental Conservation	• **Stormwater Pollution Prevention Plan (SWPPP)** • **Tidal Wetlands** • **Excavation and Fill in Navigable Waters** • **401 Water Quality Certification** • **SPDES**
Haverstraw Waterfront Advisory Commission	• **Waterfront Revitalization Program consistency review**
Army Corps of Engineers	• **Section 404 Clean Water Act;** • **Section 10 Rivers and Harbors Act**
Haverstraw Flood Permit Administrator	• **Construction within a Flood zone**
Rockland County Drainage Agency	• **Subdivision**
Joint Regional Sewerage Board	• **Sewer Permit**
New York State Department of State	• **Waterfront Revitalization Program Consistency**
New York Division of Housing and Community Renewal	• **Possible Funding**
Empire State Development	• **Possible Funding**
Federal Emergency Management Agency	• **Possible Map Amendment**
New York State Office of Parks, Recreation and Historic Preservation	• **Section 106 Review**
New York State Legislature	• **Alienation of Parkland**

1.6. INVOLVED AND INTERESTED AGENCIES

INVOLVED AGENCIES

Haverstraw Village Planning Board - Subdivision
40 New Main Street
Haverstraw, New York 10977

Haverstraw Village Architectural Review Board – Architectural Review
40 New Main Street
Haverstraw, New York 10977

Village of Haverstraw Building Department – Street Opening Permit
40 New Main Street
Haverstraw, New York 10927

Rockland County Health Department – Sewer and Water Main Extension
Robert L. Yeager Health Center
50 Sanatorium Rd, Bldg D
Pomona, NY 10970

New York State Department of Environmental Conservation – SPDES, Wetlands, SWPPP, 401 Water Quality Cert
Division of Environmental Permits, Region 3
c/o: Daniel Whitehead, Regional Permit Administrator
21 South Putt Corners Rd. - New Paltz, NY 12561-1620

Haverstraw Waterfront Advisory Committee – LWRP Consistency
40 New Main Street
Haverstraw, New York 10977

Haverstraw Flood Permit Administrator – Floodplain Development Permit
40 New Main Street
Haverstraw, New York 10977

Rockland County Drainage Agency - Subdivision
23 New Hempstead Rd
New City, NY 10956

New York State Department of State Office of Planning and Development – Coastal Zone Consistency
99 Washington Avenue
Albany, NY 45564-0001

Joint Regional Sewerage Board – Sewer Permit
301 Beach Road
West Haverstraw, NY 10993

New York State Division of Housing and Community Renewal – Possible Funding
Hampton Plaza
38-40 State Street
Albany, NY 12207

Empire State Development – Possible Funding
33 Airport Center Drive - Suite 201
New Windsor, NY 12553

New York State Office of Parks, Recreation and Historic Preservation – Section 106 Review
PO Box 189
Waterford, NY 12188

INTERESTED AGENCIES

US Army Corps of Engineers
c/o: Brian Orzell - Project Manager - Western Permits Section - Regulatory Branch,
Department of the Army, New York District, Corps of Engineers
Jacob K. Javits Federal Building, New York., N.Y. 10278-0090

Federal Emergency Management Agency – Region II – Possible Letter of Map Revisions
26 Federal Plaza
Suite 1307
New York, NY 10278

1.7. SUMMARY OF IMPACTS AND PROPOSED MITIGATION MEASURES

LAND USE, ZONING AND PUBLIC POLICY

LAND USE

Existing Conditions

The majority of the Project Site is vacant property, mostly wooded or cleared with some paved roadways. Four multi-family residences occupy a small portion of the site, with three located along the east side of Allison Avenue north of Main Street and one located on the north side of Broad Street west of Allison Avenue. A small portion of the Project Site is used as grassed open space area and a stone overlook structure as part of Emeline Park. The project parcels also include submerged land, but no use of these lands is proposed as part of the project.

Within the ½ mile study area surrounding the Project Site, the adjoining lands to the south and west are predominantly residential. Also adjacent to the west of the project site is the Henry Hudson Quadricentennial Park, and directly to the north, across Bowline Pond, is the Town of Haverstraw's Bowline Point Park. Directly to the south of the Project Site is the Village's Emeline Park. Within a ¼ mile of the Project Site is the Village's Central Business District comprised of with a mix of residential and commercial uses.

Potential Impacts

The Project will remove the existing four residential structures, clear the existing wooded areas and replace the vacant areas with a mix of multifamily residential, hotel, retail/service commercial, public, and open space uses. It is expected that that proposed mixed-use development would be visible from the surrounding local streets and from the adjacent and nearby Village and Town of Haverstraw parks. 4.2 acres of new parkland is proposed, and the waterfront parkland will link the Henry Hudson Quadricentennial Park to the west and north with Emeline Park to the south.

The redevelopment of the Project Site from its current use of vacant land is consistent with the mix of uses existing in the adjacent Haverstraw Central Business District. The height and density of redevelopment of the Proposed Action is compatible with the adjacent Central Business District and recent waterfront residential development along the Village's waterfront.

Mitigation Measures

No significant adverse impacts are anticipated, and no mitigation measures are necessary.

ZONING

Existing Conditions

The Project Site is located within two Zoning Districts: the eastern portion of the Site, located east of Allison Street, is located in the Waterfront Development District (WD), and the western portion of the Site is in the

Third Residence District (R-3). The Central Business District (CBD) is located opposite Allison Avenue. Remaining lands within ¼ mile of the site are zoned Second Residence District (R-2), First Residence Townhouse District (R-1T) and Planning Industrial District (PI).

Potential Impacts

The Proposed Action will include the application of a new Zoning Overlay for Planned Developments at the Project Site. The proposed Zoning Overlay for Planned Developments is included in **Appendix C, Zoning Overlay**. The Zoning Overlay is intended to create an opportunity for a more economically successful and environmentally responsible community with a more harmonious and pedestrian-oriented public realm than can be achieved through the existing regulations in the underlying zoning.

Mitigation Measures

Given the consistency of the land uses and densities to be permitted under the proposed zoning with the adjacent mix of land uses directly adjacent to, nearby in Downtown Haverstraw and along the Haverstraw waterfront, no additional mitigation measures are necessary.

POLICY DOCUMENTS

Existing Conditions

Village of Haverstraw 2021 Comprehensive Plan

The Village of Haverstraw adopted its Comprehensive Plan in July of 2021. The Plan includes an aspirational Vision Statement on what the Village wishes to achieve over the following 10 to 12 years, as well as nine goals which are presented in the 10 chapters of the Plan. Of the nine Goals of the Comprehensive Plan, five are related to the Proposed Action and Project Site.

The Plan discusses a preference for a mix of residential, hotel/conference/banquet, and restaurant uses, and improvements to local parks. It also recommends waterfront access, mirroring the scale of the Village's downtown, providing an anchor to downtown, connecting to the Village's road system, providing a central public gathering space, constructing above future projected flood elevations and respecting view corridors. The Plan recommends that the site be developed through a master plan with form based codes, infrastructure improvements and public amenities, partnering with a single developer and ensuring the development reflects the existing Village fabric and is not monolithic or out of character in scale and design. The Plan also recommends linkages to downtown, local waterfront parks and open spaces.

Village of Haverstraw 2005 Local Waterfront Revitalization Program and 2021 Update

The Village submitted a draft of their updated Local Waterfront Revitalization Program (LWRP) to New York State in 2021. The draft is an update of the Village's 2005 Program which helped set the stage for development along the riverfront. It identifies the Project Site for development with a mix of commercial, residential, public and open space uses, connection to the adjacent African American Memorial Park and

Emiline Park, public access and affordable housing, as well as how the Project would maintain continuous public water access, mirror the scale and pattern of the downtown, provide an anchor use for the downtown that attracts economic activity year-round and interconnects to the Village road system.

Village of Haverstraw 2022 Downtown Revitalization Initiative Strategic Investment Plan

Following the selection of the Village of Haverstraw to receive $10 million in New York State funding through the Downtown Revitalization Initiative (DRI), the DRI Local Planning Committee (LPC) collaborated with the State and multi-agency State project team to develop the list of projects to recommend to the State for DRI funding. One project is the construction of a 3,000 linear foot walkway and stabilization of the shoreline with riprap and native plantings around the Project Site to support the future mixed-use and mixed-income development and new publicly accessible open space.

Village of Haverstraw Affordable Housing Regulations

Article XI of the Village of Haverstraw Zoning Code requires the provision of no less than 10% of proposed units as affordable purchase or rental units. An applicant may request an equivalent number of affordable rental housing units at another location in the Village or could request that a contribution be made in lieu of affordable rental units to the Village's Affordable Housing Fund, to be used to create affordable housing in the Village of Haverstraw.

Potential Impacts

The Village of Haverstraw 2021 Comprehensive Plan

The Proposed Action is consistent with the recommendations of the Village of Haverstraw Comprehensive Plan. Five of the nine Goals listed in the Comprehensive Plan are accomplished through the Proposed Action.

The Comprehensive Plan also details various elements and features of the Proposed Action, particularly in its recommendations for a mix of uses at the site, the inclusion of public improvements, open space and trail linkages, continuation of the scale and pattern of downtown, and the development of a master plan and form-based code to guide the development of the site and incorporate the desired land uses, scale and urban fabric desired in the plan.

Village of Haverstraw 2021 Draft Local Waterfront Revitalization Program

The Proposed Action is consistent with the recommendations in the Draft LWRP.

The 2021 Draft LWRP notes the Project's connection to the adjacent African American Memorial Park and Emiline Park, public access and affordable housing, as well as how the Project would maintain continuous public water access, mirror the scale and pattern of the downtown, provide an anchor use for the downtown that attracts economic activity year-round and interconnects to the Village road system.

Village of Haverstraw 2022 Downtown Revitalization Initiative Strategic Investment Plan

The Proposed Action is consistent with the Downtown Revitalization Initiative Strategic Investment Plan.

One of the 14 projects recommended for funding in the 2022 DRI Strategic Investment Plan (SIP) is the construction of a 3,000 linear foot walkway and stabilization of the shoreline with riprap and native plantings around the Project Site to support the future mixed-use and mixed-income development.

The Village of Haverstraw Affordable Housing Regulations

The Proposed Action is consistent with the Village of Haverstraw Affordable Housing Regulations.

The Project will consist of 450 multi-family residential units, with a goal of between thirty to forty percent of said units qualifying as affordable units (i.e., units marketed to individuals or household earning between 30 percent and 100 percent of the Rockland County, NY HUD Metro FMR Area Annual Median Income (AMI) as determined by New York State Homes and Community Renewal, and in compliance with the Village's affordability requirements.

Mitigation Measures

The Proposed Action is consistent with the land use policies of the Village of Haverstraw. No significant adverse impacts are anticipated, and no mitigation measures are necessary.

COMMUNITY CHARACTER AND VISUAL IMPACTS

Existing Conditions

Project Site and Surrounding Land Uses

The majority of the Project Site is vacant property, mostly wooded or cleared with some paved roadways that are interspersed with remnants of prior site disturbance from previous development. It consists of mostly forest and low-lying vegetation. The property is mainly surrounded by the Hudson River and Bowline Pond, and abuts Allison Avenue, Broad Street and a residential property to the west. A small portion of the Project Site is within Emiline Park.

The directly adjoining neighborhood along Broad Street and Allison Avenue are a mix of single and multi-family residences. There are also several places of worship interspersed throughout the adjacent residential neighborhoods. Land to the west of the Project Site includes the Henry Hudson Quadricentennial Park. Directly to the north, across Bowline Pond, is the Town of Haverstraw's Bowline Point Park. To the southwest, at the intersection of Main Street, First Street, and Allison Avenue, are the King's Daughters Library Building (a.k.a. Fowler Library) and the Haverstraw U.S. Post Office. Land directly to the south of the Project Site is the Village's Emeline Park, with a mix of playgrounds, waterfront trails and parking.

There are two roads that run perpendicular to the Project Site, Broad Street and Main Street. There is one road, Allison Avenue, that runs parallel to the Project Site.

Visual Resources Within the Vicinity of the Project Site

Historic

There are two historic resources listed in the State and National Register of Historic Places that are adjacent to the Project Site, including the King's Daughters Library Building, also known as Fowler Library, located at the northwest corner of Main Street and Allison Avenue, and the Haverstraw U.S. Post office, at the southwest corner of Main and First Streets.

Parks

There are three parks that serve as a public visual resource due to their proximity to the Project Site Bowline Point Town Park and Henry Hudson Quadricentennial Park. The view of the Project Site from Bowline Point Town Park mainly includes foreground shoreline, vegetation, and tree canopy. Henry Hudson Quadricentennial Park has a direct view of Bowline Pond in the foreground and the Project Site in the middle ground. Emeline Park, which is directly adjacent to the Project Site, has a direct view of the Project Site from the park looking north. The Hudson River and Bowline Pond can be seen from the majority of the Site when views are not obstructed by vegetation and trees on the site.

Scenic Views/Corridors

Volume II of the 2021 Comprehensive Plan for the Village of Haverstraw identified several scenic corridors as "views that define the community from almost any angle." It identified Allison Avenue and Main street as view corridors that contain several buildings of historic significance and natural features.

In addition to the view corridors, scenic views of the Hudson River were noted from the shoreline of the river itself, especially at Emeline Park and Jefferson Park. Volume I of the Comprehensive Plan established Objective 8.c to "protect and enhance the historic street grid and its view corridors both east/west and north/south to the River."

Potential Impacts

There are no state or federally designated landmarks, aside from those listed above, and no designated visual resources onsite, contiguous to or in the immediate area of the site that would be significantly affected by the Proposed Project. The King's Daughters Library Building and the Haverstraw U.S. Post Office have some historical significance according to NYSORHP, but significant impacts are not expected to this land use or any other use or feature. Careful consideration was also made to strategically landscape the Project Site to minimize the visual impacts of the proposed buildings.

During the scoping process, several locations were identified as needing to be analyzed for the visibility of the Proposed Project. The locations included:

- To and from the Hudson River.
- Scenic Corridors, as identified in the 2021 Comprehensive Plan, of Main Street, Alison Avenue, and First Street.
- Scenic Views, as identified in the 2021 Comprehensive Plan, from Jefferson Park and Emeline Park.

Viewshed Analysis

A Viewshed Analysis, found in **Appendix D, Visual Impact Analysis,** was completed for eight specific locations that align with the aforementioned locations from the scope. As an overall note, views of the proposed buildings would be seen in all seasons, regardless of tree/vegetation cover, as well as in close proximity of the Project Site. The eight views considered were at the following locations:

- **View 1 – Bowline Park:** Looking south from Bowline Park to the northern portion of the Project Site;
- **View 2 – Jefferson Park:** Looking east towards the Hudson River from Jefferson Park;
- **View 3 – Division Street:** Looking east across Bowline Pond to the Chair Factory Site from Division Street;
- **View 4 – Broad Street:** Looking east towards the Hudson River from Broad Street;
- **View 5 – Main Street:** Looking east towards the Hudson River from Main Street;
- **View 6 – Allison Avenue:** Looking south towards Main Street from Allison Avenue;
- **View 7 – Emeline Park:** Looking north to the Project Site from Emeline Park and the scenic overlook within the park;
- **View 8 – Ossining-Haverstraw Ferry Parking Lot:** Looking north to the Project Site, from the northern edge of the Ossining – Haverstraw Ferry parking lot.

Building Architecture

As seen in **Appendix D, Visual Impact Analysis,** commercial and residential street analyses were completed for the Village. These provided the following conclusions from a Commercial Street Analysis and Residential Street Analysis to be later applied to the architectural plans for the Project.

The buildings would include largely brick facades while also incorporating neutral or muted colors. Additionally, the windows would continue the fenestration rhythm, with an even balance and proportioning similar to the existing window patterns throughout the Village. In addition, the Proposed Action incorporates the addition of a form-based overlay district.

Building Height

The building heights of the five proposed buildings vary, with Buildings 1 and 2 proposed to be 71 feet tall at their eastern elevation and approximately 52 feet along Allison Avenue. Building 3 is proposed to be approximately 46 feet in height along Broad Street and approximately 49 feet facing to the north. Building 4 is proposed to be approximately 56 feet in height and the Hotel building is proposed to be approximately 70 feet in height. The five buildings will be spaced apart on the Project Site to encourage the enjoyment of the aforementioned views and scenic corridors. The proposed buildings are shown in **Appendix B, Site Plans.**

Landscaping

Main views of the proposed buildings not be fully screened by mature tree plantings, but will be partially screened. Landscaping will be planted at the perimeter of the Project Site and around buildings to minimize impacts and further contribute to the surrounding character. A total of 120 primarily native and deciduous trees will be planted, including some shrubs and herbaceous plants. Green Roofs or solar panels on two of the buildings are also proposed. Stormwater treatment areas are also proposed to be planted with seed mixes. Landscaping details are shown in **Appendix B, Site Plans.**

Outdoor Lighting

Three main types of lights are proposed throughout the property, including street lights, pedestrian lights, and bollard lights. The lighting plan locates lighting only where it is essential or required, such as along walkways, building entrances, access ways, and critical emergency and security areas. Lighting will be

shielded, directed downward, and will be compliant with NYS Building Code and Village of Haverstraw Code. Lighting plans are shown in **Appendix B, Site Plans.**

Mitigation Measures

Various measures are proposed to reduce the visibility of the facility from offsite locations while improving the appearance of the Project Site. These include spacing the buildings to allow views, limiting heights, utilizing design standards as part of the proposed zoning overlay district, including brick facades with neutral or muted colors, installing approximately 120 trees and including lighting without unnecessary or wasteful illumination. No significant adverse impacts to visual resources and community character are expected from the project based on project siting, design, and mitigation measures being taken.

FISCAL AND ECONOMIC IMPACTS

Existing Conditions

The Project Site involves a total of 12 parcels which total 13.44 acres. Eight of the parcels are currently owned by the Village of Haverstraw and do not pay taxes. The Project Sponsor is hoping to secure ownership and control of the remaining four parcels, which are privately-owned and contain multifamily residences. The four parcels which are not Village-owned contributed $74,264.19 in real property taxes to the Town, Village and School District. These four parcels contain 14 dwelling units in four structures, which house 46 people. It is believed that the occupants of the 14 dwelling units are generally households that would qualify as “very low-income”. At this income level, these households contribute approximately $260,000 to the local economy. The existing residences demand more services than they pay for in real property taxes, specifically, due to the costs to the school district.

Potential Impacts

Background
The proposed project will generate additional demand for services from the Village, Town and School District.

Additionally, the proposed project will generate revenues. The applicant is seeking a Payment-in-lieu-of-taxes (PILOT) agreement with local taxing jurisdictions. The project sponsor is seeking PILOTs for the affordable housing, market rate housing and retail/public service elements of the project.

Lastly, all elements of the project will introduce significant economic activity to the region at both the construction and operational phases of the project. Construction period economic activity will include the creation of 2,600+ construction jobs and $300MM+ in increased economic activity. During the operational phase of the project, on-site businesses will create 90+ jobs, and $8MM+ in increased economic activity annually.

Cost to Community Services

A Per Capita Multiplier Method and Proportional Valuation Fiscal Impact Costing Analysis was conducted in accordance with the methods outlined in the *Fiscal Impact Handbook*[1]. The Per Capital Multiplier Method starts with the assumption that non real property tax revenue sources (such as fees, penalties, fines interest, and intergovernmental transfers such as state aid) will increase roughly relative to project costs.

For the Town and Village, the Proportional Valuation Method is utilized to apportion the levy to residential real property and to non-residential real property. This is done based on the ratio of nonresidential real property value to total property value in each jurisdiction, with a refinement coefficient employed to account for the average value of non-residential property value (many small non-residential uses generally demand more in services than fewer large non-residential uses). For the school district, all costs are apportioned to residential uses only.

The cost of the new proposed non-residential project elements is then based on the value of those elements relative to the total value of all non-residential facilities in a community. The proposed non-residential project elements are estimated to have costed approximately $60k if fully constructed and operational in 2023. Once the residential share of the tax levy is known, it is divided by the population of each jurisdiction to arrive at a per capita cost.

To account for efficiencies of scale, the budgets for the Town, Village and School District were reviewed to determine whether a particular departmental cost was closely related to the anticipated added population from the project, related on a fractional basis, or generally fixed. Based on this, it was estimated that a new resident would generate approximately 67.5% of the per capita Village cost. A new Town resident was estimated to cost approximately 62% of the per capita Town cost. A new district pupil is estimated to increase school district costs by approximately 78% of the current per pupil cost.

With the per capita costs for a new resident estimated for each of the three taxing jurisdictions, one can assess a per unit cost and total project cost, based on the demographic multipliers contained in **Chapter 3D, Community Services.**

The total project cost can then be estimated by adding the residential and non-residential cost components and subtracting the existing cost of the multifamily dwellings to be removed. After the reduction of existing units, the total project costs will be $309,093 for the Town of Haverstraw, $240,523 for the Village of Haverstraw, and $732,877 for the schools.

Revenues to Community Services

The proposed project will generate direct revenues to the three taxing jurisdictions through Real Property Taxes and Payments-in-lieu-of-Taxes (PILOTs). The project sponsor is currently proposing a 40-year PILOT starting at $500 per affordable unit and $1,325 per Market Rate Unit escalating by 3% per year. It is estimated that total project revenue from PILOTs will be $763,643.

[1] Burchell, Robert W., and Listokin, David. The Fiscal Impact Handbook. New Brunswick, NJ: Rutgers University Center for Urban Policy Research, 1978.

Net Fiscal Impact

Net project revenue can then be compared with net project costs to determine the impact on each taxing jurisdiction. If the project were constructed and fully occupied in 2023, it would have demanded approximately $518k more in tax-funded services than tax revenue. This would have impacted the local tax levy by approximately 0.27% total. This equates to an increase in 2023 taxes of approximately $49 for a house valued at $350k.

The affordable/workforce units are the largest source of net project costs and the balance of the project provides a nominal net fiscal benefit.

Economic Benefits

During construction and lease up, which is anticipated to last three to five years, the proposed sponsor will spend more than $196MM to construct the project, including more than $72.5MM in construction wages. This will directly create 944 local full-time equivalent job-years or between 190 and 315 jobs over three to five years, which will also indirectly result in additional local spending and creation of jobs. The project spending will also indirectly result in the creation of 824 full-time equivalent job-years or between 165 and 275 jobs over the 3-5 years. Those workers will spend more than $16MM over the 3-5 construction years, further inducing the creation of an additional 841 local jobs and an addition of approximately $9.5MM in local spending for a total of $25.5MM in local spending or between $5.1MM and $8.5MM annually.

The project will introduce 790 new residents in 436 new households to the community. Those residents will earn more than $54M and spend more than $11.5M in the local and regional economy. Additionally, the commercial spaces and hotel will also result in a direct increase in the number of local jobs, which will result in indirect and induced economic benefits.

Mitigation Measures

Fiscal Impacts and economic impacts do not constitute “environmental impacts” as described by SEQR and therefore no “mitigation” is required. This information provides a synopsis of how the project may impact local municipal and school district funding and how the project might improve the local economy. The net fiscal impact is balanced against social benefits of meeting regional needs for affordable housing and the economic benefits that the project will bring new affordable housing units for families, creation of numerous jobs, and result in more than $304MM in construction spending and increase annual output by more than $38MM and local spending by $11.9MMM on an annual basis.

UTILITIES

Existing Conditions

Water

The water supply for the Project Site is obtained from Veolia Municipal Water Operations. Except for the existing four residential properties on Allison Avenue and Broad Street, the Project Site is not currently connected to the water supply system.

Sewer

The Project Site is currently served by the Haverstraw Joint Regional Sewage Treatment Plant and is within Rockland County/Haverstraw Joint Regional Sewerage District Area. The majority of the Site is not directly connected to the sewer connections.

Electric, Gas, Telephone, and Cellular Data

Existing gas and electric service to the site is currently provided by Orange and Rockland Utilities. The majority of the Project Site is not directly connected to existing gas and electric lines. Existing telephone and cellular data services are currently provided to the residences at the Project Site along Allison Avenue and Broad Street.

Potential Impacts

Water

The Project would utilize public water for domestic purposes to be supplied by Veolia Municipal Water Operations Municipal Water Operations from Broad Street and Allison Avenue. The anticipated increase in average daily domestic water demand for the Project is estimated to be 90,770 GPD. The Project proposes to install new direct domestic water connection from existing water mains on Broad Street and Allison Avenue.

Sewer

The Project would utilize facilities from the Rockland County/Haverstraw Joint Regional Sewerage District from Broad Street and Allison Avenue. The anticipated increase in average daily sewer loading for the Project is estimated to be 90,770 GPD. The Project Sponsor is proposing a connection to the sewer line for Building 3 along Broad Street and an internal gravity system to discharge to a proposed municipal duplex pump station with an associated backup generator.

Electric, Gas, Telephone, and Cellular Data

Electric, gas, telephone and cellular data connections would be made to each utility through the creation of an internal distribution network. The majority of the Project's buildings would be connected to existing lines in Broad Street and extended into the site. Telephone and cellular data services would be provided from Broad Street and Allison Avenue to the Project Site.

Mitigation Measures

With the utilities upgrades as proposed, the Project would not create a significant adverse impact on utilities and therefore, no mitigation measures are necessary.

STORMWATER

Existing Conditions

Existing Drainage Infrastructure

There are no existing onsite drainage structures, swales, or other man-made features to control stormwater runoff on the Project Site.

Existing Drainage Patterns and Hydrologic Characteristics

There are currently no specific points of existing stormwater discharge from the Site, as all current stormwater is naturally directed into the Hudson River. The Project Site is moderately sloping, with elevations ranging from approximately sea level to 45 feet above sea level. The nearest natural classified water body into which runoff from the Project Site would discharge is the Hudson River. The project site is also not located over any Sole Source, Primary, or Principal aquifers.

Soil Coverage and Hydrologic Soils

The Project Site primarily consists of Ux, Urban Land, and HcD, Hinckley gravelly loamy sand soils, while a smaller portion at the southern end of the Site contains Uw, Udorthents soils. According to the USDA Web Soil Survey, the Project Site's soil composition is made of all hydrologic soil groups (HSG's) A. These soils consist of mainly deep, well drained to excessively drained sands or gravelly sands.

Potential Impacts

Stormwater Quality and Quantity

Runoff from the project site discharges directly to the Hudson River, which is a fifth order or larger stream. According to the SWPPP prepared for the Project (**Appendix H, Stormwater**), 28,220 cubic feet (cf) of WQv is required to be treated through green roofs, stormwater planters, porous pavement, hydrodynamic separators, and tree planters.

Stormwater Pollution Prevention Plan (SWPPP) and Stormwater Compliance

All construction activities would be performed in accordance with NYSDEC's technical standards for erosion and sediment control and all permitting processes, stormwater management practices and controls, etc., would also be required to be in compliance with Haverstraw Village Code Section 197. Potential sediment and erosion control measures, including stormwater mitigation measures and infrastructure, would be implemented in accordance with the approved SWPPP.

Stormwater mitigation measures primarily involve preventing soil erosion and sedimentation resulting from stormwater run-off during and after construction. During construction, this is accomplished by sequencing site disturbance activities to establish erosion controls, minimize disturbed areas, maintain existing vegetation as much as possible, and stabilize newly disturbed areas as soon as possible. Stormwater pollutant controls utilized during construction would include temporary sediment barriers and sediment traps.

Mitigation Measures

With the implementation of the SWPPP and the Project developed as proposed, the Project would not result in a significant adverse impact on stormwater.

GEOLOGY – SOILS, AND TOPOGRAPHY

Existing Conditions

Topography

Much of the eastern portion of the Site is level or includes minimal slopes. Steep slopes can be found running along the western portion of the site, to the east of Allison Avenue, and in the area north of Liberty Street. Areas of steep slope are also found along the Site's water frontage along the Hudson River and Bowline Pond.

Regional and Bedrock Geology

The geologic characteristics of the proposed site consist of relatively deep areas of existing fill and very soft clay soil, and the bedrock of the Project Site is that of Brunswick Formation bedrock from the Upper Triassic age, which is sandstone.

Soil Characteristics

The Project Site has a total of three soil types, with 51.6 percent consisting of Hinckley Gravelly Loamy soil (excessively deep and drained soils), and 38.8 percent consisting of Urban Land (soils typical of urban environments) and 9.6 percent consisting of Udorthents (soils typical of tidal marshes and flood plains). About 48.4 percent of the Project Site is somewhat to very poorly drained, while the remaining portion of the Project Site is classified as somewhat excessively drained.

Phase I Environmental Site Assessment/Geotechnical Report

The 2023 Phase I Environmental Site Assessment, completed by Hillman found only one Recognized Environmental Concern, and the Phase I report recommended a Phase II Subsurface Investigation. In February 2023, Terracon conducted Geophysical Exploration services to investigate possible subsurface materials related to the former buildings at the Site, that found Existing Fill 1 is not expected to be usable as engineered fill, whereas Existing Fill 2 is expected to be usable as engineered fill. The native soils are also expected to be usable as engineered fill as well.

Potential Impacts

In comparison to existing conditions, a large portion of the steeply sloped areas on the western portion of the Site would be developed upon with the construction of Buildings 1 and 2. The Project proposes approximately 22,000 cubic yards of cut and approximately 19,500 cubic yards of fill. The Project would therefore result in the export of approximately 2,500 cubic yards of cut. Additionally, there is no rock removal necessary for the construction of the Project, and no blasting is expected.

The most significant area of cut would be along the steeply sloped portion of the site in the location of Buildings 1,2 and 3. The existing soil would be evaluated for suitability for use as fill material to be reused on the Site. Fill would be distributed throughout the Site in areas of proposed buildings, roadways, pathways, at-grade parking and open space.

Mitigation Measures

No significant adverse impacts to the soils, topography, or steep slopes on the Project Site are anticipated to result from the implementation of the Project based on the geotechnical and environmental assessments presented in this DEIS. To minimize adverse impacts, the Project includes numerous mitigation measures being implemented.

VEGETATION AND WILDLIFE

Existing Conditions

Vegetation

The majority of the Project Site property is heavily disturbed, overgrown by introduced, non-native species, and contains large amounts of fill materials and debris. Dominant vegetation in the upland portion of the Project Site “consisted of patches and borders of early successional woodland areas including trees of black walnut, quaking aspen, big tooth aspen, red oaks, and sycamore. Understory bushes include multiflora rose bushes (invasive species), while woodland edge vegetation includes eastern red cedar, autumn olive, and honeysuckles. Across the remainder of the site the predominate species was either Phragmites, or Mugwort, both of which are invasive species.

During a May 2023 site inspection, the Project Site was further divided into six areas, labelled Areas A through F to help aid in categorization of the Site. These areas are anywhere between 0.5 and 2.4 acres, and outline which vegetative species are present at which locations on the Project Site.

The NYSDEC Environmental Mapper identified no records of any rare plants or significant natural communities on the Project Site. The site inspection supported the Wetlands Delineation Report that the Project Site is a heavily disturbed site, "with significant amounts of fill and debris, and is overgrown with non-native vegetative species."

Wildlife

During the May 2023 site assessment by NPV, wildlife was also observed, both visually and auditorily. Information regarding federally listed, threatened, and endangered species and their designated critical habitat was obtained through use of the NYSDEC Environmental Resource Mapper (ERM), Environmental Assessment Form (EAF) Mapper, and communications with the NYNHP. USFWS's Information for Planning and Consultation (IPaC) website was also used as a cross reference for the identification of species.

Shortnose Sturgeon *(Acipenser brevirostrum),* which is an Endangered species within the state of New York, Atlantic Sturgeon *(Acipenser oxyrinchus oxyrinchus)*, which is a federally listed endangered species, and Bald Eagle, a threatened species within the state of New Yok and a protected bird species under the Migratory Bird Act, were noted as potential occurrences proximate to (perhaps within one mile of) the project site. The Chimney Swift was observed during the visit and is a recognized as a vulnerable species by the International Union for Conservation of Nature (IUCN) and is listed on the United States Fish and Wildlife (USFWS) Birds of Conservation Concern priority list. The NYS Breeding Bird Atlas identified 36 confirmed species in Atlas Block 5856C, which includes the Project Site for the 2000-2005 Bird Atlas. The 36 species were seen in the Atlas Block from 2000-2005 with varying frequencies .

Potential Impacts

The conceptual Landscaping Plan, found in **Appendix B, Site Plans,** shows the areas of disturbance, locations and relative spacing of proposed plantings, including trees, shrubs, grasses, perennials, and seed mixes for the Project**.** A total of approximately 120 new trees will also be planted.

Proposed species to be planted include mostly native species as well as some ornamental species that are suitably adapted to Site conditions. Plantings would help to stabilize loose soils and prevent erosion, provide vegetative screening, mitigate impacts on from stormwater, and enhance the overall visual appearance of the Project Site.

Since most of the upland Project Site appears to be mostly invasive to New York State, the Proposed Action would not disturb any significant natural communities or disrupt the habitat of any rare plant or wildlife species in the upland portion of the Site.

Clearing activities would comply with all NYSDEC and municipal standards and all temporarily disturbed areas would be restored to pre-construction conditions upon completion of the Proposed Action. Approximately 3.4 acres of trees would be removed from the Project Site. If the Proposed Action is approved, continued correspondence with the NYSDEC, USFWS, Village of Haverstraw, and other regulatory

bodies would occur as required and construction activity and mitigation would be guided by a Stormwater Pollution Prevention Plan (SWPPP).

Live cutting/live stake joint plantings would be planted on the northwestern portions of the shoreline and riprap repairs are proposed for the shoreline and in the river on the remainder of the shoreline. Both improvements will incorporate regionally appropriate plantings.

Mitigation Measures

The Project would result in the alteration of the wildlife habitats along the shoreline of the Project Site. Despite this, the proposed changes work to improve the poor habitat environment along the shoreline, rather than entirely removing it. The live cuttings will encourage the development of wetland habitat while providing stabilization for the development of the Site.

No significant adverse impacts to ecological resources on the upland portion of the Project Site are anticipated to result from implementation of the Project, and additional mitigation measures are proposed.

WETLANDS, WATERBODIES, AND WATERCOURSES

Existing Conditions

This waterfront Project Site is located along the western bank of the Hudson River. During a May 2023 ecological investigation and wetland delineation inspection of the project site, NPV observed significant historical disturbance (i.e. fill and various forms of debris) as a primary influence of the overgrown non-native vegetation throughout the site, inclusive of some shoreline areas. NPV's habitat observations of the site are discussed in the "Wetland Delineation and Habitat Assessment" report dated September 29, 2023 (see **Appendix K, Wetlands, Waterbodies, and Watercourses**).

The peninsula's shoreline consists of vegetation intermixed with dilapidating revetments (rip-rap composed of various materials), an old stone wall and fill from previous disturbances and development that utilized both upland and shoreline/in-water areas of the Project Site and adjacent riverine system.

Ecological Analysis, LLC delineated a wetland boundary along the shoreline of the Project Site. Ecological Analysis and NPV agree that the Project Site does not contain wetland areas landward of the delineated wetland boundary along the shoreline.

Figure 3.I.1, NYSDEC Freshwater Wetlands shows no NYSDEC Article 24 regulated freshwater wetlands on the Project Site. By email correspondence dated June 30, 2023, NYSDEC Region 3 staff confirmed that, "the area is **not currently** mapped as Freshwater Wetland pursuant to Environmental Conservation Law Article 24. But the law was changed, and new standards and as-yet undrafted regulations will become effective in 2025. We cannot at this time say portions of the site will not be under Article 24 jurisdiction in the future." The underwater lands and shoreline of the Hudson River along the Project Site are not NYSDEC regulated Article 25 tidal wetlands.

The National Wetland Inventory (NWI) classifies the wetland areas along the Hudson River shoreline of the Project Site as "**E1UBL6**", as shown in **Figure 3.I.3, National Wetlands Inventory**.

Regulated activities along the shoreline of the Project Site would likely be subject to the following federal, State and local review:

- NYS Environmental Conservation Law (ECL) – NYSDEC Article 15
- U.S. Army Corps of Engineers (USACE)
- New York State Department of State (NYSDOS)
- Local Waterfront Revitalization Program -Haverstraw Waterfront Advisory Commission

The Project proposes shoreline and in-water activities/improvements associated with this project. Shoreline improvements are necessary for protection, resiliency, water-related enjoyment and native habitat creation.

Potential Impacts

The proposed shoreline improvements have been designed to clear debris from the nearshore area, including the removal of the existing rock wall. The Project would construct two types of shoreline improvements to stabilize the shoreline. Both revetments would require disturbance to the watercourse – including excavation and fill – to properly establish the native planting areas. Additional details related to these improvements can be found in **Appendix B, Site Plans** on the Shoreline Concept Plan Sheet. Disturbance of native and non-native vegetation along the banks of the shoreline as well as temporary disturbance to the waterway will occur during construction.

Mitigation Measures

Potential impacts to the Hudson River shoreline and waters along the Project Site can be mitigated. Best Management Practices (BMPs) during construction and operation will be used to ensure that any impacts are minimized to the greatest extent practicable. The design of the Project Site itself, as well as anticipated operations, will incorporate several measures to ensure the protection of wetlands and waterbodies and avoid adverse impacts.

FLOODPLAINS AND SEA LEVEL RISE

Existing Conditions

Floodplains

The current adopted Hudson River flood elevations published on Flood Insurance Rate Maps (FIRM) by the Federal Emergency Management Agency (FEMA) are from 2014. Portions of the project site are in Zone AE (light violet on Figure 3.J.1) which is consistent with a flood to elevation 7 during the 1% flood (also known as the 100-year flood). Additional areas of the project site are located in Zone X, which is defined as the "area of moderate flood hazard, usually the area between the limits of the 100- year (1%) and 500-year (0.2%) floods."

In 2014 FEMA released new FIRMs for Rockland County, that included revised flood elevations for upland areas and held over the earlier adopted elevations for the tidally influenced Hudson River. These adopted elevations continued to be the basis for the Village's Chapter 141 Flood Damage Prevention Chapter.

In 2021, the Village of Haverstraw amended Chapter 141, to key requirements to the higher advisory base flood elevations as shown in the 2013 maps on the basis that they are believed to be more accurate than the

2014 adopted FIRMs. The Flood Damage Prevention Chapter includes several construction standards, some in which are applicable to the proposed project.

Sea Level Rise

6 NYCRR Part 490 established values for New York City and the Lower Hudson Region expressed in inches over the 2001-2004 NAVD88 baseline. The nearest NOAA monitoring station is the Haverstraw Bay Station, which is controlled by the Battery station of Southern Manhattan. Current month (December 2023) high tides range from 0.99 feet to 2.35 feet above NAVD88. Historical data shows that between the Part 490 baseline years of 2001-2004 and the last 34 months (2020-2023) of monthly MSL as observed at the Battery indicated a change of 5.63 inches, which is tracking the medium Part 490 projections.

Chapter 141, Flood Damage Prevention – Village Code

Chapter 141, Flood Damage Prevention of the Village of Haverstraw's Village Code establishes regulations related to floodplains in the Village. The purpose of the chapter is to promote the public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas via provisions that are outlined in the code.

Potential Impacts

The Project is proposing development within a floodplain, but no fill is proposed below the Mean High-Water line. Moreover, the Floodplain Plan as shown in **Appendix B, Site Plans** shows the Site's existing condition of 49,904 cubic yards of floodplain will be replaced by a proposed 50,039 cubic yards of floodplain volume. This increases the available volume for the floodplain by 135 cubic yards on the Project Site.

The Proposed Project will comply with all applicable portions of Chapter 141, Flood Damage Prevention, including but not limited to Article IV, Construction Standards.

Building 3 is located outside all FEMA advisory flood zones. Building 4 is located in the Advisory X Zone (0.2% flood). Building 2 is located in the advisory A zone (1% flood) and advisory X zone (0.2% flood). Building 1 is located in the advisory A, X and V Zones (1% flood subject to wave action). The Hotel is located in the advisory V and X zones. Actions at different elevation levels are outlined as the following:

- **Elevation 0-7:** The lowest site elevations correspond with the public esplanade, public open spaces and surface parking areas at the north end of the site. These areas are generally proposed (with a few exceptions) at or above elevation five. These areas will likely flood during the current-year 1% storm.
- **Elevation 7-16:** The project proposes interior surface parking garages at seven feet. These areas are designed to flood and allow river flood waters to travel through the structure without impediment. These areas will flood during the current 1% storm event.
- **Elevation 16-25:** The Hotel is partially located in the V zone (the wing closest to the river). The Village's flood prevention chapter does not allow horizontal structural elements to be located within the V zone.
- **Elevation 25+:** Portions of Buildings 1 and 2 are proposed to be located in Zone A, X and V. The lowest habitable finished floor elevation of Buildings 1 and 2 is 25 feet, and the lowest elevation for horizontal structural elements is anticipated to be no lower than 23 feet.

Conditional Letter of Map Revision (CLOMR)
A Conditional Letter of Map Revision (CLOMR) does not change the National Flood Insurance Program Map when provided, but does indicate whether the project will be recognized by FEMA when completed. This would later possibly result in the changing of the existing regulatory floodway, the BFEs, or the Special Flood Hazard Area.

Mitigation Measures

The project elements most exposed to sea level rise and flooding are the public promenade and open spaces, the surface parking at the north end of the site, and the hotel. Each public

Public Promenade and Public Open spaces
The public promenade should be designed to survive the wave action of the V zone. While the shoreline improvements may remove the V zone from these areas of the site, sea level rise over time will likely reduce the effectiveness of the rip rap and living shoreline. Materials used should not be easily lifted by wave action.

Surface Parking
The Village via its 2021 Comprehensive Plan has announced its intent to embrace its urban character and continue to encourage population growth. It is likely that as the Village grows, its residents will be decreasingly dependent on individual automobiles and increasingly served by shared automobiles, livery services, bicycle use and pedestrianism and mass transit.

Hotel
Under the high projections and as conceptually designed, the hotel may become unusable during severe weather as early as the 2050s. As stated previously, the project includes significant shoreline improvements including riprap and living shoreline.

ARCHEOLOGICAL AND HISTORICAL RESOURCES

Existing Conditions

Historical Resources
The Division of Historic Preservation of the New York State OPRHP provided comments on the Project that were transmitted through the New York State Cultural Resource Information System (CRIS). As a part of their comments, it was noted that the Project Site is located adjacent to two historic resources listed in the State and National Registers of Historic Sites, the Fowler Library (King's Daughter's Public Library) and the Haverstraw United Post Office.

Seven properties located within and adjacent to the Project Site have been determined by OPRHP to be Not Eligible for the State and National Registers of Historic Places. Four of these properties are located on the Project Site and are proposed for demolition.

Previous Archeological and Cultural Assessments
The parcels included in the Project Site have been under consideration for development in the past, in which requisite OPRHP assessments were conducted. In 2001, Hartgen Archeological Associates performed a Phase IA Literature Study and Archaeological Sensitivity Assessment for several waterfront parcels, part of

which included the Project Site. In 2008, Pan American Consultants conducted a Phase IB Cultural Resources Investigation for several parcels, two of which were within the Project Site. A Phase 1B was conducted by City/Scape Cultural Resource Consultant in 2002 for a parcel along the waterfront south of the Project Site. Each presented similar results related to previous activity, even prior to development, on the Project Site.

Potential Impacts

The proposed Project is expected to generate actions that may disturb sub-surface cultural resources or impact above ground resources.

The ORPHP has reviewed a draft of the Project's building plans and renderings, the draft Cultural Resources Chapter from the DEIS, and the Village of Haverstraw Public Notice of Positive Declaration. Based on their review, it is the OPRHP's opinion that the proposed development will have No Adverse Impact on historic and archaeological resources.

Mitigation Measures

The Proposed Action would not have a significant adverse impact on historical or archaeological resources of the Project Site. The developer of the Project would comply with all State regulations with regards to any additional archaeological finds at the Project Site. As a result, no mitigation of the Proposed Action is necessary.

TRAFFIC AND TRANSPORTATION

Existing Conditions

Site visits and a subsequent Traffic Impact Study (see **Appendix M, Traffic Impact Study**) were completed to identify and assess possible traffic issues associated with the Proposed Action and identify any necessary mitigation.

Roadway Conditions Inventory

A detailed inspection and inventory of roadway network conditions for 14 roadways in the study area was performed as part of the Traffic Impact Study found in **Appendix M, Traffic Impact Study**. The inventory includes existing roadway geometry, location and geometry of existing driveways and intersections along with signing, signal timings, phasing, and cycle lengths, the roadway's functional classification, roadway width, parking availability and curb heights, traffic control devices, surrounding land uses, the condition of pavement markings, maintenance jurisdiction (Village, County or NYS) and posted speed limits.

Existing Parking Conditions

There is two-way on-street parking along the frontage of Broad Street and parking on the opposite side of the street from the development along Allison Avenue. The existing buildings along both Broad Street and Allison Avenue have off-street parking available with private driveways.

Existing Crash Data

Within the study area, there were a total of 409 crashes from January 1, 2020, through December 31, 2022. No fatal crashes were recorded during the study period. a majority of the crashes, 42.8% (175), involved property damage only, 14.2% (58 crashes) involved injury, 0 crashes resulted in a fatality, and 43% of

crashes were non-reportable. Within the study area, only 8 of the 27 locations experienced 3 or more crashes annually.

Existing Traffic Conditions

The Traffic Impact Study included descriptions of the 27 study intersections. More details on the traffic conditions at these intersections are available in **Appendix M, Traffic Impact Study**.

Assessment of Existing Traffic Conditions

The Traffic Impact Study analyzed traffic capacity for all intersections within the study area. Level of Service (LOS) is defined as the different operating conditions that occur at an intersection under various traffic volume loads. LOS is designated from A to F, with LOS "A" representing the best operating conditions and LOS "F" representing the worst operating conditions. Signalized intersections studied were the following:

- NYS Route 9W at Short Clove Road
- NYS Route 9W at New Main Street
- New Main Street at West Street Broadway
- NYS Route 9W at Westside Avenue
- Westside Avenue and Conklin Avenue
- NYS Route 9W at Gurnee Avenue

The Level of Service results for all the unsignalized intersections show that all the intersections operate at acceptable Level of Service D or better during both Existing Conditions **except for the northbound approach at intersections of Westside Avenue/Broadway at Samsondale Avenue that operate at Level of Service E in the AM Peak and Level of Service F in the PM Peak during the Existing Conditions.**.

Potential Impacts

No Build Condition

The No Build Condition traffic volumes are estimated based on two factors as follows:

1. Increases in traffic due to general population growth and developments outside of the immediate project area. This traffic increase is referred to as ambient growth.
2. Other planned projects located near the project site, which may affect traffic levels and patterns at the study intersections in this report.

Annual Traffic Growth

A 2.0% annual growth factor was obtained from a review of available resources, growth trends demonstrated through historic traffic data, and information provided in the annual growth factors developed for the New York Metropolitan Transportation Council's Best Practices Model (BMP) and used to increase the Existing 2023 volumes for a period of four years to project volumes to the year 2027 (No Build Volumes).

Other Planned Projects

At the time of the study two other planned projects, 49 West Broad Street (56 units of multifamily residential), Admiral's Cove at 51 Girling Drive (245 units of multi-family residential and 2,100 sf restaurant space), were currently under construction or in the planning stages within the study area.

Build Conditions

The Project includes a mixed-use, mixed-income, walkable development of up to 450 residential housing units, and 120 units of hotel space with 496 structured parking spaces and 93 on-street parking spaces. Access to the site will be provided via a full access driveway on Liberty Street.

Trip Generation

The Project is projected to generate 259 trips (85 entering and 174 exiting) during the weekday AM peak hour, 295 trips (167 entering and 128 exiting) during the weekday PM peak hour and 303 trips (169 entering and 144 exiting) during the Saturday midday peak hour.

Trip Distribution and Assignment

The volume of site traffic that would travel through the study intersections during peak hours was distributed and assigned to each movement based on the existing roadway and travel patterns.

Traffic Impact Analysis

In order to identify the impacts created by the Project, capacity analyses were conducted at the study intersections for the No Build and Build Conditions during the weekday AM, weekday PM, Saturday AM, Saturday PM, Sunday AM, and Sunday PM peak hours. The results of the capacity analyses for the No Build and Build Conditions were compared to determine the impact that will be created on the study intersections by the Proposed Project.

Signalized Intersections

The Traffic Impact Study found that one signalized intersection requires mitigation following the completion of the Project, at NYS Route 9W at New Main Street.

Unsignalized Intersections

The Traffic Impact Study found that three signalized intersections require mitigation following the completion of the Project. These are Broad Street/West Broad Street at Broadway, Westside Avenue/Broadway at Samsondale Avenue, and Broad Street at Liberty Street.

On Site Traffic Access

An on-site Access Routes Plan shows routes for both vehicles and pedestrians throughout the Project Site. Truck turning movements were also analyzed for the Project Site, including the main vehicular access from Broad Street and Liberty Street. Access for Fire Department vehicles would be able to accommodate the current types of vehicles that would respond to the Project Site.

Impacts on Surrounding Streets

Access for construction vehicles would be from two locations:

- Gate 1 at the intersection of Liberty Street and Broad Street (vehicular);
- Gate 2 at the intersection of Broad Street and Allison Avenue (vehicular); and

Construction vehicles are to utilize Liberty Street, Broad Street and Alison Avenue upon entering and leaving the site.

Parking

Appendix M, Traffic Impact Study, describes parking for the conceptual uses on the Project Site. The Project parking is designed to provide spaces for Buildings 1, 2, 3, 4, and the hotel to individually contain enough parking to support the base parking demand they create for their respective programs. Shared Parking for Buildings 1 and 2 total 344 spaces across two floors. This shared parking in both on-street and structured conditions totals 358 spaces. Building 3 parking demand (residential only) is fully accommodated through two floors of structured car park totaling 76 parking spaces. Building 4 parking demand (residential only) is accommodated through a combination of a structured parking facility totaling 97 Parking Spaces. Parking within the Project Site will be managed through signage as well as a permit or vehicle tag system. For visitors, a time limit will be posted on the signage.

To determine an efficient ratio of parking for the various uses at the Project Site, the development team assessed the patterns of peak parking usage at similar scale multifamily developments which exist within or in proximity to the Village of Haverstraw. This survey of parking use was broken into two phases. The averaged results of the phase one survey and the more detailed phase two survey of select comparable site were used as the basis for the proposed parking ratio of 1.15 parking spaces per residential unit.

Shared Parking Model

The shared parking model used utilizes a series of assumptions, in addition to the base ULI/ICSC and empirical data, and substantial locally collected data to develop the parking demand model. Parking ratios utilized both the locally sourced parking survey and ULI based parking ratios for residential, hotel, retail and community uses. A mode split adjustment redefines the default value from 100% of all patrons using an individual vehicle to arrive and park, to a certain percentage who will arrive in a carpool with another person (those not assumed in the auto occupancy rate), walk, bike, bus, or use a shared-car service. The applied adjusted parking ratios considered the spaces for the residential units, hotel rooms, retail spaces, and community spaces. Independently these aggregate uses would result in a total of 618.8 required parking spaces. The shared parking strategy (limited to on-street and Parking Area A located below Building 1 and 2) results in a reduction in the total parking demand from 618.8 to 589 parking spaces which matches the parking provided on the site.

Mitigation Measures

Based on the ITE trip generation manual, the proposed 450 residential housing units with 5,000 SF of retail space and 120 units of hotel space would have generated 259 trips (85 entering and 174 exiting) during the weekday AM peak hour, 295 trips (167 entering and 128 exiting) during the weekday PM peak hour and 303 trips (169 entering and 144 exiting) during the Saturday midday peak hour.

Capacity analyses were conducted at all the study intersections for the 2023 Existing, 2027 No Build and 2027 Build conditions during the weekday AM, weekday PM, Saturday Midday peak hours. The impacts of construction vehicles upon adjacent streets and within the local street network will be minimized through the incorporation of several mitigation measures.

- During the No Build Condition, all the signalized intersections studied operate at overall Level of Service D during the weekday AM, weekday PM, Saturday peak hours with all approach movements operating at Level of Service D or better during the analyzed peak hours. ***Only NYS Route 9W at***

New MainStreet would need a signal adjustment to improve all approach movements operating at Level of Service D or better.

- During the Build Condition, all the unsignalized intersections studied operates at Level of Service D or better during the analyzed peak hours except for the following: Broad Street/West Broad Street at Broadway which had some impacts with a Level of Service F in the eastbound and westbound PM peak hours. By installing all-way stop control, the Level of Service was improved to Level of Service B or better. Westside Avenue/Broadway at Samsondale Avenue which had some impacts with a Level of Service F in the eastbound AM and PM peak hours. ***By installing all-way stop control, the Level of Service was improved to Level of Service D or better. Broad Street at Liberty Street which is proposed as the entrance/exit to the Proposed Project had some impacts with a Level of Service F in the northbound AM peak hours. By installing all-way stop control, the Level of Service was improved to Level of Service B or better.***

The impacts of construction vehicles upon adjacent streets and within the local street network will be minimized through the incorporation of several mitigation measures:

- Construction vehicles and equipment would be parked on the Project Site in designated staging areas, when possible.
- Truck drivers would be urged to limit excessive use of residential streets, encouraging use of Main Street to reach 9W quickly.
- No construction activities would occur outside of the permitted hours as per Chapter 157, Noise of the Village Code.
- Identification of suitable places on-site for vehicle and heavy equipment parking and prohibit the parking of trucks, or prolonged idling, on public streets or within the shoulder area of public streets.

Based on the results of the Traffic Impact Study the construction of the proposed facility will not result in an adverse traffic impact at the study intersections and the surrounding roadways and the Project site parking layout and overall supply are well balanced with the aggregate parking demand across all programmed uses on the site. In addition, the overall parking strategy results in ample midday parking capacity for public parking to access waterfront park features.

CONSTRUCTION

Potential Impacts

Schedule

The proposed construction schedule of the Project includes a site work phase along with two main construction phases spanning a total period of about 29 months. Phase I focuses on the construction of Buildings 1 and 2, including residential and commercial uses. Phase II focuses on completing the remaining two residential buildings, Buildings 3 and 4, and then completing the Hotel.

Site Access

There would be three access locations to the Site when construction begins, two vehicular and one pedestrian. There would be an increase in the number of vehicles travelling to the Site during construction, including construction vehicles and worker vehicles.

Site Organization, Dust, and Erosion

During construction, there would be approximately five field offices, 11 garbage containers, and eight portable toilets throughout the Project Site. Additionally, the Project is anticipating a need to export approximately 2,500 cubic yards of cut from the Site. The Project Site would control erosion related impacts by sequencing site disturbance activities to establish erosion controls, minimize disturbed areas, maintain existing vegetation as much as possible, and stabilize newly disturbed areas as soon as possible.

It is likely that dust would be generated because of the preparation of the Site. There is no dust anticipated to be generated as a result of post-construction activities on the Site.

Noise

Noise would be generated by vehicles, equipment, tools, and personnel during the construction process. Due to the project's close proximity to surrounding various land uses, compliance with the Village regulations would ensure that construction does not take place at night or during early morning hours when residents are typically at home and are most sensitive to noise.

Rock Removal/Blasting

There is no rock removal or blasting anticipated as a part of the Proposed Project due to the depth of the bedrock.

Mitigation Measures

The majority of the impacts associated with construction would be temporary (during the 28-month construction period) and would conclude when the Project is completed, such as noise and traffic. These are temporary, construction-related unavoidable impacts. Much of the Project Site and the construction activity associated with the Project will take place at a lower elevation than residences along Allison Avenue and Broad Street. The Project would incorporate the following mitigation measures to minimize impacts:

- To mitigate construction impacts on traffic:
  - Construction vehicles and equipment would be parked on the Project Site in designated staging areas, when possible.
  - Stabilized construction entrances at Gates 1 and 2 would be maintained to help reduce dust, sand and pebbles from being tracked on to roads.
  - Truck drivers would be urged to limit excessive use of residential streets, encouraging use of Main Street to reach 9W quickly.
- The construction contractor would develop and comply with a dust mitigation plan as a part of the construction contract. This may include:
  - wetting bare soils.
  - maintaining slow on-site construction vehicle speeds.
  - immediate seeding/planting of bare ground as soon as possible after clearing.
  - installing silt fencing.
  - stabilizing any stockpiles on the Site.
- No construction activities would occur outside of the permitted hours as per Chapter 157, Noise of the Village Code.
- Identification of suitable places on-site for vehicle and heavy equipment parking and prohibit the parking of trucks, or prolonged idling, on public streets or within the shoulder area of public streets.

With the incorporation of the mitigation described, the Project would not create a construction related significant adverse impact.

1.8. OTHER ENVIRONMENTAL IMPACTS

UNAVOIDABLE ENVIRONMENTAL IMPACTS

The potential adverse impacts of the project have been assessed in all subsections of **Chapter 3, Existing Conditions, Environmental Impacts, and Mitigation Measures** of this DEIS, and mitigation measures have been identified for the topics that were reviewed. Some impacts from the Proposed Action, however, are unavoidable, and cannot be completely prevented or avoided by applying reasonable and feasible mitigation techniques as required by SEQRA. Unavoidable adverse environmental impacts are as follows:

Short Term Impacts

- Potential dust generation, erosion, and sedimentation may occur during construction (**Chapter 3J, Geology- Soils and Topography,** and **3M, Construction** of this DEIS).
- Temporary increases in truck traffic and other construction-related activities that would generate noise during the course of the construction period (**Chapter 3M, Construction**, of this DEIS).
- For the shoreline improvements, there may be suspended sediment in the waterway during the in-water excavation (**Chapter 3I, Wetlands, Waterbodies, and Watercourses** in this DEIS).

Long Term Impacts

- The Project would result in the alteration of the wildlife habitats along the shoreline of the Project Site.

IRRIVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Irretrievable and irreversible commitments of resources involve primarily the commitment of natural resources on-site, many building materials used in construction, and the consumption of nonrenewable energy sources.

The Proposed Action would result in the following irreversible and irretrievable commitment of resources:

- Approximately 3.4 acres of trees would be removed from the Project Site. The Project proposes the planting of approximately 120 trees with additional plants, shrubs and wetland plantings that are native and Site appropriate. (**Chapter 3H, Vegetation and Wildlife**, of this DEIS).

GROWTH-INDUCING, SECONDARY AND CUMULATIVE IMPACTS

The cumulative impacts of the Action will be analyzed in consideration of the policies and development activities in adjoining communities.

The Proposed Action involves a mixed-use development including multi-family residences, a hotel, commercial, and parkland. Each of these parts of the Project Action could result in positive growth-inducing, secondary and cumulative impacts.

Growth Inducing Aspects
There will likely be no major growth inducing aspects of the project. The completion of the Proposed Action may induce some additional infill development in addition to the infill development already proposed in the area, but it would not induce major growth in the Village.

Secondary Impacts
It is anticipated that the Project would likely result in positive secondary impacts on the Village, mostly through an increase in shoppers and visitors to downtown Haverstraw. Downtown businesses would likely benefit from the increased activity due to the added residents of the Project Ste or those visiting the Project Site's residential, commercial, public services or open space uses, including occasional larger events at the hotel, commercial spaces and open space areas.

Construction of the residences, commercial retail spaces, and hotel will also create both short-term and long-term job opportunities.

Cumulative Impacts
It is anticipated that that the Proposed Action will have no significant cumulative impacts within the Village and surrounding communities related to the variety of local services discussed in **Chapter 3D, Community Services**.

Traffic and Transportation
It is anticipated that the Proposed Action will have no significant cumulative impacts on traffic within the Village and surrounding communities. two other planned projects, 49 West Broad Street (56 units of multifamily residential), Admiral's Cove at 51 Girling Drive (245 units of multi-family residential and 2,100 sf restaurant space), were currently under construction or in the planning stages within the study area. The traffic from these planned projects was added to the ambient Traffic Volumes to develop the 2027 No Build Volumes.

According to the analysis in **Chapter 3L**, **Traffic and Transportation** the Proposed Action would have generated 259 trips during the weekday AM peak hour, 295 trips during the weekday PM peak hour and 303 trips during the Saturday midday peak hour. Capacity analyses were conducted at all the study intersections for the 2023 Existing, 2027 No Build and 2027 Build conditions during the weekday AM, weekday PM, Saturday Midday peak hours. The results of the analyses are described below:

- During the No Build Condition, all the signalized intersections studied operate at overall Level of Service D during the weekday AM, weekday PM, Saturday peak hours with all approach movements operating at Level of Service D or better during the analyzed peak hours. Only NYS Route 9W at New MainStreet would need a signal adjustment to improve all approach movements operating at Level of Service D or better.
- During the Build Condition, all the unsignalized intersections studied operates at Level of Service D or better during the analyzed peak hours except for the following:
    - Broad Street/West Broad Street at Broadway which had some impacts with a Level of Service F in the eastbound and westbound PM peak hours. By installing all-way stop control, the Level of Service was improved to Level of Service B or better.

- Westside Avenue/Broadway at Samsondale Avenue which had some impacts with a Level of Service F in the eastbound AM and PM peak hours. By installing all-way stop control, the Level of Service was improved to Level of Service D or better.
- Broad Street at Liberty Street which is proposed as the entrance/exit to the proposed Apartment Complex had some impacts with a Level of Service F in the northbound AM peak hours. By installing all-way stop control, the Level of Service was improved to Level of Service B or better.

According to the analysis in **Chapter 3L**, the Project site parking layout and overall supply are well balanced with the aggregate parking demand across all programmed uses on the site. In addition, the overall parking strategy results in ample midday parking capacity for public parking to access waterfront park features.

During the busiest phase of construction, truck trips would be required daily to complete the necessary excavation and material transport for building construction, and heavy equipment (e.g., excavators, backhoes, bulldozers) would be used to excavate and grade soil, and load dump trucks. This temporary increase in traffic and operation of construction equipment is unavoidable.

Demographics

It is anticipated that that the Proposed Action will have no significant cumulative impacts within the Village related to demographics. As noted in **Chapter 3D.1, Demographics**, the proposed Project of 450 residential units will add an estimated population of 798 additional residents to the Village of Haverstraw. Of the 450 residential units, 133 will be affordable housing units and 317 will be market rate. The Project and two additional projects in the Village add a total of 751 much-needed affordable and market rate housing units to the housing stock of the Village.

Schools

The Project Site is located within the North Rockland Central School District. The Proposed Project would result in approximately 49 public school aged children. It is anticipated that the Proposed Action and the other recently constructed or approved projects in the Village will have no significant cumulative impact upon the North Rockland School District.

Police Department

The Town of Haverstraw Police Department serves the Village of Haverstraw, the Village of West Haverstraw and the area of the Town outside the two Villages. It is anticipated that the Proposed Action and the other recently constructed or approved projects in the Village will have no significant cumulative impact upon the Town of Haverstraw Police Department.

Fire Department

The Village of Haverstraw Fire Department serves the Village of Haverstraw. It is anticipated that the Proposed Action and the other recently constructed or approved projects in the Village will have no significant cumulative impact upon the Village of Haverstraw Fire Department.

Emergency Services (EMS)

The Town of Haverstraw Volunteer Ambulance Corps serves the Village of Haverstraw, the Village of West Haverstraw and the area of the Town outside the two Villages. It is anticipated that the Proposed Action and the other recently constructed or approved projects in the Village will have no significant cumulative impact upon the Town of Haverstraw Volunteer Ambulance Corps.

Solid Waste
As discussed in **Chapter 3D.4, Solid Waste**, solid waste collection, recycling and disposal will be provided by a private waste carter during construction and upon completion of the project. As all solid waste collection and recycling collection will be completed by a private carter, there will be no significant cumulative adverse impact on the Village or surrounding communities as a result of the Project.

Recreation and Open Space
As discussed in **Chapter 3D.5, Recreation and Open Space**, approximately 4.2 acres of the Project Site will become new parkland for public use. The open space and recreational opportunities to be provided on the Project Site and at the Admiral's Cove development provide for new open spaces within the Village and along the waterfront and thus result an overall positive cumulative impact on recreation and open space in the Village.

ENERGY USE AND CONSERVATION

SEQRA requires that lead agencies identify and assess potential adverse environmental impacts and prevent or mitigate such impacts to the maximum extent practicable. Consistent with this requirement, SEQRA can be used to identify and assess climate change impacts, as well as steps to minimize the release of greenhouse gas emissions (GHGs) that cause climate change.

The following is an assessment of energy conservation and GHG emissions from the Project:

Site Preparation and Project Construction
Clearing, grading, driveway, and parking lot construction; installation of utilities and site infrastructure; and construction of the various buildings would require the use of construction vehicles, heavy equipment, and power tools such as chainsaws that utilize nonrenewable fossil fuels. Energy use and GHG impacts would occur on-site, as well as off-site along roadways from construction vehicle traffic and manufacturing of building materials and equipment.

Tree Removal
The removal of trees and other vegetation that absorb carbon dioxide (CO_2) and generate oxygen would also have an impact, albeit a small impact with a project of this type and scale. The replacement trees and plantings would help to partially offset the CO_2 impact of the tree removal, and invasive species are to be removed form the site.

Construction Vehicle Traffic
Operation of construction vehicles and equipment during construction would utilize energy resources, particularly diesel fuel and gasoline, and in turn release GHGs. To reduce the amount of GHGs, the prolonged idling time of construction vehicle and equipment will be limited when possible.

Building/Site Design and Operation Measures
The Project incorporates several buildings which will require heating, ventilation and air conditioning (HVAC) systems order to function properly. An increase in energy demand and associated GHG emissions can be expected during project facility operation.

LED lighting would be used for all indoor, outdoor, and emergency lighting. Lighting plans would be designed to reduce light-related impacts such as excessive lighting, light trespass, glare, impacts on nocturnal wildlife, as well as excess energy demand.

CLIMATE CHANGE

The Project includes various strategies to reasonably reduce nonrenewable energy consumption and curb the release of GHG emissions. Significant adverse energy related impacts are not expected from this essential facility.

Energy Conservation

- Solar panels are being considered on several of the Project's rooftops.
- The Project will connect to the existing street grid, sidewalks, pedestrian and bicycle trails to encourage less automobile usage.
- Energy conservation techniques would be universally implemented in the design and operation of the facility.
- Exterior lighting would be limited to only what is necessary.
- Lighting systems would consist of LED fixtures to reduce energy demands.
- Illumination levels and conservation strategies would be based on the NYS energy conservation code, electrical code, and recommendations of the Illuminating Engineers Society of North America.
- Energy conservation measures would be instituted.
- The lighting systems would be designed to include energy conservation strategies.

Construction Related Energy Conservation

- Reduce impervious surfaces through the use of pervious pavement and green roofs.
- Promote and facilitate the recycling of garbage and other solid wastes on the Site.
- Limit the area of disturbance and removal of existing trees and shrubs and plant 120 new trees.
- Limit prolonged construction vehicle and equipment idling time when possible.
- Retain reusable soil on-site to the extent practicable.

Sea Level Rise and Flooding

As discussed in **Chapter 3J, Floodplains and Sea Level Rise**, the project elements most exposed to sea level rise and flooding are the public promenade and open spaces, the surface parking at the north end of the site, and the hotel.

1.9. ALTERNATIVES

Alternatives were identified that represented reasonable and feasible land use, technology and other options to the Project that would achieve the Project Sponsor's objectives and remain within their capabilities and potentially reduce environmental impacts. For the subject application, the following alternatives were specified in the Scope:

- Alternative 1: No Build (Discuss the scenario where the status of existing land use remains unchanged).
- Alternative 2: No Action (Discuss the scenario in which buildout were to occur under current zoning based upon the 2003 SEQRA analysis adopting the current Waterfront Planned Development District (WPDD).)

- Alternative 3: Alternative Plan Based on Identified Significant Environmental Impacts (As a result of the DEIS analysis, if a significant environmental impact is identified that cannot be mitigated without a change in the site plan, the revised site plan will be evaluated under this Alternative.)
- Alternative 4: All Proposed Buildings would be Built Above the Flood Base Elevation. (Discuss the scenario in which all buildings would be constructed above the Flood Base Elevation.)
- Alternative 5: No Hotel. (Discuss the scenario in which the hotel is not constructed.)
- Alternative 6: Reduced Footprint Alternative. (Discuss an alternative where the project sponsor is unable to purchase one or more of the project parcels that are not currently owned by the project sponsor or Village of Haverstraw.)

Table 1.2, Comparison of Project Alternatives provides a summary of each of the alternatives.

ALTERNATIVE 1

This alternative anticipates that the status of the existing land use, including vacant waterfront property and residential properties, will remain unchanged. In other words, there would be no improvements done to the Site, including but not limited to land disturbance, grading, placement of buildings, vehicle/pedestrian improvements, landscaping, or shoreline improvements.

ALTERNATIVE 2

This alternative anticipates that the Proposed Action is not implemented. In other words, this alternative considers if buildout were to occur under the current Waterfront Planned Development Zoning District as analyzed in the 2003 SEQRA analysis. This analysis established a Project area of "five land use sub-areas designated as Sites A through E." Sites C through E essentially correspond to the Project Site. **Figure 5.1, Map 5A Proposed Waterfront Promenade from the 2005 Village of Haverstraw LWRP** shows the location of these Sites.

ALTERNATIVE 3

This alternative incorporates any changes to the Project needed as a result of the DEIS analysis. If a significant environmental impact was identified that could not be mitigated without a change in the site plan, the revised site plan will be evaluated under this Alternative. As shown throughout this DEIS, the Project will not result in an unmitigated significant environmental impact. As a result, any further analysis of this alternative is not necessary.

ALTERNATIVE 4

As described in **Chapter 3J, Floodplains and Sea Level Rise**, the Proposed Project incorporates parking structures at elevation 7' (NAVD88), with lowest habitable spaces at elevation 16' for the hotel and Building 4. Therefore, the Proposed Project already establishes all construction above the base flood elevation of the effective FEMA Flood Insurance Rate Maps (FIRMs). This alternative therefore assesses the comparative impacts of increasing the parking structure elevation above the Advisory Base Flood Elevation (elevation 11').

Table 1.2: Comparison of Project Alternatives

	Proposed Action	Alternative 1: No Build	Alternative 2: No Action	Alternative 3: Alternative Plan Based on Identified Significant Environmental Impacts	Alternaive 4A: All Proposed Buildings would be Built Above the Base Flood Elevation.	Alternative 4B: All Proposed Buildings would be Built Above Elevation 9'.	Alternative 5: No Hotel	Alternative 6: Reduced Footprint Alternative
Description	-	The status of existing land use remains unchanged.	If buildout were to occur under the current 2003 SEQR analysis adopting the current Waterfront Planned Development District (WPDD)	As a result of the DEIS analysis, if a significant environmental impact is identified that cannot be mitigated without a change in the site plan, the revised site plan will be evaluated under this Alternative.	All buildings would be constructed above the Flood Base Elevation.	All buildings would be constructed above elevation 9'.	If the Hotel is not constructed.	If the Project Sponsor is unable to purchase one or more of the project parcels that are not currently owned by the Project Sponsor or Village of Haverstraw.
# Residential Units	450 units	0	225 units	N/A	450 units	450 units	450 units	446 units
Hotel Keys	86	0	55	N/A	86	86	0	86
Retail/Community Space	13,000 sf	0	15,000 sf	N/A	13,000 sf	13,000 sf	13,000 sf	13,000 sf
Areas of Disturbance	412,624 sf	0	412,624 sf	N/A	412,624 sf	412,624 sf	412,624 sf	404,792 sf
Open Space	4.2 acres of new parkland	No alienation of 0.1 acres of Emeline Park	Development of waterfront promenade/trailway	N/A	4.2 acres of new parkland	4.2 acres of new parkland	4.2 acres of new parkland	4.2 acres of new parkland
Fill	-2,500 CY	0 CY	-2,500 CY	N/A	28,663 CY	-500 CY	-2,500 CY	-2,500 CY
Incremental Water and Sewer Usage	Water: 90,770 gpd Wastewater: 90,770 gpd	Water: 0 gpd Wastewater: 0 gpd	Water: 53,920 gpd Wastewater: 53,920 gpd	N/A	Water: 90,770 gpd Wastewater: 90,770 gpd	Water: 90,770 gpd Wastewater: 90,770 gpd	Water: 71,570 gpd Wastewater: 71,570 gpd	Water: 90,330 gpd Wastewater: 90,330 gpd
Residential Population	836	46	378	N/A	836	836	836	829
School-age Children (public)	59	10	19	N/A	59	59	59	56
Parking	589	0	432	N/A	589	589	591	605

ALTERNATIVE 5

This alternative anticipates the Project Site is developed in a similar manner to the Project, with Building 1-4 built following the same layout as the Project. The only change to the Site Plan would be the replacement of the hotel with a parking lot. This change results in an additional two spots for the Project Site, as the 71 proposed with the hotel would become 73. Moreover, the spots would be public parking, as the valet service associated with the Hotel would not be needed. The layout related to this alternative can be found in **Appendix N, Alternatives**.

ALTERNATIVE 6

This alternative anticipates the Project Site is developed but the Project Sponsor is unable to purchase one or more of the project parcels that are not currently owned by the Project Sponsor or Village of Haverstraw. More specifically, the analysis below is based on the property 8 Allison Street being removed from the Project and the existing dwelling remaining in place The number of residential units is reduced from 450 to 446, and the total parking is increased to 605 spaces, an increase of 16 spaces. The overall design of the Site is largely unchanged, with the exception of Building 2 no longer having frontage on Allison Street. As a result, Building 2 does not have a layout that emphasizes nor maximizes views of the Hudson River. The courtyard between Buildings 1 and 2 would be smaller, and the internal courtyard of Building 2 would also decrease in size. Building 2's unit count would increase from 128 units over 6 floors to 137 over 5 floors. This increase would lead to the sixth floor of Building 1 needing to be removed to remain within the permitted maximum of 450 units for the Site. Otherwise, Buildings 1, 3, and 4 as well as the Hotel remain largely the same. The layout related to this alternative can be found in **Appendix N, Alternatives**.

SUMMARY AND CONCLUSIONS

The above analysis of project alternatives provides a basis for comparing some of the characteristics, benefits, and potential impacts of alternative actions with those of the Proposed Action. Future conditions and potential impacts and benefits under Alternative 4, 5, 6, and the Proposed Project are similar in some respects but different in others. Alternative 4A would be cost prohibitive to the Project Sponsor. Alternative 4B would provide some cost savings to the Project Sponsor and would not otherwise have appreciable differences with the Proposed Project. Alternative 5 and 6, while not very different in overall impacts to the Proposed Action, would result in a decrease in economic benefits to the project and community due to the reduction in the overall development program. The main issue associated with No Action and Alternative 2, is that these actions are not in keeping with the goals or mission of the Village. The Proposed Action meets the mission and goals of the Village while minimizing the environmental impacts associated with the Project.

2. PROJECT DESCRIPTION

2.1. INTRODUCTION

This Draft Environmental Impact Statement (DEIS) has been prepared pursuant to the standards and requirements of the New York State Environmental Quality Review Act (SEQRA) and its implementing regulations contained in part 617, Title 6 of the New York's Code of Rules and Regulations (6 NYCCRR 617). It was prepared by the Lead Agency - the Village of Haverstraw Board of Trustees (the "Village Board") - to consider the potential impacts of the redevelopment and rezoning of the Chair Factory Site (the "Project Site" or "Site") as proposed by Haverstraw Community Chair Factory, L.L.C., (the "Project Sponsor"). **Appendix A, SEQR Documents**, contains the long Environmental Assessment Form and the Lead Agency's Declaration and Determination of Significance.

The Proposed Action includes the redevelopment of the Project Site and the establishment and "landing" of a new zoning overlay district, the Planned Development District. The redevelopment of the site will consist of a mix of residential, hotel, commercial, public, and open space uses as well as related infrastructure and public amenities. The zoning overlay is based upon recommendations in the Village of Haverstraw's 2021 Comprehensive Plan and includes form-based zoning regulations that foster a predictable built environment and high-quality public realm by using physical form, rather than separation of uses. The overlay would not replace the Project Site's underlying zoning rules and regulations. The zoning overlay is proposed to be applied to defined Development Districts (the Chair Factory Site, or Subject Site, is the first and only defined Development District described in the Zoning Overlay).

An Environmental Impact Statement (EIS) is a document used to systematically consider significant adverse environmental impacts, evaluate a reasonable range of alternatives, and propose mitigation. An EIS facilitates the weighing of social, economic, and environmental factors early in the planning and decision-making process. This document describes the Proposed Action in detail, outlines its purpose and benefits, identifies anticipated environmental impacts, and identifies appropriate mitigation measures to avoid or alleviate potential adverse significant impacts to the maximum extent practicable as required by SEQRA. The DEIS also considers alternatives to the Proposed Action. This DEIS provides essential information and analyses that are necessary for the Village Board, as the Lead Agency for this SEQRA review, to render an informed decision on the merits and environmental implications of the Proposed Action before any final decision on the Proposed Action is made.

2.2. PROJECT BACKGROUND, NEED, OBJECTIVES AND BENEFITS

PROJECT BACKGROUND

The Project Site is located on the Haverstraw waterfront, adjacent to the Hudson River. The Project Site immediately adjoins the Hudson River to the East, parkland to the north and south, and a residential neighborhood with a mix of single-, two-, three- and multi-family residences intermixed with places of worship and community service uses to the west. The Village's Downtown Central Business District, consisting largely of mixed residential and commercial use buildings, also abuts the project site to the west.

The Project Site is the location of the former Empire Chair Factory, a factory that was demolished circa 2004 in connection with an Urban Renewal Plan to allow for the planned redevelopment of the Project Site as

part of the "Haverstraw Downtown Waterfront Redevelopment" which underwent SEQR review and for which the Village of Haverstraw Board of Trustees, acting as lead agency, issued findings in 2003. The Project Site, at that time, received zoning approval for 210 units of multi-family housing; 65,000 square feet of hotel, retail, and service commercial; a 500-space commuter parking garage; the relocation of the Haverstraw-Ossining Ferry and various sundry uses. Ultimately, site plan approval for construction on the Project Site in conformance with the approved urban renewal plan and zoning approval was not sought by the original private redevelopment partner.

After completing an updated Comprehensive Plan process in July 2021, the Village Board embarked on a process to identify a new private redevelopment partner. A Request for Proposal (RFP) was issued on July 12, 2021, and the Project Sponsor was selected on February 9, 2022, as the "Master Developer." On September 30, 2022, the Village of Haverstraw and the Project Sponsor executed a Master Developer Agreement and Purchase and Sale Agreement. The Project Sponsor then embarked upon a process of gathering additional site information, reaching out to key community stakeholders, and holding several "Crowdsourced Placemaking" events to develop a "Recommended Action Plan (RAP)," which refined the guiding principles and initial concepts developed in response to the RFP. These guiding principles and concepts are the basis for the form-based zoning and conceptual development plan that is the subject of this DEIS.

PUBLIC NEED AND OBJECTIVES

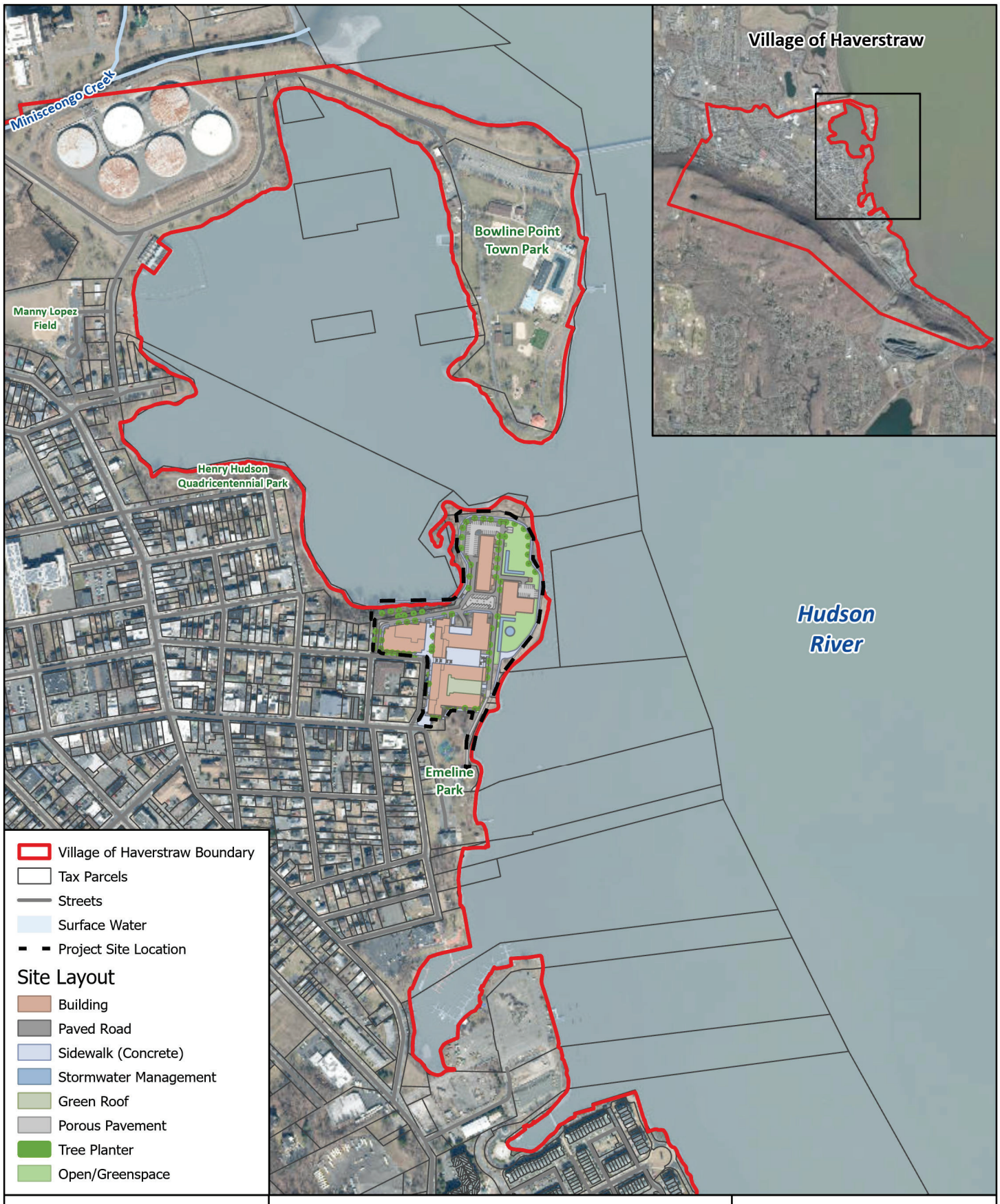
The Project Site was identified in the Comprehensive Plan, adopted in July 2021, as a strategic site for redevelopment. The goal of redevelopment was to improve a long-blighted site with pedestrian-friendly, mixed-use development with public and private amenities that would serve as an anchor for the Village's Downtown by attracting economic activity to the area year-round.

BENEFITS OF THE PROJECT

As noted in the Comprehensive Plan, several desired public improvements were highlighted to be associated with redevelopment of the Project Site, including: extension of Henry Hudson Quadricentennial Park trail to Emeline Park, public assembly space, and affordable housing. The proposed Project looks to achieve many of these outlined goals, while ensuring that the development complements the uses and scale of the Village and Downtown Haverstraw. There is a trail proposed with the Project, finalizing the connection between the Henry Hudson Quadricentennial Park and Emeline Park. The proposed waterfront improvements will serve as a public assembly space, allowing the residents to gather for events and enjoy the proposed retail and commercial spaces. Additionally, with thirty to forty percent of the units being affordable, the Project looks to fill a gap in the housing market for the Village. The Comprehensive Plan also identified multi-family, mixed, and hotel uses as preferred uses for the Project Site, all of which are proposed as a part of the Project. Overall, this Project aligns with the Comprehensive Plan to properly develop an identified Strategic Site in the Village.

2.3. LOCATION AND SITE CONDITIONS

The Village owns multiple waterfront properties totaling approximately 12.9 acres (8.7 upland acres, including 0.1 acres to be alienated from Emeline Park). The Project Sponsor is also trying to secure ownership and control of a few other properties totaling approximately 0.6 acres. Together, these properties are collectively known as the "Chair Factory Site" or the "Project Site". **Figure 2.1, Regional Location,** shows the Project Site in terms of its location within the surrounding area.



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Figure 2.1
Regional Location

Sources: Rockland County GIS, 2023
Scale: 1 inch equals 596 feet

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Chair Factory DEIS
Village of Haverstraw

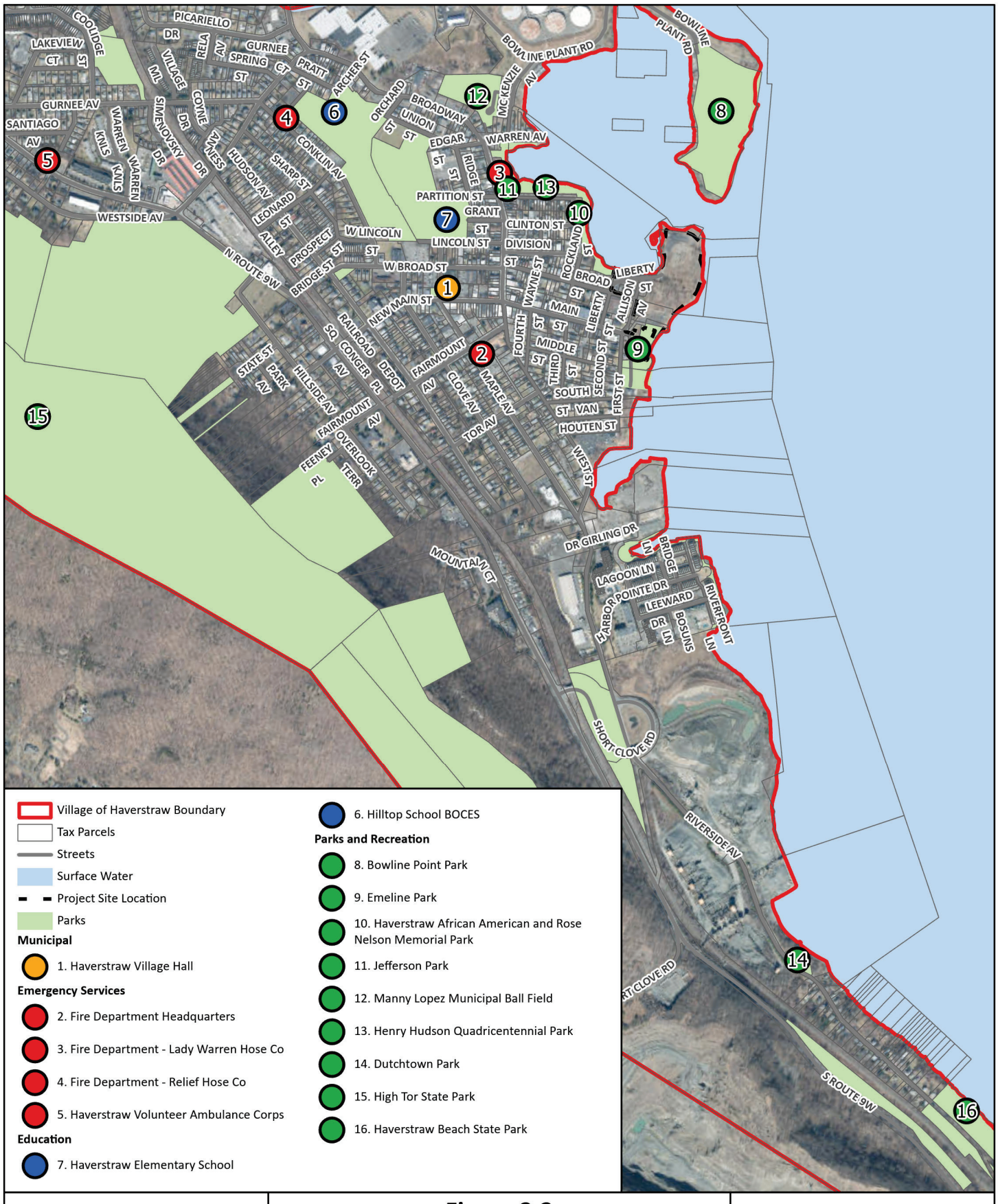
The Project Site involves a total of 12 parcels. Eight of the parcels are currently owned by the Village, and the remaining four the Project Sponsor is hoping to secure ownership and control. One of the parcels, SBL: 27.54-2-16 is Emeline Park. The Project Sponsor, along with the Village, will be seeking alienation by the New York State Legislature for approximately 6,000 SF (0.1 acre) of Emeline Park that is proposed to be used in the Project in exchange for the creation of approximately 4.2 acres of new parkland strategically connecting Emeline Park to Henry Hudson Quadricentennial Park. **Table 2.1, Tax Parcels and Ownership,** below provides the tax parcel identification, or SBLs, the ownership, and the size of involved parcels.

Table 2.1: Tax Parcels and Ownership

OWNERSHIP	SBL	ACRES
Village of Haverstraw	27.05-2-6.6	1.5 (including submerged land)
	27.09-1-3	9.8 (including submerged land)
	27.46-1-80	1.0
	27.46-1-81	0.2
	27.46-1-84	0.1
	27.46-1-85	<0.1
	27.46-1-86	0.2
	27.54-2-16	0.1 (to be alienated)
9 Allison Ave LLC	27.46-1-77	0.3
County of Rockland Rentals	27.46-1-78	0.2
Ramon A. Cruz	27.46-1-82	0.1
4 Allsion Ave Corp	27.46-1-83	0.1

The Project Site is located within two Zoning Districts: the eastern portion of the Site, located east of Allison Avenue, is in the Waterfront Development District (WD), and the western portion of the Site, fronting on Broad Street, is in the Third Residence District (R-3). The entirety of the project site is also located in the WPD, Waterfront Planned Development District.

The Site will be serviced by the Town of Haverstraw Police Department and the Haverstraw Fire Department. The Project Site is located within the Central North Rockland School District. **Figure 2.2, Project Site and Community Services,** shows the location of the Project Site in relation to nearby public services.



NPV

Figure 2.2
Project Site and Community Services

Sources: Rockland County GIS, 2023
Scale: 1 inch equals 1,167 feet

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Village of Haverstraw

2.4. CONCEPTUAL PROJECT DESIGN AND LAYOUT

OVERALL CONCEPTUAL SITE LAYOUT

The Project Sponsor proposes the following conceptual uses and has developed a conceptual plan for the purpose of assessing project-related impact. This concept plan is hereafter referred to as the "Project Sponsor's Preferred Plan" or "Preferred Plan." The Preferred Plan includes: (i) 450 multi-family residential units, with approximately 43 percent of said units qualifying as affordable units[2] (with 30 percent of these at 30 to 80 percent AMI and 13 percent at 80 to 110 percent AMI) as determined by New York State Homes and Community Renewal, and in compliance with the Village's affordability requirements, (ii) 13,000 square feet of community and commercial space, (iii) 589 parking spaces in a mix of structured and surface parking, and (iv) an 69,000 square feet hotel . In addition, the Preferred Plan includes infrastructure and public amenities, including 4.2 acres of parkland with a waterfront multi-use trail, dog park, and amphitheater. **Figure 2.3, Preferred Plan,** shows the Preferred Plan and improvements.

RESIDENTIAL COMPONENTS

The Preferred Plan will consist of 450 multi-family residential units, with approximately 43 percent of said units qualifying as affordable units[3] (with 30 percent of these at 30 to 80 percent AMI and 13 percent at 80 to 110 percent AMI) as determined by New York State Homes and Community Renewal, and in compliance with the Village's affordability requirements.

The Preferred Plan divides residential units among four buildings: Building 1 with 167 units, Building 2 with 128 units, Building 3 with 71 units, and Building 4 with 84 units. Forty-eight percent of the units (217 units) are conceived as one-bedroom units, thirty-two percent of the units (144 units) as two-bedroom units, fifteen percent of the units (67 units) as studio units, and five percent of the units (22) as three-bedroom units (see **Figure 2.3, Preferred Plan**). There are 496 structured parking spaces associated with the four buildings. The section on parking below provides additional information regarding the overall parking associated with the concept. The Preferred Plan includes 20,570 square feet of residential amenity space associated with the residential buildings including a front desk attendant, lobby, mailroom, fitness center, community meeting/entertainment space, bike storage and EV charging areas. All of the residential uses are intended to be built in a single phase. The phasing of the Preferred Plan is further discussed in this chapter.

NON-RESIDENTIAL COMPONENTS

The Preferred Plan includes a hotel, retail spaces, and community spaces. All non-residential components, except for the hotel, are contained within the residential structures described previously and thus will be constructed concurrently with the residential construction. The hotel is intended to be a second phase of the Preferred Plan. The phasing of the Preferred Plan is further discussed in this chapter.

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[2] Affordable units are defined as units marketed to individuals or households earning between thirty and one-hundred percent of the Rockland County, NY Housing and Urban Development (HUD) Metro Fair Market Rental (FMR) Area Annual Median Income (AMI).

[3] Affordable units are defined as units marketed to individuals or households earning between thirty and one-hundred percent of the Rockland County, NY Housing and Urban Development (HUD) Metro Fair Market Rental (FMR) Area Annual Median Income (AMI).



NPV

Figure 2.3
Preferred Plan

Sources: Rockland County GIS, 2023
Scale: 1 inch equals 156 feet

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Chair Factory
Village of Haverstraw

Hotel
The Preferred Plan includes a 69,000 square foot hotel consisting of approximately 86 to 120 units. The hotel will have direct views of the Hudson River, along the eastern most portion of the Project Site. The Preferred Plan includes 71 parking spaces associated with the hotel, 50 beneath the hotel and 21 surface spaces.

Retail
The Preferred Plan also includes 8,000 square feet of retail space, to be located within Buildings One and Two. There are a total of six available retail spaces, ranging in size from 580 to 2800 square feet.

Community
The Preferred Plan includes 5,000 square feet of space to be used as three community spaces. These will include a soldiers' or non-profit partner to provide services – case management, employment resources, healthcare assistance – to veterans, day care services, and employment services.

PARKING

The Preferred Plan distributes parking throughout the Site. The Preferred Plan includes a mix of 589 structured and surface parking spaces. Structured parking is divided into four parking areas totaling 192,700 square feet and 496 spaces. Parking associated with Buildings 1 and 2 will be publicly accessible. Parking for Buildings 3 and 4 will be private – resident and guest – parking. Hotel parking will be publicly accessible. Parking Area A consists of a shared footprint of two stories beneath Buildings 1 and 2. Parking Area B consists of two stories beneath Building 3, Parking Area C is one floor beneath Building 4 and Parking Area D consists of one floor beneath the hotel. There are also a total of 93 surface and street parking spaces available, of which 24 spaces will be publicly accessible. Buildings 1 and 2 will have an on-street loading area on Allison Avenue adjacent to Main Street. Building 3 will have on-street parking which can be reserved for loading associated with moving trucks on an as-needed basis. This building has no retail or community facilities associated with it. Building 4 will have an on-street loading area on the west side of Liberty Square. Lastly, the Hotel will have a loading area at the front entry to the building at Liberty Square.

OPEN SPACE, RECREATION, AND PUBLIC AMENITIES

There are multiple open space, recreation and public amenities associated with the Preferred Plan. In terms of public amenities, the Preferred Plan will provide the community with riverfront pathways, passive grass areas, active recreation areas, seating areas, direct access to existing playgrounds, and urban forestry. In addition, the Preferred Plan will provide the community with increased public parking. All exterior public space will be operated and maintained by the Village through subdivided ownership, easement, and use/occupancy agreements.

STREET NETWORK AND SITE ACESS

Vehicular access to the Site would be provided by the proposed Liberty Street extension. The Preferred Plan also proposes the development of several paved egresses allowing for vehicular access to the hotel, Building 4, and the parking garage entrance beneath Buildings 1 and 2. Pedestrian access is available throughout the site as shown in the Site Access Routes sheet in **Appendix B, Site Plans** and will include the development of

a trail to connect the Henry Hudson Quadricentennial Park and Emeline Park. All roads, sidewalks, and paved areas will meet the design standards required by the Village.

CLEARING, GRADING, DRAINAGE AND SHORELINE STABILIZATION

Most of the site is generally level, with steep slopes along the western portion of the site. Grading would occur within the limits of disturbance of the Project Site, which generally includes the footprint of the proposed buildings, stormwater management basins, associated paving and public amenities. Within the limits of disturbance, roadways would be appropriately designed, with an approximately eight percent slope along the proposed Liberty Street extension.

Excavated soils on-site would be reused to the maximum extent practicable. However, 2,500 cubic yards of fill will be exported from the Project Site to account for excess cut. The Project requires 22,000 cubic yards of cut and 19,500 cubic yards of fill. Stormwater runoff and site drainage would include the installation of green roofs, stormwater planters, porous pavement, hydrodynamic separators, bioretention filterers, and tree planters. All stormwater management practices would be sized to treat stormwater runoff for water quality and volume reduction generated from the Project Site's impervious area for the 100-year and 500-year storm. The Project incorporates two kinds of shoreline stabilization, including living shoreline improvements to the northeastern shoreline and riprap revetment to the remaining areas of shoreline.

WATER SUPPLY AND SANITARY SYSTEM

The Project will receive its water supply through an extension of an existing water main on Broad Street. The sanitary system will include a force main connection to an existing sewer system line on Allison Avenue. The force main will run down the Liberty Street extension to a pump station along the northern end of the Site. All proposed buildings will connect to the water and sewer extensions, excluding Building 3 which will have a sewer connection to an existing line on Broad Street. Water and sanitary extensions located in the Liberty Street extension will be under Village ownership and maintenance.

SITE LIGHTING AND LANDSCAPING

Site lighting and a landscaping plan can be found in **Appendix B, Site Plans**. The Project will include both interior and exterior lighting. There are three types of exterior lighting proposed for the Project Site including 12-foot-tall pedestrian lights, 12 foot-tall street lights, and 31.5 inch tall bollard lights for walkways. The Project includes 15 streetlights, seven pedestrian lights, and 23 solar bollard lights. All lighting will comply with the proposed zoning and related lighting requirements. Moreover, lighting at night will be tuned to the minimum necessary for the safety of drivers and pedestrians in the area, minimizing excessive lighting. Landscaping will include various trees, shrubs, and grasses, to enhance the visual appearance of the Site.

CONSTRUCTION SCHEDULE AND OPERATIONS

Construction is estimated to span 29 months and include two phases as well as site work, some of which would take place concurrently. **Table 2.2, Construction Schedule**, shows a breakdown of each phase and how many months each phase would take. The estimated duration of each phase is weather dependent and subject to change.

Table 2.2: Construction Schedule

CONSTRUCTION PHASE	START	FINISH	TOTAL # OF MONTHS
Site Work	September 2024	January 2027	29
Phase I- Buildings 1 & 2	October 2024	July 2026	22
Phase II-	January 2025	November 2026	23
Building 4	January 2025	September 2026	21
Building 3	March 2025	November 2026	21
Hotel	May 2025	January 2027	21
Note: Number of months are subject to change.			

All construction staging and workers' parking is proposed to be located on the Project Site. Construction vehicles will access the site from Liberty Street, and no queuing of construction vehicles will occur on Liberty Street. As required by Chapter 157, Noise, of the Village Code, no construction will take place after 10:00 p.m. or before 7:00 a.m.

PERMITS AND APPROVALS

A number of permits and approvals are required over the course of the Proposed Action from the Village of Haverstraw, Rockland County, New York State and federal agencies. **Table 2.3, Permits and Approvals** outlines the agencies and associated permits and approvals for the Proposed Action. State and local agencies listed below are considered "Involved Agencies" where such agencies have discretion over permit issuance, approval or funding. Federal agencies are not subject to SEQR.

Table 2.3: Permits and Approvals

AGENCY	APPROVAL/REVIEW
Village of Haverstraw Village Board	• Zoning Text Amendment • Site Plan
Village of Haverstraw Building Department	• Street Opening Permit
Village of Haverstraw Architectural Review Board	• Review and Approval of Architectural • Plans
Village of Haverstraw Planning Board	• Subdivision • Review and Recommendation on Site Plan
Rockland County Health Department	• Water and Sanitary Sewer service
New York State Department of Environmental Conservation	• Stormwater Pollution Prevention Plan (SWPPP) • Tidal Wetlands • Excavation and Fill in Navigable Waters • 401 Water Quality Certification • SPDES
Haverstraw Waterfront Advisory Commission	• Waterfront Revitalization Program consistency review
Army Corps of Engineers	• Section 404 Clean Water Act; • Section 10 Rivers and Harbors Act
Haverstraw Flood Permit Administrator	• Construction within a Flood zone
Rockland County Drainage Agency	• Subdivision
Joint Regional Sewerage Board	• Sewer Permit
New York State Department of State	• Waterfront Revitalization Program Consistency
New York Division of Housing and Community Renewal	• Possible Funding
Empire State Development	• Possible Funding
Federal Emergency Management Agency	• Possible Map Amendment
New York State Office of Parks, Recreation and Historic Preservation	• Section 106 Review
New York State Legislature	• Alienation of Parkland

3. ENVIRONMENTAL IMPACTS

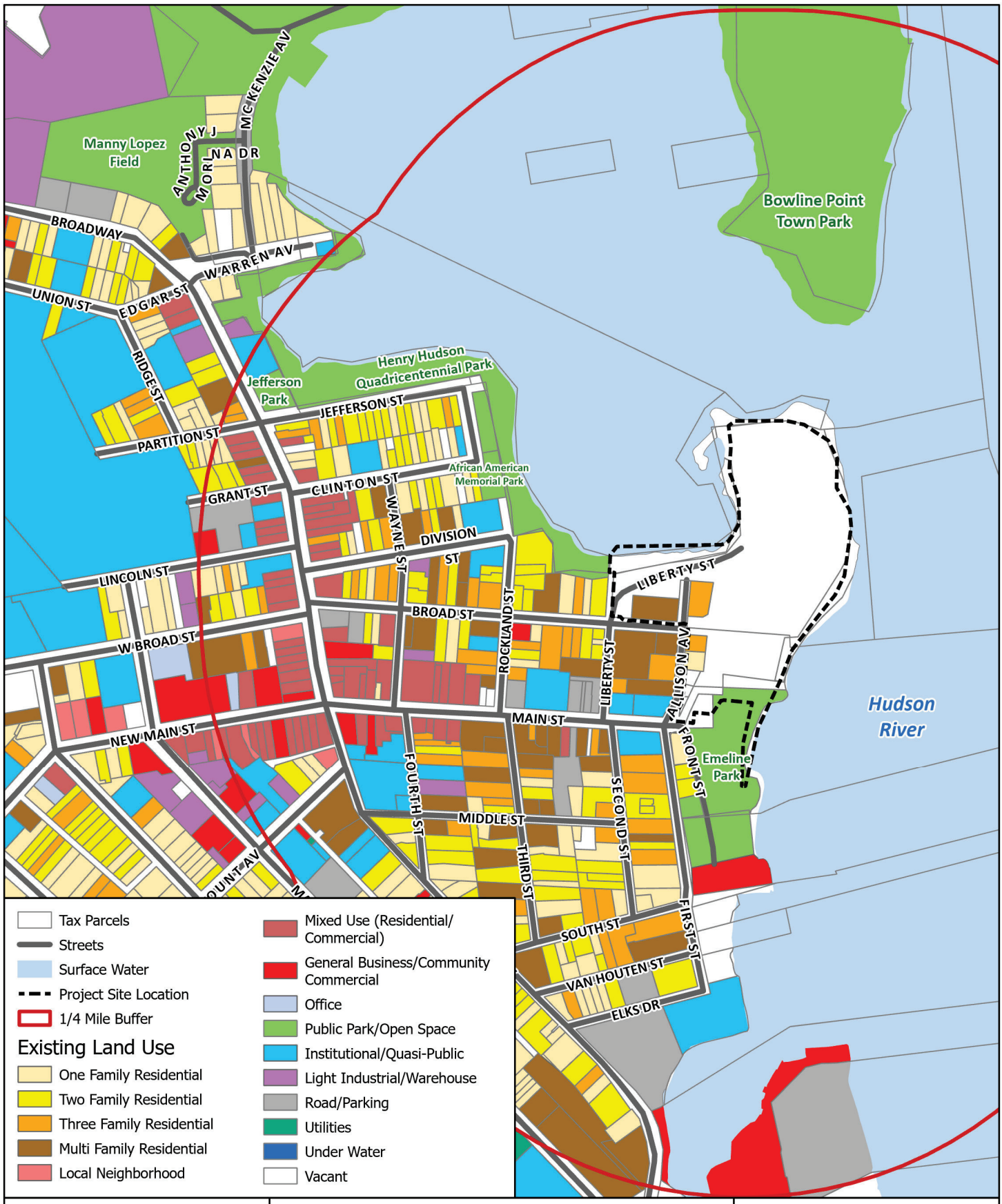
3.A. LAND USE, ZONING AND PUBLIC POLICY

3.A.1. LAND USE

EXISTING CONDITIONS

The majority of the Project Site is vacant property, mostly wooded or cleared with some paved roadways. Four multi-family residences occupy a small portion of the site, with three located along the east side of Allison Avenue north of Main Street and one located on the north side of Broad Street west of Allison Avenue. A small portion of the Project Site is used as grassed open space area and a stone overlook structure as part of Emeline Park. The project parcels also include submerged land, but no use of these lands is proposed as part of the project.

The directly adjoining neighborhood along Broad Street and Allison Avenue are a mix of single, two- and three-family residences and multi-family residences. Several places of worship are interspersed throughout the adjacent residential neighborhood and other neighborhoods to the west. Also adjacent to the west of the project site is the Henry Hudson Quadricentennial Park, which includes a path from Liberty Street around the westerly short of Bowline Pond. Directly to the north, across Bowline Pond, is the Town of Haverstraw's Bowline Point Park. To the southwest, at the intersection of Main Street, First Street, and Allison Avenue, are the King's Daughters Library and a U.S. Post Office. Directly to the south of the Project Site is the Village's Emeline Park, with a mix of playgrounds, waterfront trails and parking. One of Haverstraw's two Head Start facilities is located just west of the Project Site at the intersection of Division Street and Rockland Street. A small overlook park is located at that intersection, and the larger African American Memorial Park and Jefferson Street Playground are located just to the north directly across the Bowline Pond (and adjacent to the Henry Hudson Quadricentennial Park) from the Project Site. **Figure 3.A.1**, **Existing Land Use** shows the various land uses surrounding the project site.



NPV

Figure 3.A.1
Existing Land Use

Sources: Rockland County GIS, 2023
Scale: 1 inch equals 426 feet

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Village of Haverstraw

Further beyond the directly adjacent neighborhoods and within a ¼ mile of the Project Site is the Village's Central Business District comprised of mostly ground-story retail and two stories of residential above along Main Street and Broadway. A mix of single-, two-, three- and multi-family residential uses front on secondary local streets branching out from Main Street and Broadway similar to the directly adjacent neighborhood along Broad Street. Further west on the opposite side of Broadway, is the Village's public and institutional center, comprised of a number of private and public schools and religious institutions.

To the south of the Project Site, along the Hudson River waterfront and beyond Emeline Park are a restaurant, steeply sloping residential front yards associated with the residences west of First Street, the Haverstraw Elks Lodge, a marina and the Haverstraw/Ossining Ferry terminal and parking lot.

POTENTIAL IMPACTS

The Project Site will remove the existing four residential structures, clear the existing wooded areas and replace the vacant areas currently covered with brush and grass with a mix of multifamily residential, hotel, retail/service commercial, public, and open space uses. The Project will reflect a similar mix of residential, commercial, and public land uses as is located to the west of the site in the Village's Central Business District. The Project proposes to include public parkland along the waterfront, including a pedestrian trail to connect to the two Village parks adjacent to the Site. As discussed in **Chapter 3B, Community Character and Visual Impacts** of this DEIS, it is expected that that proposed mixed-use development would be visible from the surrounding local streets and from the adjacent and nearby Village and Town of Haverstraw parks. While some of the existing Emeline Park would be used for a staircase and residential building, these facilities would be open to the public and available for people with limited mobility to access the waterfront and Emeline Park, which is currently not possible without a vehicle today. Additionally, 4.2 acres of new parkland is proposed, which is significantly more than is being eliminated for building and staircase construction. The waterfront parkland will link the Henry Hudson Quadricentennial Park to the west and north with Emeline Park to the south.

The redevelopment of the Project Site from its current use of vacant land, four residential properties and a small portion of Emeline Park to a mixed-use development including multi-family residences, a hotel, commercial, and parkland is consistent with the mix of uses existing in the adjacent Haverstraw Central Business District. The proposed waterfront open space and trail will continue the adjacent Henry Hudson Quadricentennial Park to the west and north and Emeline Park to the south and will greatly increase the length of connected trails along the Village's waterfront. The height and density of redevelopment as part of the Proposed Action is compatible with the adjacent Central Business District and is similar to recent waterfront residential development located to the south in the Village of Haverstraw (Harbors at Haverstraw and Admirals Cove).

MITIGATION MEASURES

No significant adverse impacts are anticipated, and mitigation measures are necessary.

3.A.2. ZONING

EXISTING CONDITIONS

The Project Site is located within two Zoning Districts: the eastern portion of the Site, located east of Allison Avenue, is located in the Waterfront Development District (WD), and the western portion of the Site, fronting on Broad Street, is in the Third Residence District (R-3), as regulated in Chapter 245, Zoning, of the Village of Haverstraw Code. The Central Business District (CBD) is located opposite Allison Avenue. Remaining lands within ¼ mile of the site are zoned Second Residence District (R-2), First Residence Townhouse District (R-1T) and Planning Industrial District (PI). It is noted that the portion of the project site is also located within the Waterfront Planned Development District and is zoned for up to 210 units of residential; up to 65,000 square feet of hotel, restaurant and retail use; and various sundry uses. **Figure 3.A.2**, **Surrounding Zoning,** shows the various Zoning Districts in the Project area.

The Village of Haverstraw identifies permitted uses in the WD district in Chapter 245, Attachment 12 - Table of General Use Regulations; the permitted uses in the R-3 district are identified in Chapter 245, Attachment 5 - Table of General Use Regulations. Dimensions for uses in the WD district and R-3 district are regulated in Chapter 245, Attachment 14 - Table of Bulk Requirements. For both the WD and R-3 districts, the Table of General Use Regulations lists "Uses Permitted by Right" and "Uses by Special Permit of Board of Appeals or Board of Trustees". Unlisted uses are prohibited.

For the various uses included in the Proposed Action, waterfront trails, parks and scenic overlooks are Uses Permitted by Right within the WD zoning district, while multiple dwellings, restaurants, excluding drive-in and fast-food establishments, business, professional and government offices are Uses by Special Permit in the WD district. Within the R-3 district, multifamily residences are Uses by Special Permit.

POTENTIAL IMPACTS

The Proposed Action will include the application of a new Zoning Overlay for Planned Developments at the Project Site. The Zoning Overlay will not replace the underlying zoning rules and regulations of the current Waterfront Development District (WD) and Third Residence District (R-3). The proposed Zoning Overlay for Planned Developments is included in **Appendix C, Zoning Overlay**. The Overlay District provides an alternative option for landowners to use in developing or redeveloping their land and buildings within defined districts within the Village. The Zoning Overlay is proposed to be applied to defined Development Districts (the Chair Factory Site, or Subject Site, is the first and only defined Development District described in the Zoning Overlay). The Zoning Overlay is based upon the Village of Haverstraw's 2021 Comprehensive Plan which recommended the establishment of development rules and procedures that helps create a holistic and comprehensive economic development strategy that utilizes the principles of social, economic and environmental responsibility to re-establish districts within the Village of Haverstraw as centers of vibrancy within a mixed-use and walkable setting. It is intended to create an opportunity for a more economically successful and environmentally responsible community with a more harmonious and pedestrian-oriented public realm than can be achieved through the existing regulations in the underlying zoning.



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Figure 3.A.2
Surrounding Zoning

Sources: Rockland County GIS, 2023
Scale: 1 inch equals 426 feet

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Village of Haverstraw

The Zoning Overlay development district proposed for the Project Site includes details and maps of zoning standards which require storefronts, building entryways and civic spaces in certain areas, areas where pedestrian paths, waterfront trails and "terminating vistas" are permitted, identifies certain street types, and defines and identifies locations for "significant corners". The Overlay, using diagrams, tables and cross sections, also details standards for streets and sidewalks, public and private frontage and building designs, and civic spaces. A list of permitted uses within the Chair Factory development district encourages a vibrant and complementary mix of uses, as well as flexible parking standards.

The Proposed Action would result in the redevelopment of the site into a mix of residential, hotel, commercial, public and open space uses.

MITIGATION MEASURES

Given the consistency of the land uses and densities to be permitted under the proposed zoning with the adjacent mix of land uses directly adjacent to, nearby in Downtown Haverstraw and along the Haverstraw waterfront no additional mitigation measures are necessary.

3.A.3. POLICY DOCUMENTS

EXISTING CONDITIONS

Village of Haverstraw 2021 Comprehensive Plan

The Village of Haverstraw adopted its Comprehensive Plan in July of 2021. The Plan includes existing conditions analyses of the Village and overviews of the public input and work of the Plan's taskforce. The Plan includes an aspirational Vision Statement on what the Village wishes to achieve over the following 10 to 12 years, as well as nine goals which are presented in the 10 chapters of the Plan, which include:

- Sustainability
- Land Uses and Zoning
- Transportation
- Natural Resources and Open Spaces
- Economic Development
- Historic and Scenic Resources
- Infrastructure and Utilities
- Social Systems
- Community Services and Facilities
- The Future

Of the nine Goals of the Comprehensive Plan, five are related to the Proposed Action and Project Site:

- Highlight the identity of the Hudson River to the Village of Haverstraw by enhancing scenic and physical connections to the river.
- Improve access to natural and recreational resources to all Village residents and visitors.
- Improve the diversity, marketability and profitability of downtown and other Village businesses.
- Maintain and enhance the sustainability of Village life.
- Strengthen transportation connections, alternatives and gateways.

Several chapters of the Comprehensive Plan include a focus on the Project Site and its role in the future of the Village, its downtown and riverfront. The Land Use and Zoning chapter of the Comprehensive Plan discusses and provides recommendations on nine "Strategic Sites" throughout the Village, one of which includes the Project Site. The Plan discusses the following for the Project Site:

- **Preferred Uses**: Single-family attached residential; mixed-use Village-style buildings with retail below; residential apartments above; hotel/conference/banquet facility; multi-family; restaurant.
- **Desired public improvements**: Extension of the Henry Hudson Quadricentennial Park (HHQP) trail to Emiline Park; canoe/kayak launch; public assembly space; tour boat dock; pedestrian link to Bowline Point Park; affordable housing.
- **Design Principles**: Maintain continuous public water access; mirror scale and pattern of Village downtown; provide an anchor use for downtown that attracts economic activity year-round; interconnect to Village road system; provide central public gathering space; construct above future projected flood elevations; respect view corridors from downtown and existing neighborhoods (height limits).
- **Implementation**: Develop master plan and form-based codes; consider subdividing the site into sectors each with an identified infrastructure improvement and public amenity prerequisite to development. Alternatively, partner with a single developer, but ensure that the development reflects the existing Village fabric and is not monolithic or out of character in scale and design.

Within the Transportation chapter the Project Site is included as part of, or within, several "Transportation Corridors, Hubs, Opportunity Areas and Open Spaces." These include:

- **Bowline Pond Greenway**: The Plan recognizes the opportunities related to continued improvements and linkages between the several land uses and open spaces around Bowline Pond.
- **Downtown Hudson Riverfront Corridor**: The Plan discusses linking the Village's downtown and the riverfront, and continuing the linking of riverfront open spaces, public access and trails.
- **Downtown Corridors**: The Plan notes the importance of the Main Street and Broad Street corridors, which link downtown to the Project Site. Main Street and Broad Street are noted for their potential role in enhancing the historic downtown and view of the Hudson River, and linking to the riverfront open spaces, trails and public access.

Also, within the Transportation chapter, the Plan makes a recommendation:

- **5.d.3: Develop and connect all waterfront greenways to create a cohesive network for pedestrians and bicyclists**. The Plan discusses the potential to link the downtown and residential neighborhoods to the riverfront as well as connect riverfront greenways with each other, including privately owned public spaces.

Village of Haverstraw 2005 Local Waterfront Revitalization Program and 2021 Update

The Village submitted a draft of their updated Local Waterfront Revitalization Program (LWRP) to New York State in 2021. The LWRP helps the Village evaluate local waterfront resources, develop goals and a comprehensive strategy for the best use of those resources, proposed future projects, and adopt a local program that will guide appropriate development. The draft is an update of the Village's 2005 Program which helped set the stage for development along the riverfront. As in the 2005 Program, the 2021 Draft LWRP identifies the Project Site for development with a mix of commercial, residential, public and open space uses. It notes the Project's connection to the adjacent African American Memorial Park and Emiline

Park, public access and affordable housing, as well as how the Project would maintain continuous public water access, mirror the scale and pattern of the downtown, provide an anchor use for the downtown that attracts economic activity year-round and interconnects to the Village road system.

Village of Haverstraw 2022 Downtown Revitalization Initiative Strategic Investment Plan

Following the selection of the Village of Haverstraw to receive $10 million in New York State funding through the Downtown Revitalization Initiative (DRI), the DRI Local Planning Committee (LPC) collaborated with the State and multi-agency State project team to develop the list of projects to recommend to the State for DRI funding. The Strategic Investment Plan (SIP) was developed to provide an analysis of existing assets and opportunities in downtown Haverstraw and establish the vision, goals, and strategies that will guide the implementation of the recommended projects. Fourteen projects were recommended for funding, and several are currently underway. One project is the construction of a 3,000 linear foot walkway and stabilization of the shoreline with riprap and native plantings around the Project Site to support the future mixed-use and mixed-income development and new publicly accessible open space.

Village of Haverstraw Affordable Housing Regulations

Article XI of the Village of Haverstraw Zoning Code requires the provision of no less than 10% of proposed units as affordable purchase or rental units. The maximum affordable income for a particular affordable unit shall be calculated by the HUD Rockland County Median Income multiplied by the Haverstraw Adjustment Factor and the household size calculations as listed in the Code. The Code allows an increase in density of one additional market rate unit for every affordable unit, an additional 1.5 units for each additional unit sold or rented to qualified families with adjusted gross incomes no greater than sixty percent of the maximum affordable income, and an additional two units for each additional unit sold or rented to qualified families with adjusted gross incomes no greater than sixty percent of the maximum affordable income. The maximum increase in density is up to twenty-five percent of the density otherwise permitted by zoning. An applicant may request an equivalent number of affordable rental housing units at another location in the Village or could request that a contribution be made in lieu of affordable rental units to the Village's Affordable Housing Fund, to be used to create affordable housing in the Village of Haverstraw.

POTENTIAL IMPACTS

The Village of Haverstraw 2021 Comprehensive Plan

The Proposed Action is consistent with the recommendations of the Village of Haverstraw Comprehensive Plan.

Five of the nine Goals listed in the Comprehensive Plan are accomplished through the Proposed Action:

- The Proposed Action enhances scenic and physical connections to the Hudson River by improving an existing and inaccessible site with a mixed-use development which extends pedestrian access from the adjacent streets into the site and creates new public spaces within the site with views of the Hudson River and creates a new riverfront trail that connects to African American Memorial Park and Emiline Park.

- The Proposed Action improves access to natural and recreational resources to all Village residents and visitors by creating a new publicly accessible riverfront trail with native plantings that connects two Village riverfront parks.
- The Proposed Action improves the diversity, marketability and profitability of downtown and other Village businesses by bringing new residents and commercial and open space activities to a site adjacent to the downtown.
- The Proposed Action maintains and enhances the sustainability of Village life by bringing a variety of new residents to help support downtown businesses and utilizes a currently vacant space with a mixed use development walkable to downtown.
- The Proposed Action strengthens transportation connections, alternatives and gateways by connecting the downtown to the waterfront with public sidewalks and pathways, and connects the waterfront pedestrian and bicycle trail at Henry Hudson Quadricentennial Park and Emeline Park.

The Comprehensive Plan also details various elements and features of the Proposed Action, particularly in its recommendations for a mix of uses at the site, the inclusion of public improvements, open space and trail linkages, continuation of the scale and pattern of downtown, and the development of a master plan and form-based code to guide the development of the site and incorporate the desired land uses, scale and urban fabric desired in the plan.

Village of Haverstraw 2021 Draft Local Waterfront Revitalization Program

The Proposed Action is consistent with the recommendations in the Draft LWRP.

The 2021 Draft LWRP identifies the Project Site for development with a mix of commercial, residential, public and open space uses. It also notes the Project's connection to the adjacent African American Memorial Park and Emiline Park, public access and affordable housing, as well as how the Project would maintain continuous public water access, mirror the scale and pattern of the downtown, provide an anchor use for the downtown that attracts economic activity year-round and interconnects to the Village road system.

Village of Haverstraw 2022 Downtown Revitalization Initiative Strategic Investment Plan

The Proposed Action is consistent with the Downtown Revitalization Initiative Strategic Investment Plan.

One of the 14 projects recommended for funding in the 2022 DRI Strategic Investment Plan (SIP) is the construction of a 3,000 linear foot walkway and stabilization of the shoreline with riprap and native plantings around the Project Site to support the future mixed-use and mixed-income development.

The Proposed Action is consistent with the Goals and Strategies detailed in the SIP by:
- encouraging the development of new businesses in vacant and underutilized locations to bring new job opportunities to the Village;
- supporting public and private waterfront improvements that provide public amenities and linkages to downtown;

- supporting public/private partnerships that result in the redevelopment of strategic sites with mixed-income housing, commercial uses, public benefits, and sustainable and resilient infrastructure;
- stimulating the development of private, mixed-income housing development by leveraging publicly-owned properties and resources;
- promoting public/private partnerships to ensure that new private development incorporates improvements that serve the public and strengthen the downtown;
- creating and enhancing spaces for local gathering, community events, social interaction, and recreational opportunities through the reuse of vacant and underutilized properties.

The Village of Haverstraw Affordable Housing Regulations

The Proposed Action is consistent with the Village of Haverstraw Affordable Housing Regulations.

The Project will consist of 450 multi-family residential units, with a goal of between thirty to forty percent of said units qualifying as affordable units (i.e., units marketed to individuals or household earning between 30 percent and 100 percent of the Rockland County, NY HUD Metro FMR Area Annual Median Income (AMI) as determined by New York State Homes and Community Renewal, and in compliance with the Village's affordability requirements.

MITIGATION MEASURES

The Proposed Action is consistent with the land use policies of the Village of Haverstraw. No significant adverse impacts are anticipated, and no mitigation measures are necessary.

3.B. COMMUNITY CHARACTER AND VISUAL IMPACTS

3.B.1. EXISTING CONDITIONS

PROJECT SITE AND SURROUNDING LAND USES

The majority of the Project Site is vacant property, mostly wooded or cleared with some paved roadways that are interspersed with remnants of prior site disturbance from previous development. It consists of mostly forest and low-lying vegetation. The intermittently paved areas on site also consist of low-lying vegetation and grasses, most of which are invasive. The property is mainly surrounded by the Hudson River and Bowline Pond, and abuts Allison Avenue, Broad Street and a residential property to the west. Four multi-family residences occupy a small portion of the site, with three located along the east side of Allison Avenue north of Main Street and one located on the north side of Broad Street west of Allison Avenue. A small portion of the Project Site is within Emiline Park, including a grassed open space area and a stone overlook structure.

The directly adjoining neighborhood along Broad Street and Allison Avenue are a mix of single, two- and three-family residences and multi-family residences. There are also several places of worship interspersed throughout the adjacent residential neighborhood and other neighborhoods to the west. Land to the west of the Project Site includes the Henry Hudson Quadricentennial Park, which includes a path from Liberty Street and around the westerly shore of Bowline Pond. Directly to the north, across Bowline Pond, is the Town of Haverstraw's Bowline Point Park. To the southwest, at the intersection of Main Street, First Street, and Allison Avenue, are the King's Daughters Library Building (a.k.a. Fowler Library) and the Haverstraw U.S. Post Office.

Land directly to the south of the Project Site is the Village's Emeline Park, with a mix of playgrounds, waterfront trails and parking. **Figure 3.A.1, Existing Land Use,** shows additional information on land uses surrounding the property.

There are two roads that run perpendicular to the Project Site, Broad Street and Main Street. There is one road, Allison Avenue, that runs parallel to the Project Site.

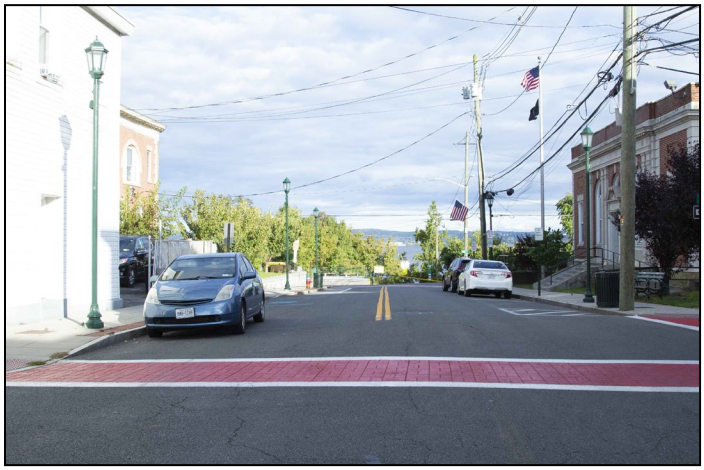


Figure 3.B.1: Main Street Existing Conditions

Main Street

From Main Street looking east towards the Hudson River, the visual landmarks are largely of the street, street furnishings and existing buildings in the foreground. The view of the Hudson River, especially when foliage is present on trees, is partly obscured from view because of the existing tree canopy in Emeline Park.

Broad Street

Looking east towards the Hudson River from Broad Street, visual landmarks are mainly of the street, including residential buildings and street furnishings in the foreground. The view of the Hudson River is mostly obstructed by existing vegetation, trees, and an existing multi-family building fronting Allison Avenue.



Figure 3.B.2: Broad Street Existing Conditions

Allison Avenue

Looking south towards Main Street from Allison Avenue, the main visual landmarks are the street, residential dwellings on both sides, and vegetation and street furnishings in the foreground. The High Tor is visible in the distant background, partly obstructed by buildings and trees.

Looking north towards the Project Site from Allison Avenue, the area is heavily vegetated with trees, aside from residential buildings on each side of the street. The view of Bowline Pond, especially when tree foliage is present, is largely obstructed by trees and other vegetation.



Figure 3.B.3: Allison Avenue Existing Conditions

VISUAL RESOURCES WITHIN THE VICINITY OF THE PROJECT SITE

Historic

There are two historic resources listed in the State and National Register of Historic Places that are adjacent to the Project Site, including the King's Daughters Library Building, also known as Fowler Library, located at the northwest corner of Main Street and Allison Avenue, and the Haverstraw U.S. Post office, at the southwest corner of Main and First Streets. These can also be seen in **Figure 3.K.1, Historical Resources Map.**

Parks

There are three parks that serve as a public visual resource due to their proximity to the Project Site. Bowline Point Town Park is directly to the North of the Project Site. The view of the Project Site from the park mainly includes foreground shoreline, vegetation, and tree canopy. Henry Hudson Quadricentennial Park, which is directly northwest of the Project Site, has a direct view of Bowline Pond in the foreground and the Project Site in the middle ground. The pond provides an unobstructed view of the Project Site from the

park, including shoreline, tree canopy and vegetation. Emeline Park, which is directly adjacent to the southernmost portion of the Project Site, has a direct view of the Project Site from the park looking north. Exiting visual landmarks include a largely forested tree line and Hudson River shoreline in the foreground. An overlook to the Hudson River is located in Emiline Park at the eastern end of Main Street and south of the Project Site.

The Hudson River and Bowline Pond can be seen from the majority of the Site when views are not obstructed by vegetation and trees on the site. Similarly, the Project Site can be seen from the surface of the Hudson River and Bowline Pond.

Scenic Views/View Corridors

Volume II of the 2021 Comprehensive Plan for the Village of Haverstraw identified several scenic corridors as "views that define the community from almost any angle." Among these corridors, Allison Avenue and Main Street were identified. The following is an excerpt from the Comprehensive Plan discussing these roads.

> *Allison Avenue contains several buildings of local historical significance on the western side of the road including the Casa Hudson Bed and Breakfast and the King's Daughters Public Library (National Historic Register building). Through the trees to the east, the Hudson River and Emeline Park are visible and even to the south, the ridge of South Mountain. Continuing south, the Hudson waterfront and Emeline Park continues to define the views along First Street.*
>
> *The end of Main Street also provides another view unique to Haverstraw, a view of the Hudson River and the eastern shore bordered by two of the three historic buildings in the Village.*

In addition to the view corridors, scenic views of the Hudson River were noted from the shoreline of the river itself, especially at Emeline Park and Jefferson Park. As a result of these identified view corridors and scenic views, Volume I of the Comprehensive Plan, focusing on the Goals and Objectives of the community, established Objective 8.c to "protect and enhance the historic street grid and its view corridors both east/west and north/south to the River."

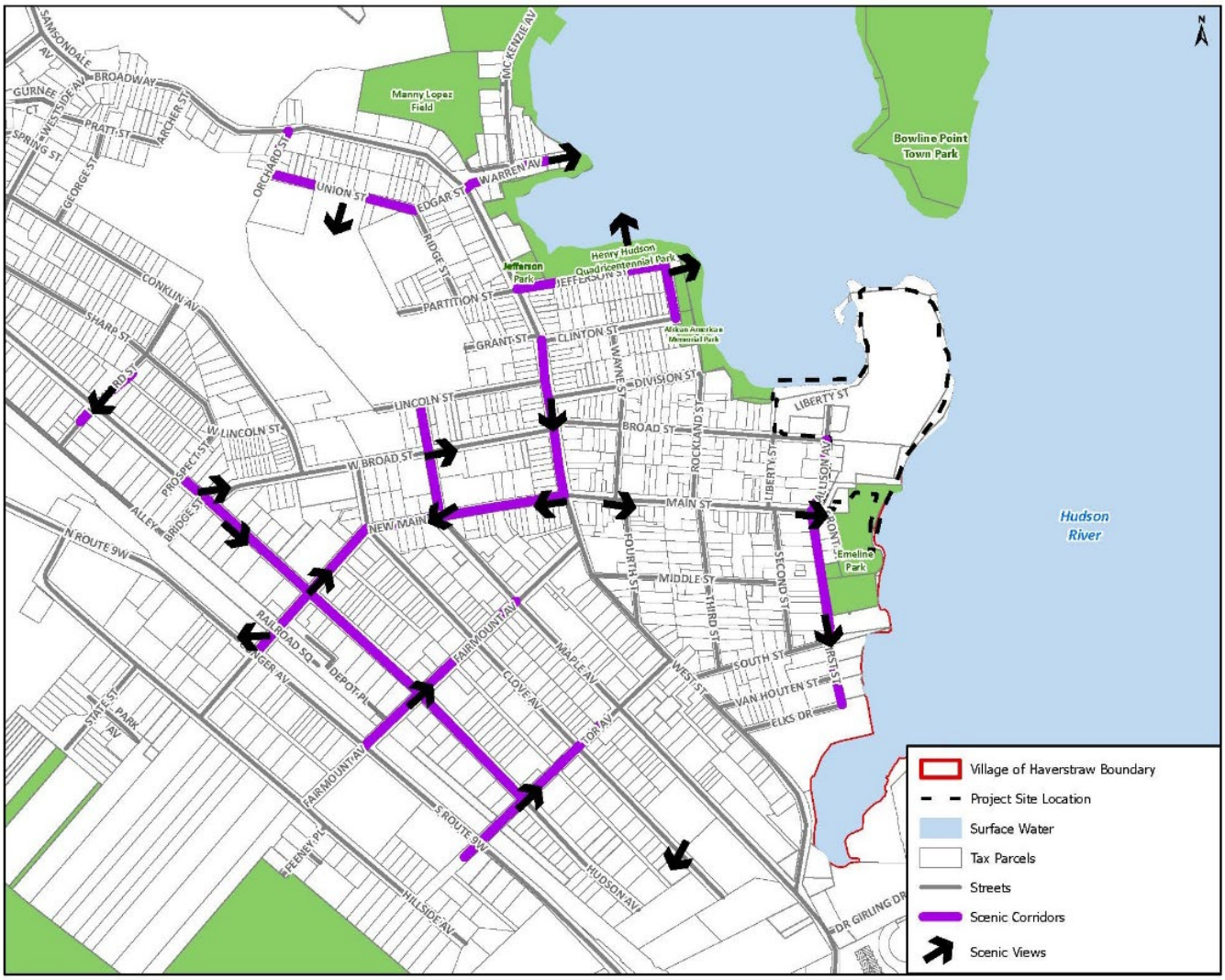


Figure 3.B.4: Scenic and View Corridors identified in the 2021 Village of Haverstraw Comprehensive Plan

Additionally, the Project Site is not within, along, adjacent, or near any of the following:

- Scenic Areas of Statewide Significance;
- Critical Environmental Areas;
- New York State Scenic Roadways;
- State Forests or State parks;
- State or National Scenic Trails or Natural Scenic Trails; or
- Unique topographic or geologic features;

3.B.2. POTENTIAL IMPACTS

There are no state or federally designated landmarks, aside from those listed above, and no designated visual resources onsite, contiguous to or in the immediate area of the site that would be significantly affected by the Proposed Project. As noted previously, the King's Daughters Library Building and the Haverstraw U.S. Post Office have some historical significance according to NYSORHP. However, based on the Project location, siting and sizing of the proposed buildings, landscaping, vegetative screening and buffers, exterior light controls, architectural design, sidewalk and street furnishings, significant impacts are not expected to this land use or any other use or feature. Careful consideration was also made to strategically landscape the Project Site to minimize the visual impacts of the proposed buildings, including the planting of 120 new trees on the site and along street frontages.

During the scoping process, several locations were identified as needing to be analyzed for the visibility of the Proposed Project. The locations included:

- To and from the Hudson River.
- Scenic Corridors, as identified in the 2021 Comprehensive Plan, of Main Street, Alison Avenue, and First Street.
- Scenic Views, as identified in the 2021 Comprehensive Plan, from Jefferson Park and Emeline Park.

Each of these locations are important scenic/visual resources for the community of the Village, having each been identified and discussed in the 2021 Comprehensive Plan.

VIEWSHED ANALYSIS

A Viewshed Analysis, found in **Appendix D, Visual Impact Analysis,** was completed for eight specific locations that align with the aforementioned locations from the scope. As an overall note, views of the proposed buildings would be seen in all seasons, regardless of tree/vegetation cover, as well as in close proximity of the Project Site. In all eight views included in the Visual Analysis in **Appendix D, Visual Impact Analysis,** the buildings can be observed. Additional proposed renderings of the Project Site can also be seen in **Appendix C, Site Plans.** The eight views are discussed further on the following pages.

View 1 – Bowline Park

Looking south from Bowline Park to the northern portion of the Project Site, the proposed build scenario replaces existing visual features, which is mainly tree cover and vegetation, with the proposed buildings, landscaping features, and a new publicly accessible pedestrian walkway.



Figure 3.B.5: View from Bowline Park

View 2 – Jefferson Park

Looking east towards the Hudson River from Jefferson Park, Bowline Pond provides an unobstructed view of the Project Site from the park. The Project's proposed build scenario replaces the existing tree canopy cover with the proposed buildings, new landscape features, and shoreline plantings.



Figure 3.B.6: View from Jefferson Park

View 3 – Division Street

Looking east across Bowline Pond to the Chair Factory Site from Division Street. The pond provides unimpeded views of the Site. The Proposed Project replaces existing open area and tree canopy with new building massing, new landscape features and shoreline plantings.

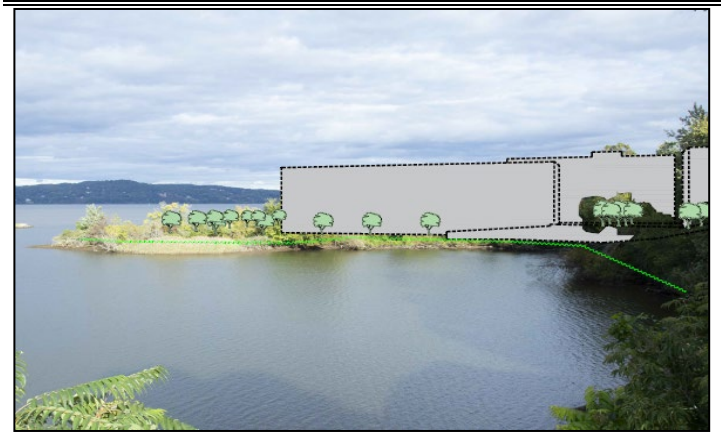


Figure 3.B.7: View from Division Street

View 4- Broad Street

Looking east towards the Hudson River from Broad Street. Views of the Hudson River are mostly obstructed by existing vegetation. The Proposed Project replaces the existing visual features with new building facades, furnishings, building entries and a new publicly accessible pedestrian way, providing both visual physical access to the riverfront.

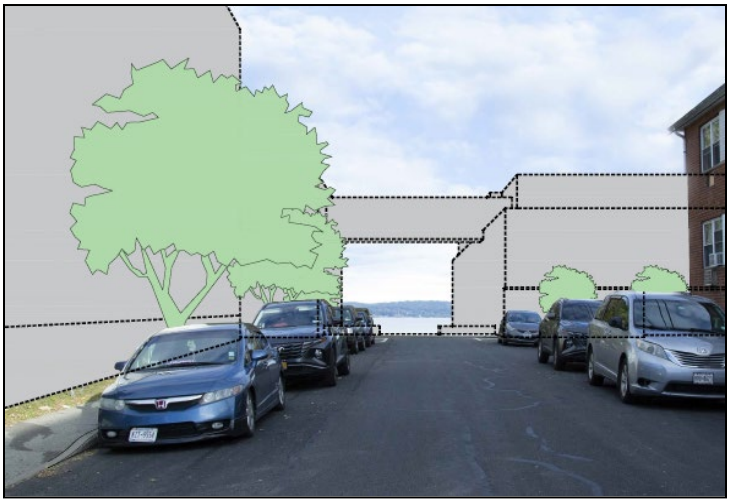


Figure 3.B.8: View from Broad Street

View 5- Main Street

Looking east towards the Hudson River from Main Street, the proposed Project will have limited visual exposure of the southern edge of Building One. As shown in **Figure 3.B.9**, **Main Street to the Hudson River** most of the massing for Building One is blocked by the existing King's Daughters Library Building, and the proposed plans include the removal of all or some of the tree canopy from Emeline Park to better reveal the view of the Hudson River from this vantage point.



Figure 3.B.9: Main Street to the Hudson River

View 6 - Allison Avenue

Looking south towards Main Street from Allison Avenue, the High Tor is prominent in the skyline of the backgrounds. The proposed buildings replace existing trees and vegetation with new building facades, furnishings and plantings, and a new sidewalk on the east side of Allison Avenue.

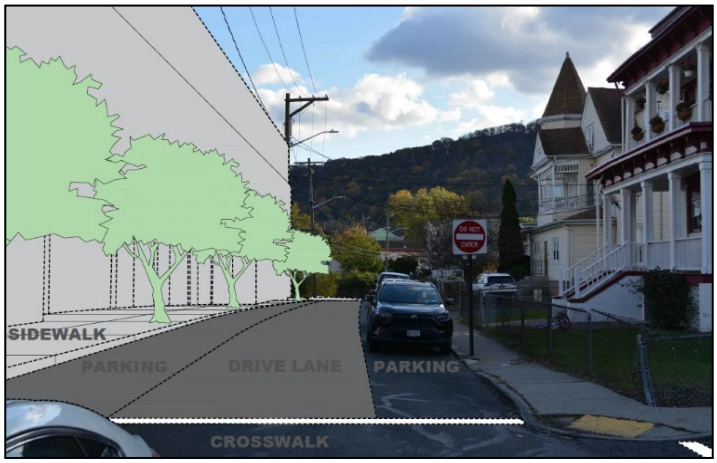


Figure 3.B.10: Allison Ave from Broad Street towards Main Street

View 7 - Emeline Park

Looking north to the Project Site from Emeline Park and the scenic overlook within the park located to the east of Main Street, the Project Site will replace the existing tree canopy and vegetation with buildings, which will be accompanied by public pathways, trees, landscaping, and shoreline plantings. Much of the view of the Hudson River from the park's scenic overlook will remain unobstructed except for views directly to the north.

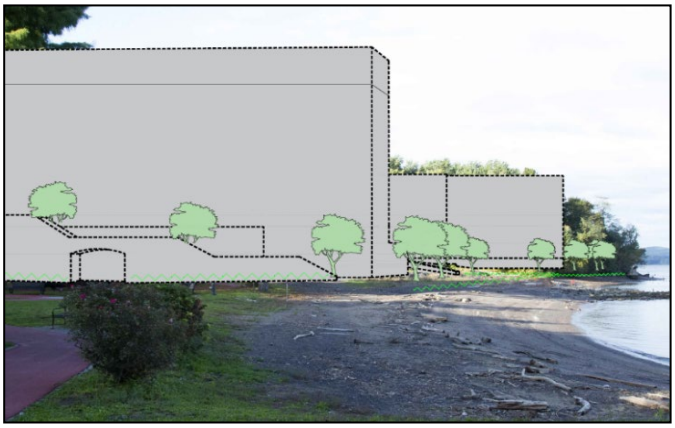


Figure 3.B.11: View from Emeline Park

View 8 – Ossining-Haverstraw Ferry Parking Lot

Looking north to the Project Site, from the northern edge of the Ossining – Haverstraw parking lot. The gazebo and beach at Emeline Park in the foreground, along with the shoreline of Bowline Park visible in the background of the existing conditions. The Proposed Project will have no impact on the views of Emeline Park but will replace the visual tree canopy of the Site by building massing for the hotel and Building 1, accompanied by landscape features and shoreline plantings. Views of Bowline Park will no longer be visible from this viewpoint.



Figure 3.B.12: View from Ossining-Haverstraw Ferry Parking Lot

First Street

First Street, which is a Scenic Corridor identified in the 2021 Comprehensive Plan, contains views of Emeline Park and the Hudson River to the east. The Comprehensive Plan identifies the scenic view looking south towards Elks Drive. Views along First Street looking towards the Hudson River will be minimally impacted by the Project Site, as the Project's buildings will be to the north of First Street.

BUILDING ARCHITECTURE AND HEIGHT

Building Architecture

As seen in **Appendix D, Visual Impact Analysis,** commercial and residential street analyses were completed for the Village. These provided the following conclusions to be later applied to the architectural plans for the Project:

- Commercial Street Analysis
  - There is a variation in the height above the ground floor, with a strong ground floor expression.
  - Widows have a continuous fenestration rhythm.
  - Colors are varying although most are muted or pastel in nature.
- Residential Street Analysis
  - Distinctive variety of the overall design of residential units.
  - Porches facing the water
  - Colors are varying although most are muted, neutral, or pastel in nature.



Figure 3.B.13: Rendering of Project Site at Main Street

The Proposed Project already aligns with many of the aforementioned architectural contexts of the area. The buildings would include largely brick facades while also incorporating neutral or muted colors. Additionally, the windows would continue the fenestration rhythm, with an even balance and proportioning similar to the existing window patterns throughout the Village. As the Project continues to develop, the Community Context document will be an instrumental resource. The Project Sponsor will refer to this document to ensure that the Proposed Project is a continuing reflection of the existing community, allowing for architectural improvements that are true to the community context.

In addition, the Proposed Action incorporates the addition of a form-based overlay district. This establishes standards for sidewalks, civic spaces, frontage, and overall design. More information related to the standards associated with the form-based overlay district can be found in **Appendix C, Zoning Overlay**. This

code helps to ensure that the development of the Project Site keeps a balance between storefronts, pedestrian areas, bicyclists, and vehicular transportation all while encompassing landscaping and design standards.

Building Height

The building heights of the five proposed buildings vary, with Buildings 1 and 2 proposed to be 71 feet tall at their eastern elevation and approximately 52 feet along Allison Avenue. Building 3 is proposed to be approximately 46 feet in height along Broad Street and approximately 49 feet facing to the north. Building 4 is proposed to be approximately 56 feet in height and the Hotel building is proposed to be approximately 70 feet in height. As shown in **Appendix B, Site Plans** as well as **Appendix D, Visual Impact Analysis**, the buildings ultimately replace existing tree canopy and the four existing residential properties associated with the Project. Although different from the existing visual resources provided by the Project Site, the development on the Project Site would be improvement to the existing conditions. Given that the Project Site is for the most part vacant and has been left in disarray since the demolition of the factory, the improvements proposed through this Project would provide the community with additional access and enjoyment of the scenic resources aforementioned in this Chapter.



Figure 3.B.14: Rendering of Project Site Bird's Eye View from the northeast

The proposed buildings are shown in **Appendix B, Site Plans.** It is noted that the average height of the buildings is taller than neighboring buildings, and views of the buildings from surrounding streets would not be entirely obstructed by trees. The five buildings will be spaced apart on the Project Site, including openings between buildings at the northern end of Allison Avenue and the eastern end of Broad Street to allow views to Bowline Pond and the Hudson River. At the northern end of Allison Avenue, there will be approximately 40 feet between Building 3 and Building 2, providing a direct view of Bowline Pond. At the end of Broad Street, there will be approximately 25 feet between Buildings 1 and 2, opening into an approximately 75 feet wide courtyard with unobstructed views of the Hudson River. This spacing helps to encourage the enjoyment of the aforementioned views and scenic corridors. The Proposed Project will also provide views of the River from its proposed 4.2 acres of green public open space at the north eastern portion of the Site as well as the trail extension that extends around the Project Site.

LANDSCAPING

Main views of the proposed buildings, like mentioned above, will not be fully screened by mature tree plantings, but will be partially screened. Landscaping will be planted at the perimeter of the Project Site and around buildings to minimize impacts and further contribute to the surrounding character. A total of 120 primarily native and deciduous trees will be planted, including some shrubs and herbaceous plants to provide additional screening, scenic variety, and to beautify the Project Site and development. Green Roofs or solar panels on two of the buildings are also proposed to further contribute to the natural character and greenery of the area. The perimeter of the Project Site that borders the Hudson River will contain public open space to further set back the buildings on site and increase greenspace. Stormwater treatment areas are also proposed to be planted with seed mixes, which include a wetland meadow mix and rain garden mix to further screen utilities. Landscaping details, including species is shown in **Appendix B, Site Plans.**



Figure 3.B.15: Rendering of Project Site at Waterfront

OUTDOOR LIGHTING

The outdoor lighting plan is designated to provide a safe and secure site and prevent light trespass, excessive glare, light pollution, and restricted visibility of the night sky, adverse effects on nocturnal wildlife, and inefficient use of energy resources. The lighting plan strategically locates lighting only where it is essential or required, such as along walkways, building entrances, access ways, and critical emergency and security areas. Lighting will be shielded, directed downward, and will be compliant with NYS Building Code and Village of Haverstraw Code. All egress paths are required to remain illuminated at all times per the NYS Building Code, and all lighting will comply with NYS Energy Code. There will be no encroachment of the exterior lighting onto the neighboring property boundaries. Three main types of lights are proposed throughout the property, including street lights, pedestrian lights, and bollard lights. Street and pedestrian lighting fixtures will be 12 feet in height. The Bollard light will be 31.5 inches in height. Lighting plans are shown in **Appendix B, Site Plans.**

3.B.3. MITIGATION MEASURES

Various measures are proposed to reduce the visibility of the facility from offsite locations while improving the appearance of the Project Site. No significant adverse impacts to visual resources and community character are expected from the project based on project siting, design and identified mitigation measures as summarized below:

- As depicted on the site plan in **Appendix B, Site Plans**, the proposed buildings would be spaced throughout the Project Site to avoid the appearance of large, continuous walls of buildings and to allow views in between and through the five buildings. Public access areas at the northern end of Allison Avenue and the eastern end of Broad Street will allow visual openings and help preserve

views to Bowline Pond and the Hudson River. Much of the site would remain as open space and be improved with new trees, landscaping, lawns and pathways.

- Building heights will be limited to minimize visual impacts on the surrounding area. Buildings 1, 2 and 3, which will front on Allison Avenue and Broad Street, will be built into the slope to minimize heights and visual impacts on the surrounding streets.
- The proposed zoning overlay district proposed for the Project Site includes detailed design standards for streets and sidewalks, public and private frontage and building designs and civic spaces. These standards will encourage a higher level of visual quality and minimization of visual impacts on the site and surrounding area.
- The proposed buildings would include largely brick facades with neutral or muted colors to blend into the immediate area. Green roofs would be provided to make the buildings look less commercial and enhance the visual quality of the Project Site.
- A landscaping plan, including the installation of approximately 120 trees, is proposed to replace some of the vegetation that would be cleared, enhance the visual quality of the development with diverse indigenous species, and screen man-made structures from the street and other public vantage points.
- An exterior lighting plan was prepared to provide the necessary outdoor lighting to ensure a safe and secure environment without unnecessary and wasteful illumination or negative impacts on the visual character of the area. Walkways, building entrances, access ways, and critical emergency and security areas are among those locations that must be lit.
- Lighting shall be shielded and directed downward, will be energy efficient, and will not illuminate off-site.

3.C. FISCAL AND ECONOMIC IMPACTS

3.C.1. EXISTING CONDITIONS

The Project Site involves a total of 12 parcels which total 13.44 acres. Eight of the parcels are currently owned by the Village of Haverstraw and do not pay taxes. These eight parcels are all vacant. These lands demand negligible services from community services, although the Village is paying significant principal and interest on bonds issued in connection with acquisition of the project parcels through eminent domain.

The Project Sponsor is hoping to secure ownership and control of the remaining four parcels, which are privately-owned and contain multifamily residences. The four parcels which are not Village-owned contributed $74,264.19 in real property taxes to the Town, Village and School District as shown in **Table 3.C.1.**

Table 3.C.1: Current Taxes Paid on Project Site (2023)

SBL	Acres	Village Taxes (2023)	Town & County Taxes (2023)	School Taxes (2023)	Total Taxes (2023)
27.46-1-77	0.26	$6,028	$11,571	$14,220	$31,819
27.46-1-78	0.17	$2,903	$6,070	$11,659	$20,632
27.46-1-82	0.07	$3,395	$4,660	$3,895	$11,949
27.46-1-83	0.08	$2,443	$2,580	$4,841	$9,864
		$14,768	$24,881	$34,615	$74,264

SOURCE: VILLAGE OF HAVERSTRAW ASSESSOR; TOWN OF HAVERSTRAW ASSESSOR; NELSON POPE VOORHIS;

These four parcels contain 14 dwelling units in four structures, which house 46 people, 10 of which are public school children. It is believed that the occupants of the 14 dwelling units are generally households that would qualify as "very low-income" or earning less than 50% of area median income ($60,050 for a two-bedroom). At this income level, these households contribute approximately $260,000 to the local economy. These existing residents also demand government services from local government that are paid for through the local tax levy. Utilizing a Per Capita Multiplier Average Costing method, as detailed in Section 3.C.2, the portion of services to be raised through the local real property tax levy can be applied to the population and number of school children to determine if the existing residences demand more in services than they contribute in real property taxes.

Table 3.C.2: Net Revenue or Cost of Existing Uses

	Population	Cost	Revenue	Net Impact
Town	46	$14,668	$24,881	$10,213
Village	46	$13,015	$14,768	$1,753
School	10	$150,869	$34,615	-$116,254
Total		$178,552	$74,264	-$104,288

SOURCE: VILLAGE OF HAVERSTRAW ASSESSOR; TOWN OF HAVERSTRAW ASSESSOR; NELSON POPE VOORHIS;

As shown in **Table 3.C.2**, the existing residences demand more services than they pay for in real property taxes, specifically, due to the costs to the school district.

3.C.2. POTENTIAL IMPACTS

BACKGROUND

The proposed project will generate additional demand for services from the Village, Town and School District. A portion of this cost will be offset by added fees and intergovernmental transfers. Most of the costs will be borne by the local real property tax levy.

Additionally, the proposed project will generate revenues. The applicant is seeking a Payment-in-lieu-of-taxes (PILOT) agreement with local taxing jurisdictions. This PILOT would allow the project sponsor to make a scheduled and agreed upon reduced payment to each taxing jurisdiction instead of paying full rate taxes. This is increasingly becoming a market-standard requirement for multifamily housing, particularly those residences reserving units for very low- and low-income residents. Generally, PILOTs are authorized for projects that propose to provide low-income housing and receive funding or assistance from the NY Department of Homes and Community Renewal (HCR). Additionally, market-rate units can receive a PILOT through the local Industrial Development Agency (IDA) in exchange for job creation and economic development. PILOT agreements generally increase in amount over time and last for anywhere from 15 to 50 years, but usually are timed to last at least for the duration of the project's initial financing. This is because construction and permanent mortgage lenders need assurance that debt service can be met over the entire financing timeline.

The project sponsor is seeking PILOTs for the affordable housing, market rate housing and retail/public service elements of the project. Currently, the project sponsor is not seeking a PILOT for the hotel element of the project as that element of the project is still at an early stage of underwriting. For the purposes of analysis, that element of the project will be analyzed as a fully tax-paying element of the project.

Lastly, all elements of the project will introduce significant economic activity to the region at both the construction and operational phases of the project. Construction period economic activity will include the creation of 2,600+ construction jobs and $300MM+ in increased economic activity over the 3–5-year

construction and lease up period. During the operational phase of the project, on-site businesses will create 90+ jobs, and $8MM+ in increased economic activity annually.

COST TO COMMUNITY SERVICES

A Per Capita Multiplier Method and Proportional Valuation Fiscal Impact Costing Analysis was conducted in accordance with the methods outlined in the *Fiscal Impact Handbook*[4]. The Per Capita Multiplier Method results were then adjusted to account for the efficiencies inherent to mid-size communities by estimating what elements of local budgets were highly variable based on population change, and which elements were more static. It is noted that the cost analyses do not represent a "projection" of future conditions. Rather, they are an analysis of the scale of impact that would have occurred if the project were constructed and fully occupied and operational in a year for which all fiscal factors are known – in this case 2023 for the Town and Village and 2022-2023 for the School District. This yields an "order of magnitude" impact analysis, rather than a projection which would be too dependent on future variables to accurately estimate.

The Per Capital Multiplier Method starts with the assumption that non real property tax revenue sources (such as fees, penalties, fines interest, and intergovernmental transfers such as state aid) will increase roughly relative to project costs. For example, communities typically institute fees and penalties based on the cost of services for which the fee or penalties pay. Similarly, intergovernmental transfers such as school district state aid is transferred on a per pupil basis, so as enrollment increases, state aid also increases. This costing analysis therefor only considers that portion of the local budgets to be offset by the local real property tax levy.

For the Town and Village, the Proportional Valuation Method is utilized to apportion the levy to residential real property and to non-residential real property. This is done based on the ratio of nonresidential real property value to total property value in each jurisdiction, with a refinement coefficient employed to account for the average value of non-residential property value (many small non-residential uses generally demand more in services than fewer large non-residential uses). For the school district, all costs are apportioned to residential uses only.

Table 3.C.3: Percentage of Costs Apportioned to Residential and Non-Residential Land Use

Taxing Jurisdiction	Total Budget	RP Tax Levy	% Apportioned to Non-Residential Land Use	Costs Apportions to Nonresidential Land Use	Costs Apportioned to Residential Land Use
Town	$38,511,100	$30,792,100	24.80%	$7,635,425	$23,156,675
Village	$11,035,684	$8,220,437	23.98%	$1,971,119	$6,249,318
School	$253,025,692	$151,062,624	0.00%	$0	$151,062,624

SOURCE: VILLAGE OF HAVERSTRAW; TOWN OF HAVERSTRAW; NORTH ROCKLAND CSD; NELSON POPE VOORHIS;

[4] Burchell, Robert W., and Listokin, David. The Fiscal Impact Handbook. New Brunswick, NJ: Rutgers University Center for Urban Policy Research, 1978.

The cost of the new proposed non-residential project elements is then based on the value of those elements relative to the total value of all non-residential facilities in a community. A refinement coefficient is applied here as well to account for the fact that much larger than average non-residential uses typically do not demand new costs on a one-to-one basis as do average non-residential uses.

Table 3.C.4: Est. Non-Residential Project Costs

Taxing Jurisdiction	Retail/Public Service	Hotel	Total
Town	$9,317	$40,155	$49,472
Village	$1,097	$9,847	$10,944
Total	$10,414	$50,002	$60,416

SOURCE: NELSON POPE VOORHIS;

As shown in **Table 3.C.4,** the proposed non-residential project elements are estimated to have costed approximately $60k if fully constructed and operational in 2023.

Once the residential share of the tax levy is known, it is divided by the population of each jurisdiction to arrive at a per capita cost. However, a new resident added to the taxing jurisdiction does not necessarily increase the cost to that jurisdiction at the same rate as the per capita cost. Additional costs accrue to any jurisdiction based on a range of tipping points. For example, one additional student may directly impact printing costs on a per pupil basis, while it may take a dozen new students to require the hiring of a new teacher. It may take a few hundred students before an additional hire is required in the business office and it might take several hundred students to require an additional building principal to be hired, while no amount of new students would trigger the hiring of a second superintendent. The Fiscal Impact Handbook instructs that this efficiency of scale for new population is highest with mid-size jurisdictions, while very small jurisdictions and very large jurisdictions tend to be more closely related to the average per capita costs.

To account for efficiencies of scale, the budgets for the Town, Village and School District were reviewed to determine whether a particular departmental cost was closely related to the anticipated added population from the project, related on a fractional basis, or generally fixed. Additionally, it was understood that certain costs (such as employee benefits) were related to the actual increase in expenditures rather than increase in population. These relationships were generally discussed with the Mayor of Haverstraw who provided insight about the Village budget, but also weighed in on the reasonableness of assumptions as regards the Town and School District budgets. Based on this, it was estimated that a new resident would generate approximately 67.5% of the per capita Village cost (with efficiencies in the Judicial, Treasures, Staff and Shared Services budget items, and negligible impacts to the Legislative, Executive, Finance or Debt Service Costs). A new Town resident was estimated to cost approximately 62% of the per capita Town cost (with efficiencies in the General Government Services and Recreation budget items and with negligible impact to Health, Transportation, Economic Assistance and Home and Community budget items). A new

district pupil is estimated to increase school district costs by approximately 78% of the current per pupil cost (with efficiencies in the Superintendent's Office, Business Office, Board of Education, Plan Maintenance, Health and Safety, Data Processing, Curriculum Development, and School Library budget items and a negligible impact to the Plant Operation, Bonds and certain minor administrative items). The calculation of these adjustment factors is included in **Appendix E, Fiscal and Economic Analysis**.

Table 3.C.5: Summary of Per Capita Costs

Taxing Jurisdiction	Residential Cost	Population	Per Capita Cost	Cost Efficiency Adjustment	Adjusted Per Capita Cost
Town	$20,102,505	39,087	$514	62.0%	$319
Village	$5,165,202	12,323	$419	67.5%	$283
School	$151,062,624	7,810	$19,342	78.0%	$15,087

SOURCE: US CENSUS BUREAU; VILLAGE OF HAVERSTRAW; TOWN OF HAVERSTRAW; NORTH ROCKLAND CSD; NELSON POPE VOORHIS

With the per capita costs for a new resident estimated for each of the three taxing jurisdictions, one can assess a per unit cost and total project cost, based on the demographic multipliers contained in **Chapter 3D, Community Services.**

Table 3.C.6: Estimated Cost Per Unit and Residential Project Cost

		Affordable*				Market*				
		Studio	1-Bed	2-Bed	3-Bed	Studio	1-Bed	2-Bed	3-Bed	
Est. Per Unit Costs	Town	$421	$421	$855	$1,349	$703	$533	$737	$1,215	
	Village	$373	$472	$758	$1,197	$472	$472	$654	$1,078	
	Student	$0	$754	$8,600	$24,743	$0	$754	$1,810	$3,168	
	Total	$794	$1,648	$10,212	$27,288	$1,175	$1,759	$3,201	$5,461	TOTAL
Est. Project Costs	# of units	19	65	42	7	48	152	102	15	450
	Occupied units**	18.05	61.75	39.90	6.65	45.60	144.40	96.90	14.25	427.50
	Town	$7,597	$25,991	$34,097	$8,970	$32,053	$76,894	$71,375	$17,312	$274,289
	Village	$6,741	$29,176	$30,254	$7,959	$21,545	$68,227	$63,330	$15,361	$242,593
	Student	$0	$46,581	$343,122	$164,538	$0	$108,928	$175,431	$45,148	$883,747
	Total	$14,338	$101,748	$407,473	$181,466	$53,598	$254,049	$310,136	$77,821	$1,400,629

SOURCE: NELSON POPE VOORHIS

*Difference in cost between affordable and market based on predicted population and schoolchildren per unit.

**Assumes 5% vacancy rate

The total project cost can then be estimated by adding the residential and non-residential cost components and subtracting the existing cost of the multifamily dwellings to be removed.

Table 3.C.7: Estimated Total Project Costs After Reduction of Existing Units

	Project Residential Cost	Eliminated Residential Cost	Project Non-Residential Cost	Total Project Cost
Town	$274,289	-$14,668	$49,472	$309,093
Village	$242,593	-$13,015	$10,944	$240,523
School	$883,747	-$150,869		$732,877
Total	$1,400,629	-$178,552	$60,416	$1,282,493

SOURCE: US CENSUS BUREAU; VILLAGE OF HAVERSTRAW; TOWN OF HAVERSTRAW; NORTH ROCKLAND CSD; NELSON POPE VOORHIS;

REVENUES TO COMMUNITY SERVICES

The proposed project will generate direct revenues to the three taxing jurisdictions through Real Property Taxes and Payments-in-lieu-of-Taxes (PILOTs). Currently, the project sponsor is still working with the Assessor and representatives of the various taxing jurisdictions to arrive at an acceptable PILOT. To understand the effect of the payments to be made, this fiscal impact analysis will consider the first-year, mid-term and final payment of the most recently proposed PILOT. The project sponsor is currently proposing a 40-year PILOT starting at $500 per affordable unit and $1,325 per Market Rate Unit escalating by 3% per year. The first year is being considered because the escalator is in line with contemporary Federal Reserve inflation targets (2.5%) and the average rate of inflation over the last 50 years (3.9%[5]). The PILOT escalator is anticipated to keep pace with rising costs. By comparison, the Town of Haverstraw experienced an average increase of 4.1% between 2008 and 2023, and the North Rockland CSD reports a 2.85% annual budget increase between 2006 and 2023.

Although subject to PILOT discussions between the project sponsor and taxing jurisdictions, this study assumes there would be no additional revenues from retail and public service spaces contained within the mixed-use/residential buildings. It is assumed that the hotel will pay full rate real property taxes and will have a full market value of approximate $10M, based on a per-key local market comparable (Time Hotel in Nyack, NY). It is assumed that revenues would be split among the taxing jurisdiction based on proportion of current tax rates.

[5] CPI average 12-Month Percent Change for all items except food and energy.

Table 3.C.8: Estimated Total Project Revenue

Taxing Jurisdiction	FV Mil Rate	% of PILOT*	Affordable Unit PILOT	Market Unit PILOT	Hotel RP Taxes	Eliminated Residential Revenue	Total
Town	10.11	19.41%	**$26,008**	**$46,804**	**$101,100**	**($24,881)**	**$149,031**
Village	10.44	20.04%	**$26,857**	**$48,332**	**$104,400**	**($14,768)**	**$164,820**
School	28.16	54.06%	**$72,441**	**$130,366**	**$281,600**	**($34,615)**	**$449,792**
Total	52.09		**$125,305**	**$225,502**	**$487,100**	**($74,264)**	**$763,643**

SOURCE: MPACT; TOWN OF HAVERSTRAW TAX ROLL; NELSON POPE VOORHIS

*It is assumed that the County will receive 6.49% of any PILOT. Since County costs are not being calculated, County revenues are also not considered herein.

NET FISCAL IMPACT

Net project revenue can then be compared with net project costs to determine the impact on each taxing jurisdiction.

Table 3.C.9: Estimated. Net Project Fiscal Impact

	Net Cost	Net Revenue	Net Impact	RP Tax Levy	Impact as % of Levy	Impact per capita/ pupil	Impact per Unit
Town	$309,093	$149,031	-$160,062	$30,792,100	-0.52%	-$202.61	-$355.69
Village	$240,523	$164,820	-$75,702	$8,220,437	-0.92%	-$95.83	-$168.23
School	$732,877	$449,792	-$283,085	$151,062,624	-0.19%	-$5,827.56	-$629.08
Total	$1,282,493	$763,643	-$518,850	$190,075,161	-0.27%		-$1,153.00

SOURCE: MPACT; TOWN OF HAVERSTRAW TAX ROLL; NELSON POPE VOORHIS;

As shown in **Table 3.C.9**, were the project constructed and fully occupied in 2023, it would have demanded approximately $518k more in tax-funded services than tax revenue. This would have impacted the local tax levy by approximately 0.27% total. This equates to an increase in 2023 taxes of approximately $49 for a house valued at $350k.

These results are again summarized on a project element basis in **Table 3.C.10**. This table demonstrates that the affordable/workforce units are the largest source of net project costs and that the balance of the project provides a nominal net fiscal benefit. It is widely accepted that affordable housing will result in fiscal impact

to a community, and that fiscal impact must be weighed against the social benefits and sustainability that such housing brings.

Table 3.C.10: Estimated Net Project Fiscal Impact by Project Component

	Affordable Residential	Market Residential	Non-Residential	Existing Residential Removal	Total
Cost					
Town	$76,655	$197,634	$49,472	-$14,668	$309,093
Village	$74,130	$168,464	$10,944	-$13,015	$240,523
School	$554,241	$329,506	$0	-$150,869	$732,877
Total	$705,025	$695,603	$60,416	-$178,552	$1,282,493
Revenue					
Town	$26,008	$46,804	$101,100	-$24,881	$149,031
Village	$26,857	$48,332	$104,400	-$14,768	$164,820
School	$72,441	$130,366	$281,600	-$34,615	$449,792
Total	$125,305	$225,502	$487,100	-$74,264	$763,643
Net Impact					
Town	-$50,647	-$150,830	$51,628	-$10,213	-$160,062
Village	-$47,273	-$120,132	$93,456	-$1,753	-$75,702
School	-$481,800	-$199,140	$281,600	$116,254	-$283,085
Total	-$579,720	-$470,101	$426,684	$104,288	-$518,850

SOURCE: MPACT; NELSON POPE VOORHIS

ECONOMIC BENEFITS

During construction and lease up, which is anticipated to last 3-5 years, the proposed sponsor will spend more than $196MM to construct the project, including more than $72.5MM in construction wages. This will directly create 944 local full-time equivalent job-years or between 190 and 315 jobs over three to five years. The project spending will also indirectly result in the creation of 824 full-time equivalent job-years or between 165 and 275 jobs over the 3-5 years. Those workers will spend more than $16MM over the 3-5 construction years, further inducing the creation of an additional 841 local jobs and an addition of approximately $9.5MM in local spending for a total of $25.5MM in local spending or between $5.1MM and $8.5MM annually.

Table 3.C.11: Construction Phase Economic Benefits

Job Creation	National Multiplier	Local Adj. Multiplier	Jobs Created
Direct Jobs per $1M Spend	5.5	4.81	944
Indirect Jobs per $1M Spend	4.8	4.20	824
Induced Jobs per $1M Spend	4.9	4.28	841
Total Jobs per $1M	15.20	13.29	2,609

SOURCE: MPACT; ECONOMIC POLICY INSTITUTE; BUREAU OF LABOR STATISTICS; BUREAU OF ECONOMIC ANALYSIS:

As stated in **Chapter 3D, Community Services,** the project will introduce 790 new residents in 436 new households to the community. Those residents will earn more than $54M and spend more than $11.5M in the local and regional economy. Additionally, the commercial spaces and hotel will also result in a direct increase in the number of local jobs, which will result in indirect and induced economic benefits.

Table 3.C.12: Operational Phase Economic Benefits

Use	Jobs	Indirect Jobs	Induced Jobs	Avg Wage	Local Retail Spending
Retail/Community Space	**14**	**4**	**6**	**$16,534**	**$51,658**
Hotel	**27**	**8**	**12**	**$16,647**	**$98,264**
Residential	**9**	**7**	**6**	**$45,455**	**$90,409**

SOURCE: MPACT; ENERGY INFORMATION AGENCY; ECONOMIC POLICY INSTITUTE; BUREAU OF LABOR STATISTICS; BUREAU OF ECONOMIC ANALYSIS:

The economic benefits to the Village, Town and Region are summarized below:

Table 3.C.13: Summary of Economic Benefits

Economic Impact	Direct	Indirect	Induced	Total
Direct Construction Job Years	944	824	841	2609
Construction Spending	$196,333,320	$59,822,763	$48,749,563	$304,905,646
Permanent Jobs	50	19	24	93
Ongoing Annual Output	$27,488,241	$7,532,710	$3,805,987	$38,826,937
Annual Purchasing Power from Resident + Workers	$11,912,264			
% Boost to current expenditures	9%			

SOURCE: MPACT; ENERGY INFORMATION AGENCY; ECONOMIC POLICY INSTITUTE; BUREAU OF LABOR STATISTICS; US CENSUS BUREAU; CRAFTSMAN COST INDEX; BUREAU OF ECONOMIC ANALYSIS:

3.C.3. MITIGATION MEASURES

Fiscal Impacts and economic impacts do not constitute "environmental impacts" as described by SEQR and therefore no "mitigation" is required. The information in this chapter is intended to provide agencies with a synopsis of how the project may impact local municipal and school district funding and how the project might improve the local economy. The current multifamily structures on the project site are estimated to operate in a net fiscal deficit on the scale of $100k more in services demanded than funded through the local real property tax levy.

After full construction, this deficit is anticipated to increase to $518k more in services demanded than funded through the local real property tax levy, although the affordable and work force housing accounts for $579k, with the balance of the project providing a net benefit. This net fiscal cost impact will be a negligible change of just 0.2% of the total tax levy of the three taxing jurisdictions analyzed. The largest impact (1.08%) being experienced by the Village. The net fiscal impact is balanced against social benefits of meeting regional needs for affordable housing and the economic benefits that the project will bring:

- Achieving 133 affordable housing units for families earning less than 80% AMI;
- Achieving 135 "workforce" housing units for families earning less than 130% of AMI;
- Creation of 2609 FTE Construction job-years and more than $304MM in construction spending;
- Creation of 93 permanent jobs;
- Increasing annual output by more than $38MM and local spending by 9% or $11.9MM on an annual basis

3.D. COMMUNITY SERVICES

3.D.1. DEMOGRAPHICS

EXISTING CONDITIONS

According to the 2020 Census, the population of the Village of Haverstraw was 12,323 people.

The 2020 Village of Haverstraw Comprehensive Plan Volume 2 was reviewed to determine notable demographic attributes. Only 52% of the Village population was native born in NY and only 57% was native born in the United States. Approximately 72% of the population identifies as Hispanic or Latino Origin. More than 57% of households are renter (compared with 40% in the county). Only 24% of the population has a Bachelor's degree or higher educational attainment.

According to HUD, 59% of renter households are cost burdened, with 41% of those households being severely cost burdened. Median income in 2017 was $56,862 versus $88,570 for the County. 27% of households received SNAP benefits compared to 11% of the county. In 2020 14.8% of households were below the federal poverty line.

The Project Site is located in Census Block Group 1 of Census Tract 107.03 and has a population of which 22.35 percent of the population is below poverty level and 100 percent of the population reported themselves to be members of a minority group[6].

The entire Village of Haverstraw is identified by the New York Department of Environmental Conservation as a Potential Environmental Justice Area (PEJA). According to the NYSDEC, PEJA's are U.S. Census block groups of 250 to 500 households each that, in the Census, had populations that met or exceeded at least one of the following statistical thresholds:

1. At least 52.42% of the population in an urban area reported themselves to be members of minority groups; or
2. At least 26.28% of the population in a rural area reported themselves to be members of minority groups; or
3. At least 22.82% of the population in an urban or rural area had household incomes below the federal poverty level.

Four residential structures currently occupy the Project Site along Alisson Street and Broad Street, with the balance being vacant land. It is estimated that residences contain 14 dwelling units which are estimated to house 46 persons, 10 of which are school aged children.

[6] NYSDEC ArcGIS Webmap of the Potential EJ Areas as designated in the 2020 updates.

POTENTIAL IMPACTS

The proposed Project of 450 residential units, consisting of 133 affordable housing units and 317 market rate units, will add an estimated 790 additional residents to the Village of Haverstraw, as detailed in **Table 3.D.1, Projected Number of Residents and School Age Children**. This Project will result in a 6.5 percent increase in the population of the Village of Haverstraw.

The Project includes the demolition of the existing four multi-family residential structures which occupy the site. These replaced units are included in the below population estimates. The estimates also assume that there will be a vacancy rate of 5%.

MITIGATION MEASURES

No mitigation measures are proposed as part of the proposed development. Although the proposed project will remove 14 units of existing multifamily housing, it will introduce more than 130 units of quality low-income housing to the region.

Table 3.D.1: Projected Number of Residents and School Age Children

Unit Type	Income Level	Number of Units	Person Per Unit	Total Persons
Studio	Affordable	19	1.32	25.1
Studio	Market	48	1.67	80.2
One Bedroom	Affordable	65	1.32	85.5
One Bedroom	Market	152	1.67	253.8
Two Bedroom	Affordable	42	2.68	112.6
Two Bedroom	Market	102	2.31	235.6
Three Bedroom	Affordable	7	4.23	29.6
Three Bedroom	Market	15	3.81	57.2
All Units	Affordable	133		253
All Units	Market	317		627
Gross Population Yield		450		880
5% Vacancy Rate Adjustment				836
Population Removed from Existing Units (14 Units)				46
Net Population Yield				**790**

Source: Rutgers University, Center for Urban Policy Research: Residential Demographic Multipliers Rutgers University, Center for Urban Policy Research: Residential Demographic Multipliers - Estimates of the Occupants of New Housing, June 2006 (New York State, Total Persons in Buildings with 5+ Rental Units, More than $1,100/month for Market Units, and less than $500/month for Affordable Units, categorized into 1 BR, 2 BR and 3 BR Units).

3.D.2. SCHOOLS

EXISTING CONDITIONS

The Project Site is located within the North Rockland Central School District. The district consists of nine schools, although one of the schools is leased to Rockland BOCES. The District has three schools serving kindergarten through third grade (Stony Point Elementary School, Thiells Elementary School and West Haverstraw Elementary School); three schools which serve grades four through six (James A. Farley Elementary School, Haverstraw Elementary School and Willow Grove Elementary School); one Middle School (Fieldstone Middle School) which is home to the district's seventh and eighth grades and North Rockland High School which serves grades nine through 12.

According to the District's 2023-2024 Budget Proposal, the District has a total of 7,643 students attending all the District's schools, with 1,251 students currently receiving special education services. The District's enrollment has remained relatively consistent over the past 12 years as shown in **Table 3.D.2**, although recently there has been a slight decline in enrollment. The total budget for the 2023-2024 school year is $272,319,972 dollars.

POTENTIAL IMPACTS

The construction of the Project will result in an estimated net increase of 49 school children attending the North Rockland Central District's schools using the Pupil Yield Market Analysis provided by the Project Sponsor. The analysis is based on the actual student numbers collected from recent developments by the project sponsor in similar urban villages or small cities in New York State. The analysis accounts for a vacancy rate of 5% and removal of the existing site's residential structures which house 10 children currently enrolled in the public school district.

Table 3.D.2: North Rockland Central School Enrollment Data by Year

Year	Enrollment	Percent Change
2011-2012	7,896	
2012-2013	7,862	-0.43%
2013-2014	7,905	0.55%
2014-2015	7,847	-0.73%
2015-2016	7,789	-0.74%
2016-2017	7,770	-0.24%
2017-2018	7,895	1.61%
2018-2019	7,895	0.00%
2019-2020	7,886	-0.11%
2020-2021	7,713	-2.19%
2021-2022	7,643	-0.91%
2022-2023	7,643	0.00%

The numbers provided by the project sponsor were compared with the demographic multipliers for public school children prepared by Rutgers Center for Urban Policy Research in 2006. Both calculations are provided and described in **Table 3.D.3, Projected Number of Public School Children**. A comparison of rates shows that actual observed school child generation is in range of the Rutgers University numbers, albeit somewhat less in the aggregate. As the Rutgers numbers were from 2006 and for the entirety of New York State including NYC, Buffalo and other large cities, where rental multifamily housing is a more preferred option for families, than in suburban areas like Rockland County.

Additionally, two local past developments were researched to determine whether the project sponsor provided multipliers were in range.

Table 3.D.3: Projected Number of Public School Children

Unit Type	Income Level	Number of Units	Rutgers Public School Children Per Unit*	MPACT Public School Children Per Unit	Rutgers Total Public School Children	Project Sponsor Public School Children
Studio	Affordable	19	0	0	0	0
Studio	Market	48	0	0	0	0
One Bedroom	Affordable	65	0.09	0.05	5.85	3.25
One Bedroom	Market	152	0.07	0.05	10.64	7.60
Two Bedroom	Affordable	42	0.67	0.57	28.14	23.94
Two Bedroom	Market	102	0.16	0.12	16.32	12.24
Three Bedroom	Affordable	7	1.27	1.64	8.89	11.48
Three Bedroom	Market	15	0.63	0.21	9.45	3.15
				Gross Population Increase	79.29	61.66
				95% Occupancy Rate Adjustment	75.33	58.58
				Net Population Increase (Rounded)	**65**	**49**

*** Source: Rutgers University, Center for Urban Policy Research: Residential Demographic Multipliers Rutgers University, Center for Urban Policy Research: Residential Demographic Multipliers - Estimates of the Occupants of New Housing, June 2006 (New York State, Total Persons in Buildings with 5+ Rental Units, More than $1,100/month for Market Units, and less than $500/month for Affordable Units, categorized into 1 BR, 2 BR and 3 BR Units); MPLAN Collective Analysis**

The Harbors at Haverstraw: according to the Draft Environmental Impact Statement for the Admirals Cove multi-family development, the enrollment from The Harbors at Haverstraw market rate multi-family development is 28 public school children based on 496 market rate one-, two-, three- and four- bedroom market rate units (or 0.06 school children per unit).

Murphy Manor: according to the North Rockland Central School District, the enrollment for the Murphy Manor affordable housing development is 19 school children for 26 one-, two- and three-bedroom units of affordable housing (or 0.73 school children per unit).

Based on these local comparables, the project sponsor's observed multipliers are believed to be accurate.

MITIGATION MEASURES

It is expected that the Project will add 49 children to the district's schools, which averages 3.7 public school children per grade. The 49 new school children are well within the range of recent past enrollment.

3.D.3. POLICE, FIRE AND EMERGENCY SERVICES (EMS)

The Village of Haverstraw is served by the Village's Fire Department, the Town of Haverstraw Police Department, and the Haverstraw Volunteer Ambulance Corps. Letters were sent out to these agencies requesting information about the existing conditions and potential impacts which would result from the development of the Project. The Village Fire Department and the Town Police Department responded to these requests (see **Appendix F, Community Services**). Locations of Fire, Police and EMS services are shown on **Figure 3.D.1, Project Site and Community Services**.

EXISTING CONDITIONS

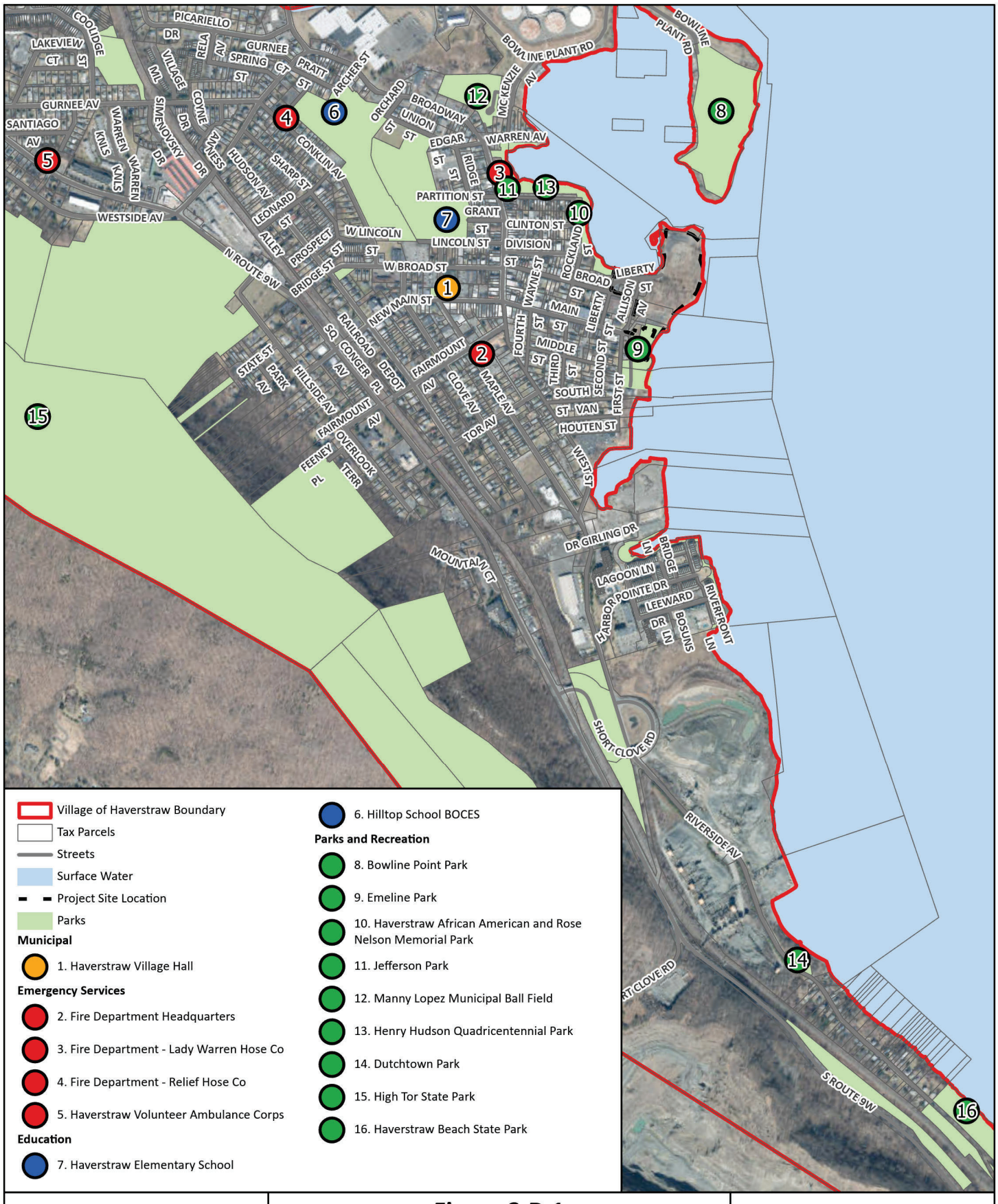
Fire Department

The Haverstraw Fire Department is staffed by volunteers and consists of five fire companies housed in three stations. The Department has three pumpers, one ladder truck and one heavy rescue vehicle. The main station is at 25 Fairmount Avenue and houses Rescue Hook & Ladder Company #1, General Warren Emergency Company #2, and Cosgriff Hose Company #4. Lady Warren Hose Company #5 is located at 88 Broadway and Relief Hose Company #3 is located at 11 Conklin Avenue. The Haverstraw Fire Department also has a fire boat (known as 4-Marine) which is docked at the Haverstraw Elks Marina and is kept in the water seasonally.

The Department estimates the response time to the area of the Project is about four minutes on average and would be serviced by all five fire companies in the Village.

Police Department

The Town of Haverstraw Police Department is located at 101 West Ramapo Road in Garnerville, NY. The Station is 3.2 miles from the Project Site. The Department employs 68 police officers. The Department's fleet consists of 35 vehicles, with 15 of these assigned to the Patrol Division. The other 20 vehicles are distributed among the Detective Division, Special Operations Unit, Administration and other specialized units. According to the Department, the average response time for non-priority calls, with no other calls being handled, is estimated to take between five to 10 minutes. For non-priority calls with other ongoing priority calls it will take significantly longer. For priority calls with no other calls the response time would be less than two to three minutes, and for priority calls with other calls the response time would be ideally five to 10 minutes.



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Figure 3.D.1
Project Site and Community Services

Sources: Rockland County GIS, 2023
Scale: 1 inch equals 1,167 feet

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Chair Factory DEIS
Village of Haverstraw

Emergency Services (EMS)

The Haverstraw Volunteer Ambulance Corps is located at 160 Route 9W, Haverstraw, NY. The Corps provides emergency medical care and treatment to the Town of Haverstraw, including the Village of Haverstraw. The Corps has 87 members and employees. The Corps has four Type III ambulances, one agency fly car, and one mass casualty trailer. The average response time to the project area is six to seven minutes, and generally, within five minutes of initial dispatch, the ambulance is rolling out of the station.

POTENTIAL IMPACTS

Fire Department

According to a response letter received from the Haverstraw Fire Department dated September 29, 2023, the Department has had approximately 150 annual fire/emergency calls to the 496-unit Harbors at Haverstraw development in the Village since 2013 (see **Appendix F, Community Services**). The Department noted that the proposed Project, with its mix of residential and commercial space, would have a comparable or higher number of calls as compared with the Harbors at Haverstraw development. Representatives of the Project team met with the Fire Department Council on October 24, 2023, to review emergency access to the development proposed at the Project Site. Proposed residential buildings will contain fire suppression sprinklers and will adhere to all local and State building and fire prevention codes. Water supply, including extra demand from fire flow, is anticipated to be adequate (**Chapter 3E, Utilities** includes additional discussion of water flow to the Project Site).

Access and building construction will meet New York State Fire Code requirements and will be able to accommodate the current types of vehicles that would respond to the Project Site. The Project is expected to increase the population of the Village by approximately 6.5 percent. Based on the planning standards published in the Urban Land Institute's Development Assessment Handbook, the increase in population could result in an increased demand of 1.4 fire personnel and 0.2 additional vehicles.

Police Department

Peter G. Murphy, Chief of Police estimated that the proposed project would generate 800 additional calls per year based on the Harbors at Haverstraw as a comparable, although he indicated it was tough to estimate. The Project is expected to increase the population of the Village by approximately 790 residents. Based on the planning standards published in the Urban Land Institute's Development Assessment Handbook, the increase in population could result in an increased demand of 1.7 police personnel, and 0.5 additional police vehicles.

Emergency Services (EMS)

The Haverstraw Volunteer Ambulance Corps responded on November 12, 2023, concerning the Project's impact on their services. President Anthony Nunez of the Corps noted that the Project will warrant the hiring of additional employees and will require more volunteers but stated the Corps would have, "no issue caring for the increase to population that the project would bring." Based on the planning standards published in the Urban Land Institute's Development Assessment Handbook, the increase in population could result in an increased demand of 0.1 EMS personnel and no additional EMS vehicles.

MITIGATION MEASURES

Fire Department

Fire safety measures and fire-rated building materials would be installed during construction of the Project. Representatives of the Project team and consultants met with the Fire Department Council to review emergency access to the development proposed at the Project Site. Emergency access will be reviewed by the Fire Department during site plan review of the Project. The proposed development will generate property taxes, PILOT payments and sales taxes which are expected to adequately offset the estimated additional services required for local Fire Department services required for this Project.

Police Department

The proposed development will generate property taxes, PILOT payments and sales taxes which are expected to offset the estimated additional services required from the Town's Police Department.

Emergency Services (EMS)

The proposed development will generate property taxes, PILOT payments and sales taxes which are expected to offset the estimated additional services required for the Ambulance Corps services for the Project.

3.D.4. SOLID WASTE

EXISTING CONDITIONS

The Project Site includes four residential properties including single family residences and small multifamily residences. Refuse and recycling collection is provided in the Village by a private waste carter which is responsible for removing and disposing of solid waste for these properties.

POTENTIAL IMPACTS

Solid waste collection, recycling and disposal will be provided by a private waste carter during construction and upon completion of the project. The Project Sponsor will provide areas for on-site solid waste collection in designated waste receptacle areas which comply with the code of the Village of Haverstraw. The private waste carters serving the Project will provide off-site disposal of all refuse and recycling materials produced by the Project.

MITIGATION MEASURES

As all garbage collection and recycling collection will be completed by a private carter at the Project Site.

3.D.5. RECREATION AND OPEN SPACE

EXISTING CONDITIONS

An approximately 3,000 square foot portion of the Project Site is within the Village's Emeline Park including a grassed open space area and a stone structure used as a Hudson River overlook.

The following parks are located in the Village of Haverstraw and provide various open space and recreation purposes to the residents of the Village and region. Locations of local parks, recreation and open spaces are shown in **Figure 3.D.1, Project Site and Community Services**.

Emeline Park: located near downtown, adjacent to the Project Site, and on the Hudson River, this park includes a gazebo, seating areas, playgrounds and walking trails.

Henry Hudson Quadricentennial Park: this shoreline park runs along the edge of Bowline Park and is adjacent to the Project Site. The Park includes walking trails and seating areas.

Jefferson Park: this small park at the corner of Jefferson Avenue and Broadway includes tables and seating areas and views of Bowline Pond and the Hudson River.

Manny Lopez Municipal Ball Field: this park hosts baseball and softball leagues, local school teams, and the Haverstraw Little League.

Haverstraw African American & Rose Nelson Memorial Park: located at Jefferson and Clinton Streets, this park is adjacent to the Henry Hudson Quadricentennial Park and includes playgrounds, seating areas and a basketball court.

Dutchtown Park: located in the historic Dutchtown area in the south end of Haverstraw, the park contains walking paths, play areas and forested areas.

Bowline Point Town Park: located on the northeast side of Bowline Park and directly north of the Project Site, this park includes an outdoor pool facility, playgrounds, tennis and basketball courts, walking trails and a fishing pier.

High Tor State Park: located along the Village's western boundary, the Park features hiking trails, forested areas and views of the Hudson River.

Haverstraw Beach State Park: located in the south end of Haverstraw, this park includes the Haverstraw-Nyack Path which connects to the south to Nyack Beach State Park and Rockland Lake State Park.

POTENTIAL IMPACTS

The portion of the Project Site within Emeline Park will be subject to parkland alienation to become part of the Project in exchange for the creation of approximately 4.2 acres of new parkland along the waterfront. The new parkland created as part of the Project will provide a connection from Emeline Park to the south, through the Project Site, to Henry Hudson Quadricentennial Park to the west. This new waterfront park will extend into and connect the walking trails in both existing parks. Uses in the new parkland will include a

paved riverfront trail, seating areas and open lawn for primarily passive recreation activities such as a dog run and earthen amphitheater. The Proposed Action will improve downtown Haverstraw's connection with the waterfront, providing more open space and passive recreation resources for the public.

MITIGATION MEASURES

The addition of the 4.2 acres of new parkland at the Project Site will provide opportunities for waterfront access, open space and passive recreation for the public in the Village of Haverstraw and the region. The residents of the Project are not expected to substantially increase the use of or adversely impact any of the existing parks or recreation areas in the Village. The additional open space areas, trails and recreational opportunities provided by the Project will be an overall benefit within the Village and region.

3.E. UTILITIES

This chapter focuses on the utility components of the Project which include the water supply, sanitary sewer, gas, electric, telephone and cellular data connections. The discussion of these services includes a description of the existing conditions and connections on the Project Site; identifies available utilities and infrastructure in the area; presents the estimated demands of the Proposed Action; discusses system capacities and service capabilities; and identifies the ways in which the existing resources and infrastructure would meet the project-generated demand or can be mitigated to address the system capacity issues.

The majority of the Project Site is vacant, with four multi-family residences located along Allison Avenue and Broad Street. These residential properties are currently served by utilities from Allison Avenue and Broad Street.

3.E.1. EXISTING CONDITIONS

WATER

The water supply for the Project Site is obtained from Veolia Municipal Water Operations. Except for the existing four residential properties on Allison Avenue and Broad Street, the Project Site is not currently connected to the water supply system.

SEWER

The Project Site is currently served by the Haverstraw Joint Regional Sewage Treatment Plant and is within Rockland County/Haverstraw Joint Regional Sewerage District Area. The majority of the Site is not directly connected to the sewer connections. The four existing residential properties are connected to sewer lines on Broad Street and Allison Avenue.

ELECTRIC, GAS, TELEPHONE AND CELLULAR DATA

Existing gas and electric service to the site is currently provided by Orange and Rockland Utilities. The majority of the Project Site is not directly connected to existing gas and electric lines. The four existing residential properties are connected to lines on Broad Street and Allison Avenue.

Existing telephone and cellular data services are currently provided to the residences at the Project Site along Allison Avenue and Broad Street.

3.E.2. POTENTIAL IMPACTS

A preliminary Utility Plan of the Project Site has been developed, and can be found in **Appendix B, Site Plans**.

WATER

The Project would utilize public water for domestic purposes (i.e. cooking, drinking, washing and sanitary), to be supplied by Veolia Municipal Water Operations Municipal Water Operations from Broad Street and Allison Avenue. The anticipated increase in average daily domestic water demand for the Project is estimated to be 90,770 GPD. Applying a factor of two (2) to determine the maximum daily demand yields 182,060 gallons per day (GPD). Applying a factor of four (4) to determine the peak hourly domestic water

demand yields 363,080 GPD or 252.1 gallons per minute (GPM). Please see **Appendix G, Utilities**, for the water demand calculations.

The Project proposes to install new direct domestic water connection from existing water mains on Broad Street and Allison Avenue. Four out of the five Project's buildings would be serviced from a new water main along Liberty Street. Building 1 would be serviced from the existing main along Allison Avenue. The proposed new water main would consist of 750+/- LF of 8" CL52 ductile iron pipe (see **Appendix B, Site Plans**). All construction of the new water mains would be funded by the Project Sponsor and reimbursed by Veolia.

Veolia Water provided a flow test of one of the hydrants along Allison Avenue on September 5, 2023, which shows the pressure of the water at the Flow Hydrant 71-144 and Control Hydrant 71-24. The hydrant showed a gauge pressure of 37 Pressure Square Inch (PSI), static pressure of 85 PSI, residual pressure of 70 PSI and the Hydrant Discharge that was observed was 920 gallons per minute.

On August 25, 2023, the Project Sponsor sent a request to Veolia to serve the project and to confirm the anticipated upgrades required for the connections, pressure, and load capacities to address the Project (see **Appendix G, Utilities)**.

SEWER

The Project would utilize facilities from the Rockland County/Haverstraw Joint Regional Sewerage District from Broad Street and Allison Avenue. Under SPDES Permit Number NY0028533, the Haverstraw Joint Regional Sewer Treatment Plant is approved up to 8 million GPD. The anticipated increase in average daily sewer loading for the Project is estimated to be 90,770 GPD. Applying a factor of two (2) to determine the maximum daily demand yields 182,060 GPD. Applying a factor of four (4) to determine the peak hourly sewer loading yields 363,080 GPD. Please see **Appendix G, Utilities**, for the sewer demand calculations. On August 25, 2023, the Project Sponsor sent a request to Rockland County/Haverstraw Joint Regional Sewerage Board to serve the project with the anticipated required upgrades required for the connections and load capacities to address the Project.

The Project Sponsor is proposing a connection to the sewer line for Building 3 along Broad Street. For the remainder of the Project's buildings, an internal gravity system would discharge to a proposed municipal duplex pump station with an associated backup generator. The internal gravity sewer main that discharges to the pump station would be approximately 1,500 linear feet of 8-inch SDR35 PVC sewer pipe with a manhole spacing of approximately 300 ft. The pump station would discharge to a proposed 4-inch force main of approximately 500 linear feet to the gravity sewers within Allison Avenue and Broad Street. The **Appendix B, Site Plans**, of the DEIS contains additional information on the proposed sewer connections.

ELECTRIC, GAS, TELEPHONE AND CELLULAR DATA

Connections would be made to each utility through the creation of an internal distribution network. It is anticipated that Orange and Rockland Utilities would be able to supply the proposed project without impact to its ability to serve its other customers in the area.

The majority of the Project's buildings would be connected to existing lines in Broad Street and extended into the site through wires and underground connections that would go along and under Liberty Street. Building 1 would be connected to the existing gas and electricity lines along Allison Avenue. The Project

Sponsor has sent a request to Orange and Rockland Utilities to serve the project and to confirm that gas and electric services can and would be provided to the proposed project.
Telephone and cellular data services would be provided from Broad Street and Allison Avenue to the Project Site.

3.E.3. MITIGATION MEASURES

The Project Sponsor has sent letters to the Joint Regional Sewerage Board and Veolia Municipal Water Operations requesting will serve letters in August 2023 which it has received. The sponsor is also in discussions with Orange and Rockland Utilities regarding the potential to install a pilot program geothermal loop network. With the utilities upgrades as proposed, the Project would not create a significant adverse impact on utilities and therefore, no mitigation measures are necessary.

3.F. STORMWATER

3.F.1. EXISTING CONDITIONS

EXISTING DRAINAGE INFRASTRUCTURE

There are no existing onsite drainage structures, swales, or other man-made features to control stormwater runoff on the Project Site. Approximately 15% percent (1.9 acres) of the Project Site is covered by impervious or compacted surfaces.

EXISTING DRAINAGE PATTERNS AND HYDROLOGIC CHARACTERISTIC

There are currently no specific points of existing stormwater discharge from the Site, as all current stormwater is naturally directed into the Hudson River. All existing slopes on Project Site are shown on **Figure 3.G.1, Topography and Slopes,** found in **Chapter 3G** of this DEIS. The Project Site is moderately sloping, with elevations ranging from approximately sea level to 45 feet above sea level. The site slopes from Broad Street and Allison Avenue to the north and east, discharging directly to the Hudson River. Steep slopes can be found running along the western portion of the Site, to the east of Allison Avenue, and in the area north of Liberty Street. Areas of steep slope are also found along the Site's water frontage along the Hudson River.

The nearest natural classified water body into which runoff from the Project Site would discharge is the Hudson River. The river is classified by the New York State Department of Environmental Conservation (NYSDEC) as a Class SB water body and is not included in the Section 303(d) list of impaired waters found in Appendix E of the NYSDEC SPDES General Permit No. GP-0-20-001 for Stormwater Discharges from Construction Activity.

The project site is also not located over a US Environmental Protection Agency (US EPA) designated Sole Source aquifer, nor is it located over a Primary or Principal aquifer listed in the NYSDEC Technical and Operational Guidance Series (TOGS) 2.1.3 (1980).

In the 2023 Stormwater Pollution Prevention Plan (SWPPP) prepared for the Project (see **Appendix H, Stormwater**), rainfall data was obtained from the modeling and analysis of rainfall data on the Cornell University website, Extreme Precipitation in New York and New England. Rainfall data specific to the portion of Rockland County within the Project Site, for various 24-hour storm events, is presented in **Table 3.F.1, Storm Events and 24-Hour Rainfall**. The terms "1-, 10- and 100 Year Storm Event" are used in the context of return periods. A 1-year storm has a 100% chance of occurring in a given year, a 10-year storm has a 10% chance of occurring each year, and a 100-year storm has a 1% chance of occurring each year. During a 24-hour rainfall event, the amount of rainfall in those 24 hours indicates what type of storm has occurred.[7]:

[7] https://precip.eas.cornell.edu/#/data_and_products

Table 3.F.1: Storm Events and 24-Hour Rainfall

STORM EVENT PERIOD	24-HOUR RAINFALL (INCHES)
1-Year	2.77
10-Year	5.09
100-Year	9.18

SOIL COVERAGE AND HYDROLOGIC SOILS

As discussed in **Chapter 3G, Geology- Soils and Topography**, of this DEIS, the Project Site primarily consists of Ux, Urban Land, and HcD, Hinckley gravelly loamy sand soils, while a smaller portion at the southern end of the Site contains Uw, Udorthents soils. According to the USDA Web Soil Survey, the Project Site's soil composition is made of all hydrologic soil groups (HSG's) A, meaning the soils have a high infiltration rate and low runoff potential when thoroughly wet. These soils consist of mainly deep, well drained to excessively drained sands or gravelly sands, and have a moderate rate of water transmission. HSG's are determined by proximity to wetlands and evidence of groundwater observed in geotechnical investigations.

3.F.2.POTENTIAL IMPACTS

STORMWATER QUALITY AND QUANTITY

The Project Site is located within the Village of Haverstraw regulated Municipal Separate Stormwater Sewer System (MS4). Therefore, an MS4 SWPPP Acceptance Form and Notice of Intent would be submitted to the NYSDEC.

The Project Site was previously developed with industrial uses. The site is currently covered predominantly by asphalt roadway, buildings, gravel drive aisles, areas of fill, grass, and trees. Runoff from the project site discharges directly to the Hudson River, which is a fifth order or larger stream. Therefore, as described in Chapter 4 of the 2015 *New York State Stormwater Management Design Manual*, the stormwater quantity criteria do not apply to the Project. However, the General Permit has requirements for the Water Quality Volume (WQv) that are intended to improve water quality by capturing and treating runoff from small, frequent storm events.

According to the SWPPP prepared for the Project (**Appendix H, Stormwater**), 28,220 cubic feet (cf) of WQv is required to be treated. The Project Site would achieve pollutant removal from the WQv through five main stormwater features to provide water quality (see **Appendix B, Site Plans**). These are green roofs, stormwater planters, porous pavement, hydrodynamic separators, and tree planters. All storm sewer and treatment areas are shown on the Utilities Plan in see **Appendix B, Site Plans. Table 3.F.2**, provides details on the runoff reduction techniques, which would capture 25,930 cf of the required 28,220 cf of WQv. To reach the remaining WQv requirement, hydrodynamic separators are being proposed as a method of stormwater management, in addition to those listed in **Table 3.F.2**. The hydrodynamic separators accelerate the separation of floating and settling pollutants from stormwater through the use of a vortex. Stormwater

Table 3.F.2: Runoff Reduction (RR) Methods Summary

RR TECHNIQUE	RRv CAPACITY	WQv REQUIRED (in cubic feet)
Area Reduction Practices		
Tree Planting/Tree Pit	100%	2,090 cf
Volume Reduction Practices		
Green Roof	100%	8,320 cf
Porous Pavement	100%	9,370 cf
Stormwater Planter	100%	6,150 cf
TOTAL		**25,930 cf**

runoff enters the unit, and as it circles in the chamber, settable solids fall into a sump and are retained. All other pollutants are raised to the surface and separate as the water goes through a baffle wall, then exits through a flow control orifice.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND STORMWATER COMPLIANCE

All construction activities would be performed in accordance with NYSDEC's technical standards for erosion and sediment control to minimize potential adverse effects on surface waters, particularly the Hudson River. All permitting processes, stormwater management practices and controls, etc., would also be required to be in compliance with Haverstraw Village Code Section 197. The Village's Stormwater Management Officer would be involved in the final review of the final Stormwater Pollution and Prevention Plan (SWPPP) and pre-, during, and post-construction practices. Potential sediment and erosion control measures, including stormwater mitigation measures and infrastructure, would be implemented in accordance with the approved SWPPP.

Stormwater mitigation measures primarily involve preventing soil erosion and sedimentation resulting from stormwater run-off during and after construction. During construction, this is accomplished by sequencing site disturbance activities to establish erosion controls, minimize disturbed areas, maintain existing vegetation as much as possible, and stabilize newly disturbed areas as soon as possible. Stormwater pollutant controls utilized during construction would include temporary sediment barriers and sediment traps designed in accordance with the 2016 *NYS Standards and Specifications for Erosion and Sediment Control*. Stormwater pollutant controls utilized after construction would include stormwater quality control practices designed in accordance with the *New York State Stormwater Management Design Manual*.

3.F.3. MITIGATION MEASURES

With the implementation of the SWPPP and the Project developed as proposed, the Project would not result in a significant adverse impact on stormwater.

3.G. GEOLOGY – SOILS, AND TOPOGRAPHY

3.G.1. EXISTING CONDITIONS

TOPOGRAPHY

A map of the topography of the Project Site, shown at two-foot intervals (see **Figure 3.G.1, Topography and Slopes**), shows much of the eastern portion of the Site as level or with minimal slopes. Steep slopes can be found running along the western portion of the site, to the east of Allison Avenue, and in the area north of Liberty Street. Areas of steep slope are also found along the Site's water frontage along the Hudson River and Bowline Pond.

REGIONAL AND BEDROCK GEOLOGY

According to the 2023 Preliminary Geotechnical Engineering Report (**Appendix I, Soils and Geology**), the geologic characteristics of the proposed site consist of relatively deep areas of existing fill and very soft clay soil. According to the USGS New York State Geological Map, the bedrock of the Project Site is that of Brunswick Formation bedrock from the Upper Triassic age, which is sandstone, highly to moderately weathered.

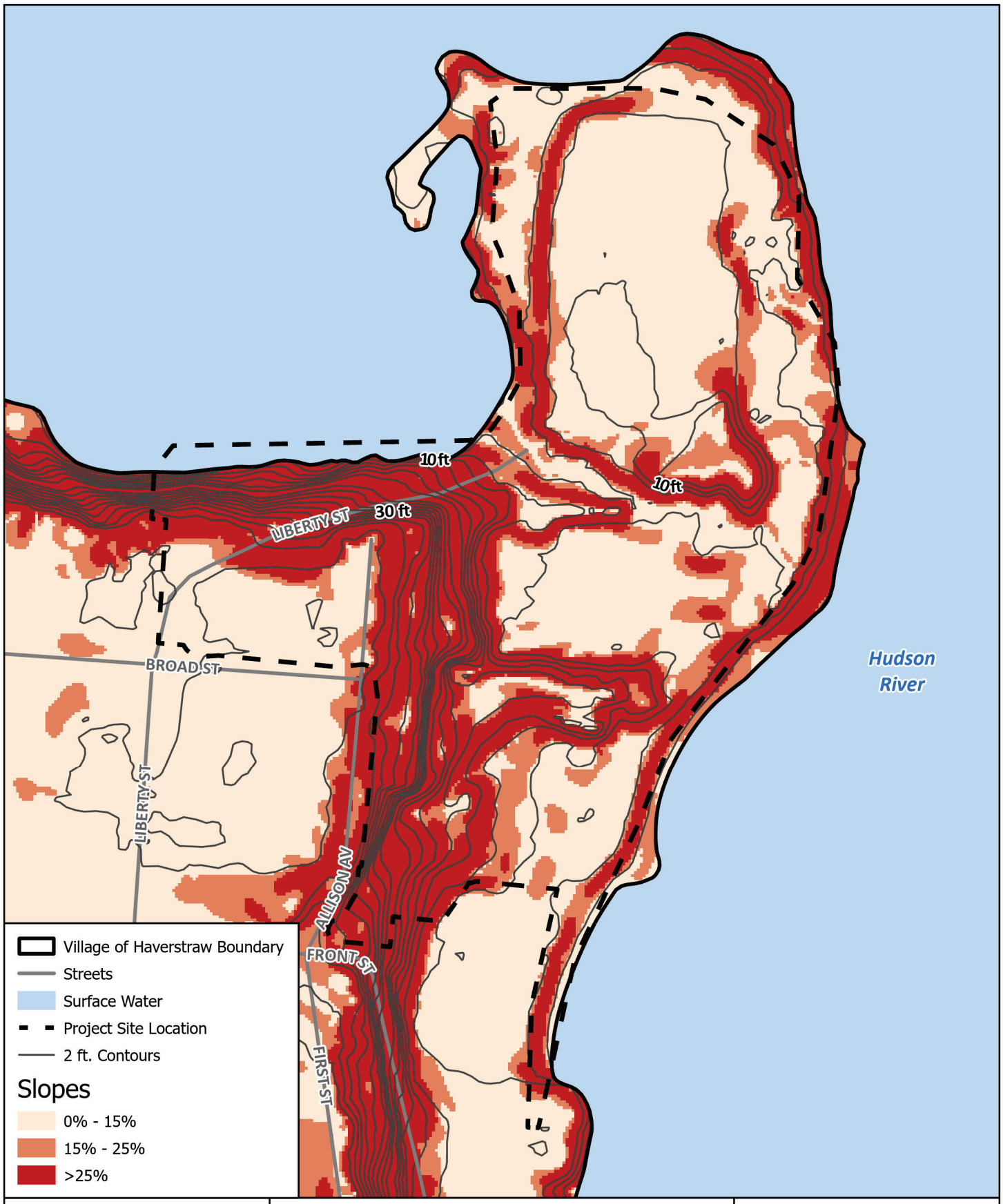
SOIL CHARACTERISTICS

Soil types are determined based on several factors, such as the granularity of the soil, texture, sorting, drainage color, and slopes. According to the U.S. Department of Agriculture Natural Resource Conservation Service Soil Survey, the Project Site has a total of three soil types, with 51.6 percent consisting of Hinckley Gravelly Loamy soil (excessively deep and drained soils), and 38.8 percent consisting of Urban Land (soils typical of urban environments) and 9.6 percent consisting of Udorthents (soils typical of tidal marshes and flood plains). **Figure 3.G.2, Soil Classification,** shows the approximate location of these soil types. About 48.4 percent of the Project Site is somewhat to very poorly drained, while the remaining portion of the Project Site is classified as somewhat excessively drained. The Udorthents soil type is also considered hydric soils which are soils that typically form under conditions of saturation, floodings or prolonged ponding. **Table 3.G.1, Summary of Soil Types** provides the soil types found at the Project Site, including the drainage class.

Table 3.G.1: Summary of Soil Types

Soil Type	Drainage Class	Acres	Percent
Hinckley Gravelly Loamy Soil, slopes 15-25% (HcD)	Somewhat Excessively Drained	4.8	51.6
Udorthents (Uw)	Somewhat Poorly Drained	0.9	9.6
Urban Land (Ux)	Very Poorly Drained	3.6	38.8

Source: USDA Soil Survey, 2023.



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Figure 3.G.1
Topography and Slopes

Sources: Rockland County GIS, 2023
Scale: 1 inch equals 150 feet

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Village of Haverstraw



NPV

Figure 3.G.2
Soil Classifications

Sources: Rockland County GIS, 2023
Scale: 1 inch equals 205 feet

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Chair Factory DEIS
Village of Haverstraw

PHASE I ENVIRONMENTAL SITE ASSESMENT/GEOTECHINCAL REPORT

The 2023 Phase I Environmental Site Assessment, completed by Hillman Consulting (**Appendix I, Soils and Geology**), found only one REC, or Recognized Environmental Concern, which was the "unknown origin and contents of the fill material used to build up the land, the long history of manufacturing and the associated demolition debris represent a REC for the Property." The Phase I report recommended a Phase II Subsurface Investigation "to investigate potential impacts to the subsurface." In February 2023, Terracon conducted Geophysical Exploration services to investigate possible subsurface materials related to the former buildings at the Site. This report concluded that the "main geotechnical concerns facing the site development are the relatively deep sones of existing fill and the deep zones of very soft clay soil." The geotechnical report did not include any environmental testing of the soil.

The 2023 Preliminary Geotechnical Report (see **Appendix I, Soils and Geology**) determined that there are two types of fill preexisting on the Project Site. **Table 3.G.2, Subsurface Layers** shows a summary of the model layers identified on the Site's subsurface profile. These layers were confirmed through five soil borings retrieved from the Site.

Table 3.G.2: Subsurface Layers

Layer Name	Description
Existing Fill 1	Asphalt millings, crushed stone, concrete and brick fragments
Existing Fill 2	Very loose to medium dense silt, sand and gravel
Cohesive Soil 1	Very soft to medium stiff clay
Cohesive Soil 2	Stiff to hard clay or silt
Granular Soil 1	Very loose to loose sand
Granular Soil 2	Medium dense to very dense sand
Bedrock	Sandstone, highly to moderately weathered

Source: Preliminary Geotechnical Report, 2023.

The Preliminary Geotechnical Report found Existing Fill 1 is not expected to be usable as engineered fill, whereas Existing Fill 2 is expected to be usable as engineered fill. The native soils are also expected to be usable as engineered fill as well. The Preliminary Geotechnical Report also provided preliminary recommendations to determine the suitability of the site for development. **Table 3.G.3, Site Suitability** outlines these recommendations. We note these recommendations were based on a summary description of the Project.

Table 3.G.3: Site Suitability

Item	Preliminary Recommendation
Shallow Foundations- Lightly Loaded Structures (~50 to 100 kips)	
Bearing Material	Native soils consisting of medium dense or better granular soils and/or stiff or better cohesive soils or engineered fill bearing upon these native soils.
Foundation Type	Conventional shallow spread isolated and strip footings.
Ground Improvement- Moderately Loaded Structures (~100 to 250 kips)	
Bearing Material	It may possible that the existing fill could be modified or improved to provide sufficient support for structural loads.
Foundation Type	Densification, inclusions and/or modifications
Deep Foundations- Heavily Loaded Structures (~250 to 500 kips)	
Bearing Material	Bedrock
Foundation Type	**If drilled – drilled shafts or augered piles**
	If driven – H or Pipe Piles
Retaining Walls	
Bearing Material	Native soils consisting of medium dense or better granular soils and/or stiff or better cohesive soils or engineered fill bearing upon these native soils
Backfill Material	Native soils and possibly Existing Fill 2
Foundation Type	Depending on their height, walls retaining more than 5 feet of soil may require ground improvement or deep foundation support.
Floor Slabs	
Bearing Material	Native soils consisting of medium dense or better granular soils and/or stiff or better cohesive soils or engineered fill bearing upon these native soils.
Pavements	
Bearing Material	Native soils consisting of medium dense or better granular soils and/or stiff or better cohesive soils or engineered fill bearing upon these native soils.

Source: Preliminary Geotechnical Report, 2023.

3.G.2. POTENTIAL IMPACTS

A preliminary Grading Plan of the Project Site has been developed, and can be found in **Appendix B, Site Plans**. The Grading Plan also shows the limits of disturbance for the Project Site. Moreover, it shows that in

comparison to existing conditions, a large portion of the steeply sloped areas on the western portion of the Site would be developed upon with the construction of Buildings 1 and 2. The Liberty Street extension would have a slope of approximately eight percent with most other paths having slopes less than five percent. Most of the fill is proposed to occur along the central portion of the Project Site. The Project proposes approximately 22,000 cubic yards of cut and approximately 19,500 cubic yards of fill. The Project would therefore result in the export of approximately 2,500 cubic yards of cut. Excess soil and earth materials that cannot be re-used would be disposed off-site in accordance with Village of Haverstraw, New York State and federal regulations and the recommendations of the Phase I Environmental and Preliminary Geotechnical Engineering report. For any fill deemed unsuitable for building construction, pilings would be used to provide additional structural support. A total of 748 piles are to be used site wide. The preliminary Piling Plan can be found in **Appendix B, Site Plans** for additional information related to the location and total number of pilings used for each proposed structure**.** Additionally, based on the depth of the bedrock as shown in the 2023 Geophysical Exploration Report (**Appendix I, Soils and Geology**), there is no rock removal necessary for the construction of the Project, and no blasting is expected.

The Project mostly involves the redistribution of the existing soil to allow the Site to accommodate the proposed buildings as shown in the Cut and Fill Plan included in **Appendix B, Site Plans**. The existing soil would be evaluated for suitability for use as fill material to be reused on the Site. The most significant area of cut would be along the steeply sloped portion of the site in the location of Buildings 1,2 and 3. Fill would be distributed throughout the Site in areas of proposed buildings, roadways, pathways, at-grade parking and open space.

3.G.3. MITIGATION MEASURES

No significant adverse impacts to the soils, topography, or steep slopes on the Project Site are anticipated to result from the implementation of the Project based on the geotechnical and environmental assessments presented in this section of the DEIS. To minimize adverse impacts, the Project includes the following measures:

- Identify limits of clearing prior to site preparation and construction. Limit total site clearing to only what is necessary for building construction, parking, access, staging, equipment, and space for required operations.
- Install temporary fencing (limits of disturbance) as needed to prevent encroachment of clearing and other work into areas that are to remain natural/undisturbed and utilize silt fencing to prevent soil from being transported off the development site, on to streets, private properties, into drainage structures, or into the stream and wetlands.
- Grade or stabilize cleared slopes as soon as possible after clearing and grubbing by developing the site (paving and building construction) and/or seeding and landscaping as soon as possible after disturbance.
- Utilize dust control practices including stabilized construction entrance, applying water and or calcium chloride to bare soil periodically if and as necessary and maintaining low onsite construction vehicle speeds (posting an onsite speed limit of ten (10) mph).
- Ensure that dump trucks are covered when exporting from the site.
- Designate material staging areas and designated temporary stockpile locations onsite as needed and measures taken to prevent erosion and sedimentation from stockpiles as warranted.

- All excavated materials and water from the Project Site would meet all regulatory requirements including the requirements of 6 NYCRR Part 360 for off-site disposal facilities. All analytical results developed during the project development stage would be used to facilitate selection of a suitable disposal facility. If excavated materials require additional characterization depending on the acceptance requirements of the selected disposal facility permit, such additional characterization would be conducted at that time.
- Solid wastes or miscellaneous debris encountered during the construction process would be isolated/ segregated, characterized, recycled, or salvaged where possible. All remaining materials or waste or debris would be excavated, removed, and transported offsite for proper disposal.

3.H. VEGETATION AND WILDLIFE

This chapter discusses the existing ecological conditions at the Project Site and the potential impacts that the Proposed Project may have on vegetation and wildlife. Information and analyses contained herein and located in **Appendix J, Vegetation and Wildlife** are based on:

- Wetlands Delineation Report by Ecological Analysis, dated April 7, 2023.
- Site Visit by NPV on May 23, 2023, and related Wetland Delineation and Habitat Report, dated September 22, 2023.
- Letter from New York Natural Heritage Program (NYNHP), dated July 19, 2023.
- Information from published sources and plant and animal databases, including:
  - U.S. Fish and Wildlife Service Information Planning and Consultation (USFWS IPaC);
  - New York State Department of Environmental Conservation's (NYSDEC's) Environmental Mapper/Natural Heritage Program (NHP) database; and
  - NYS Breeding Bird Atlas - Block 5856C and Emeline Park.

3.H.1. EXISTING CONDITIONS

VEGETATION

The Project Site is approximately 13.4 acres (including submerged land) of waterfront property. A portion of the Site has existing dwellings (four in total). The majority of the property is heavily disturbed, overgrown by introduced, non-native species, and contains large amounts of fill materials and debris. The shoreline is identified as estuarine and marine deepwater wetland, according to the USFWS Wetland Map in **Appendix J, Vegetation and Wildlife,** and confirmed not to be a tidal wetland during the NPV site assessment (see **Chapter 3I, Wetlands Waterbodies and Watercourses**).

According to the April 2023 Wetland Delineation Report, dominant vegetation in the upland portion of the Project Site "consisted of patches and borders of early successional woodland areas including trees of black walnut, quaking aspen, big tooth aspen, red oaks, and sycamore. Understory bushes include multiflora rose bushes (invasive species), while woodland edge vegetation includes eastern red cedar, autumn olive, and honeysuckles. Across the remainder of the site the predominate species was either Phragmites, or Mugwort, both of which are invasive species.

During a May 2023 site inspection, the Project Site was further divided into six areas, labelled Areas A through F to help aid in categorization the Site (see **Figure 3.H.1, Delineation of Areas**). The summaries for each of the areas are as follows:

Area A

This ±1.2-acre area along the western edge of the Project Site is littered with debris (i.e. ripped up pavement, tires, trash, etc.) and fallen trees. Invasive and undesirable vegetative species such as Black Locust, Honey Locust, Norway Maple, Oriental Bittersweet, Virginia Creeper, Japanese Honeysuckle, and Poison Ivy dominate the roadway edges and the banks of the Hudson River in this area. The steeped banks of Liberty Street are overgrown with Japanese Knotweed and Poison Ivy, limiting access to the water's edge in this area.



NPV

Figure 3.H.1
Delineation of Areas

Sources: Rockland County GIS 2023
Scale: 1 inch equals 145 feet

N

Chair Factory DEIS
Village of Haverstraw

Area B
This ±0.5-acre area is located in the northernmost extent of the Project Site. Remnants of the former Empire State Chair Factory are visible along the shoreline. Foundational structures were mostly covered with low-growing vegetation. The Bowline Point Park is visible to the north (across the waterway) and the Bowline Power Plant Station is visible to the northwest. Phragmites and Mugwort were present in this area.

Area C
This ±1.9-acre upland area of the Project Site contains disturbed soils, broken pavement, sediment, and fill material. Plants observed in this area have stunted growth and are growing in pockets of available soils - between debris/trash and on piles of cracked asphalt mixed with sediment. This area is believed to be the location of the primary Chair Factory facilities, which is indicative of the extremely high levels of disturbance stemming from the removal of the large industrial structures.

Area D
This ±1.1-acre area follows the eastern portion of the peninsula on the Project Site. The shoreline in this area consists of sand, gravel, stones and old bricks from the former brick factory. The observed Green Ash, Cottonwood and Quaking Aspen as well as Mugwort and Japanese Honeysuckle are indicative of a successional field reverting in an area of highly disturbed soils and artificial supplements that are unsuitable for native vegetation growth. This area contains a maintained footpath between the shoreline and the upland areas of the Site, demonstrating a historic high pedestrian traffic area - noted as primarily homeless people observed living in the densely vegetated/forested area.

Area E
This ±0.4-acre area is heavily disturbed, containing a large portion of debris and temporary shelters that are presumably used by homeless people that are known to habitat the area. Quaking Aspens were observed indicating recent colonization after site disturbance. This area is densely overgrown with invasive species. Emeline Park is within the southerly viewshed of the Project Site.

Area F
This ±2.4-acre area exhibits characteristics of a floodplain. Trees within this portion of the site have buttressed root systems, which allow for increased stabilization for trees growing in shallow, saturated soils. Dominant tree species include Red Maple (a potential indicator of a floodplain or wet soil conditions), Silver Maple and Sycamore Maple. An array of different-aged trees is present in this vicinity. While this area seems to be the least impacted by disturbance, it appears that most of the hydrologic influence in this area has been cut off by the construction of berms along Liberty Street and residential developments in the vicinity of this area.

Table 3.H.1, Plant Species below provides a species list for all of the plant species that were observed on the Project Site, sectioned by the areas described above. The invasive species have been highlighted in red.

Table 3.H.1: Plant Species

COMMON NAME	SCIENTIFIC NAME
Area A	
Norway Maple	***Acer plantanoides***
Garlic Mustard	***Alliaria petiolata***
Desert False Indigo	*Amorpha fruticosa*
Common Milkweed	*Aqsclepias syriaca*
Mugwort	***Artemisia vulgaris***
Burdock	*Articum spp.*
Narrow-leaved Milkweed	*Asclepias fascicularis*
Oriental Bittersweet	***Celastrus orbiculatus***
Clematis	*Cleamtis viticella*
Orchard Grass	*Dactylis glomerata*
American Beech	*Fagus grandifolia*
Japanese Knotweed	***Fallopia japonica***
Cut-leaved Geranium	*Geranium dissectum*
Ground Ivy	*Glechoma hederacea*
Honey Locust	*Gleditsia triacanthos*
Japanese Honeysuckle	***Lonicera japonica***
Phragmites	***Phragmites australis***
Ribwort Plantain	*Plantago lanceolata*
Black Cherry	*Prunus serotina*
Staghorn Sumac	***Rhus typhina***
Black Locust	***Robinia psedoacacia***
Multiflora Rose	***Rosa multiflora***
Wineberry	*Rubus phoenicolasius*
Willow	*Salix spp.*
Poison Ivy	***Toxicodendron radicans***
Fox Grape	***Vitis labrusca***
Area B	
Mugwort	***Artemisia vulgaris***
Narrow-leaved Milkweed	*Asclepias fascicularis*
Common Milkweed	*Asclepias syriaca*
Thistle	*Cirsium spp.*
Field Horsetail	***Equisetum arvense***
Japanese Honeysuckle	***Lonicera japonica***
White Sweet Clover	*Melilotus alabus*
Virginia Creeper	***Parthenocissus quinquefolia***
Phragmites	***Phragmites australis***
Narrow-leaved Blue-eyed Grass	*Sisyrinchium angustifolium*
Lesser Hop Trefoil	*Trifolium dubium*
White Clover	*Trifolium repens*

Area C	
Thyme-leaved Sandwort	*Arenaria serpyllifolia*
Narrow-leaved Milkweed	*Asclepias fascicularis*
Shepherd's Purse	*Capsella bursa-pastoris*
Sticky Chickweed	*Cerastium glomeratum*
Late Boneset	*Eupatorium serotinum*
Pineapple Weed	*Matricaria discoidea*
White Sweet Clover	*Melilotus alabus*
Yellow Sweet Clover	*Melilotus officinalis*
Phragmites	***Phragmites australis***
Ribwort Plantain	*Plantago lanceolata*
Seaside Goldenrod	*Solidago sempervirens*
Lesser Hop Trefoil	*Trifolium dubium*
Area D	
Silver Maple	*Acer saccharinum*
Desert False Indigo	*Amorpha fruticosa*
Mugwort	***Artemisia vulgaris***
Narrow Leaved Milkweed	*Asclepias fascicularis*
Thistle	*Cirsium spp.*
Green Ash	*Fraxinus pennsylvanicus*
Honey Locust	*Gleditsia triacanthos*
Dame's Rocket	*Hesperis matronalis*
Japanese Honeysuckle	*Lonicera japonica*
Chinese White Mulberry	*Morus alba*
Slender Yellow Wood Sorrel	*Oxalis dillenii*
Virginia Creeper	***Parthenocissus quinquefolia***
Phragmites	***Phragmites australis***
Cottonwood	*Populus dentoides*
Quaking Aspen	*Populus tremuloides*
Black Locust	***Robinia psedoacacia***
Willow-leaved Dock	*Rumex salicifolius*
Lamb's Ear	*Stachys byzantina*
Dandelion	*Taraxacum spp.*
Great Mullein	*Verbascum thapsus*
Area E	
Box Elder	*Acer negundo*
Sycamore Maple	***Acer pseudoplatanus***
Silver Maple	*Acer saccharinum*
Tree of Heaven	*Ailanthus altissima*
Mugwort	***Artemisia vulgaris***
Narrow-leaved Milkweed	*Asclepias fascicularis*
Oriental Bittersweet	***Celastrus orbiculatus***
Japanese Knotweed	***Fallopia japonica***
Honey Locust	*Gleditsia triacanthos*

Dame's Rocket	*Hesperis matronalis*
Butter-and-Eggs	*Linaria vulgaris*
Chinese White Mulberry	*Morus alba*
American Sycamore	*Platanus occidentalis*
Quaking Aspen	*Populus tremuloides*
Sumac	***Rhus spp.***
Black Locust	***Robinia psedoacacia***
Multiflora Rose	***Rosa multiflora***
Wineberry	***Rubus phoenicolasius***
Raspberry Brambles	*Rubus spp.*
Elm	*Ulmus spp.*
Area F	
Box Elder	*Acer negundo*
Sycamore Maple	***Acer pseudoplatanus***
Red Maple	*Acer rubrum*
Silver Maple	*Acer saccharinum*
Garlic Mustard	***Alliaria petiolata***
Japanese Barberry	***berberis thunbergii***
Oriental Bittersweet	***Celastrus orbiculatus***
Japanese Knotweed	***Fallopia japonica***
Common Ivy	*Hedera helix*
Japanese Privet	*Ligustrum japonicum*
Japanese Honeysuckle	***Lonicera japonica***
Virginia Creeper	***Parthenocissus quinquefolia***
Snakeroot	*Rauvolfia sepentina*
Willow	*Salix spp.*
Poison Ivy	***Toxicodendron radicans***
Elm	*Ulmus spp.*

Source: Wetland Delineation and Habitat Assessment Report, NPV 2023.

The NYSDEC Environmental Mapper identified no records of any rare plants or significant natural communities on the Project Site. The site inspection supported the Wetlands Delineation Report that the Project Site is a heavily disturbed site, "with significant amounts of fill and debris, and is overgrown with non-native vegetative species." The southeastern portion of site was the least disturbed and resembled a floodplain. Many trees growing in this portion developed buttress root systems, which is indicative of shallow, moist soils. This was the only portion of the Project Site containing healthy Red Maples, Elms and other such vegetation. This area, later identified as "Area F" in the report, seemed to be the healthiest portion with healthy and site-appropriate vegetation, alongside invasive species, however, it appears that most of the hydrologic influence in this area has been cut off by the historical construction of berms along Liberty Street and other residential developments in the vicinity.

WILDLIFE

During the May 2023 site assessment by NPV, wildlife was also observed, both visually and auditorily. **Table 3.H.2, Wildlife,** includes all wildlife observed during the visit.

Table 3.H.2: **Wildlife**

Common Name	Scientific Name
Mallard	*Anas platyrhynchos*
Northern Cardinal	*Cardinalis cardinalis*
Turkey Vulture	*Cathartes aura*
Snail	*Cepaea spp.*
Chimney Swift	*Chaetura pelagica*
Fish Crow	*Corvus ossifragus*
Gray Catbird	*Dumetella carolinensis*
Sea Robin (carcass)	Family Trigilidae
Baltimore Oriole	*Icterus galbula*
Red-bellied Woodpecker	*Melanerpes carolinus*
Turkey	*Meleagris gallopavo*
Song Sparrow	*Melospiza melodia*
Eastern Tiger Swallowtail	*Papilio glaucus*
House Sparrow	*Passer domesticus*
Yellow Warbler	*Setophaga petechia*
American Redstart	*Setophaga ruticilla*
European Starling	*Sturnus vulgaris*
Carolina Wren	*Thyothoryus ludovicianus*
American Robin	*Turdus migratorius*
Warbling Vireo	*Vireo gilvus*

Source: Site Reconnaissance Report, NPV 2023.

Information regarding federally listed, threatened, and endangered species and their designated critical habitat was obtained through use of the NYSDEC Environmental Resource Mapper (ERM), Environmental Assessment Form (EAF) Mapper, and communications with the NYNHP. USFWS's Information for Planning and Consultation (IPaC) website was also used as a cross reference for the identification of species. These reports can be found in **Appendix J, Vegetation and Wildlife**. Shortnose Sturgeon *(Acipenser brevirostrum),* which is an Endangered species within the state of New York, Atlantic Sturgeon *(Acipenser oxyrinchus oxyrinchus)*, which is a federally listed endangered species, and Bald Eagle, a threatened species within the state of New Yok and a protected bird species under the Migratory Bird Act, were noted as potential occurrences proximate to (perhaps within one mile of) the project site. None of these species were observed during the site visit.[8] However, the Chimney Swift was observed during the visit and is a recognized as a vulnerable species by the International Union for Conservation of Nature (IUCN) and is listed on the United States Fish and Wildlife (USFWS) Birds of Conservation Concern priority list. The NYS Breeding Bird Atlas identified 36 confirmed species in Atlas Block 5856C, which includes the Project Site for the 2000-2005 Bird Atlas. The 36 species were seen in the Atlas Block from 2000-2005 with varying frequencies . For

[8] Wetland Delineation and Habitat Assessment Report, NPV 2023.

the list of bird species, refer to **Appendix J, Vegetation and Wildlife**. Additionally, the adjacent Emeline Park had two confirmed species of Bonaparte's Gull and the Ring-billed Gull.

3.H.2. POTENTIAL IMPACTS

The Project Site has been largely disturbed by past development, including a former factory and existing dwellings on the eastern portion of the Site. The majority of the Site, excluding underwater land, will be cleared and developed for the various buildings, roadway improvements, pedestrian sidewalks, green space, and supporting utilities.

The conceptual Landscaping Plan, found in **Appendix B, Site Plans,** shows the areas of disturbance, locations and relative spacing of proposed plantings, including trees, shrubs, grasses, perennials, and seed mixes for the Project**.** A total of approximately 120 new trees will be planted inclusive of the species listed in **Table 3.H.3, Plant List**.

Proposed species listed above include mostly native species as well as some ornamental species that are suitably adapted to Site conditions. Plantings would help to stabilize loose soils and prevent erosion, provide vegetative screening, mitigate impacts on from stormwater, and enhance the overall visual appearance of the Project Site. The landscaping plans and plant palette would continue to be developed during Site Plan review to include regionally appropriate plantings and avoid the use of any invasive species. In addition, the plantings will extend throughout the entirety of the Site, with trees bordering circulation routes (pedestrian and vehicular),

Since most of the upland Project Site appears to be mostly invasive to New York State, the Proposed Action would not disturb any significant natural communities or disrupt the habitat of any rare plant or wildlife species in the upland portion of the Site. "Area F", despite being the healthiest area of the Site, has had most of its hydrological influence cut off by the construction berms along Liberty Street and the neighboring residential development. Therefore, this is not a significant natural community.

Clearing activities would comply with all NYSDEC and municipal standards and all temporarily disturbed areas would be restored to pre-construction conditions upon completion of the Proposed Action. Approximately 3.4 acres of trees would be removed from the Project Site, as shown in the Landscaping Plan, found in **Appendix B, Site Plans.** In addition, the construction activity and mitigation effort would be guided by a Stormwater Water Pollution Protection Plan (SWPPP) approved by NYSDEC that would not only address erosion and sedimentation but would assist in protecting nearby wetlands environments. If the Proposed Action is approved, continued correspondence with the NYSDEC, USFWS, Village of Haverstraw, and other regulatory bodies would occur as required.

Table 3.H.3: Plant List

Common Name	Scientific Name
Trees	
Deodar Cedar	*Cedrus Deodara*
Donald Wyman Crabapple	*Malus Sp.*
Prairifire Crabapple	*Malus Sp.*
Honey Locust	*Gleditsia Triacanthos*
Flowering Dogwood	*Cornus Florida*
Hackberry	*Celtis Occidentalis*
Red Oak	*Quercus Rubra*
Ginko	*Ginko Biloba*
Bloodgood London Planetree	*Plantanus X Acerifolia*
Swamp White Oak	*Quercus Bicolor*
Shrubs	
Hummingbird Summersweet	*Cletha Alnifolia*
Cultivar Sweetspire	*Itea Virginica*
Bigleaf Hydrangea	*Hydrangea Macrophylla 'Bailmer'*
Gray Dogwood	*Cornus Racemosa*
Black Chokeberry	*Aronia Melanocarpa*
Serviceberry	*Amalanchier Canadensis*
Mapleleaf Viburnum	*Viburum Acerfolium*
Nannyberry	*Viburnum Lentago*
Gray Dogwood	*Cornus Racemosa*
Witchhazel	*Hamamelis Virginiana*
Grasses and Perennials (for stormwater treatment areas)	
Turtlehead	*Chelone Glabra*
Little Bluestem	*Schizachyrium Scoparium*
Switch Grass	*Panicum Virgatum*
Maiden Hair Grass	*Miscanthus Sinensis*
Seed Mixes (for stormwater treatment areas)	
FACW Wetland Meadow Mix (ERNMX-122) by Ernest Seeds	
Rain Garden Mix (ERNMA-180) by Ernest Seeds	

Source: Landscaping Plan, LaBella.

Live cutting/live stake joint plantings would be planted on the northwestern portions of the shoreline and riprap repairs are proposed for the shoreline and in the river on the remainder of the shoreline. This is further discussed in **Chapter 3I, Wetlands, Waterbodies, and Watercourses**. Both improvements will incorporate regionally appropriate plantings.

3.H.3. MITIGATION MEASURES

The Project would result in the alteration of the wildlife habitats along the shoreline of the Project Site. Despite this, the proposed changes work to improve the poor habitat environment along the shoreline, rather than entirely removing it. The live cuttings will encourage the development of wetland habitat while providing stabilization for the development of the Site.

No significant adverse impacts to ecological resources on the upland portion of the Project Site are anticipated to result from implementation of the Project, based on the vegetation and wildlife analyses presented in this section of the DEIS. Despite this, the Project proposed to include the following measures:

- Areas that are cleared but not physically developed would be stabilized as soon as possible after disturbance. The areas would be reseeded and replanted/landscaped as soon as construction activities allow per the Landscape Plan. Approximately 120 trees are proposed to be planted along with additional plants, shrubs and wetland plantings.
- The Applicant is proposing ample green space for the Project, limiting hard scape to the proposed roads and sidewalks, but providing plantings for most of the remainder of the coverage.

3.I. WETLANDS, WATERBODIES AND WATERCOURSES

3.I.1. EXISTING SHORELINE CONDITIONS AND REGULATORY OVERSIGHT

This waterfront Project Site is located along the western bank of the Hudson River. During a May 2023 ecological investigation and wetland delineation inspection of the project site, NPV observed significant historical disturbance (i.e. fill and various forms of debris) as a primary influence of the overgrown non-native vegetation throughout the site, inclusive of some shoreline areas. The low-lying floodplain within the southeastern portion of the site demonstrated signs of least human disturbance. Observations of thriving native vegetation (i.e. Red Maples, Elms, etc.) and wildlife were unique to this area of the project site. Additionally, many trees growing in this area developed buttress root systems, which are indicative of shallow, moist soils. NPV's habitat observations of the site are discussed in the "Wetland Delineation and Habitat Assessment" report dated September 29, 2023 (see **Appendix K, Wetlands, Waterbodies, and Watercourses**).

The peninsula's shoreline consists of vegetation intermixed with dilapidating revetments (rip-rap composed of various materials), an old stone wall and fill from previous disturbances and development that utilized both upland and shoreline/in-water areas of the Project Site and adjacent riverine system. The vegetative conditions and habitat along the shoreline are discussed in **Chapter 3H, Vegetation and Wildlife** as well as the NPV Wetland Delineation and Habitat Assessment report.

On April 7, 2023, Ecological Analysis, LLC delineated a wetland boundary (demarcating the landward edge of wetland habitat) along the shoreline of the Project Site (see **Appendix K, Wetlands, Waterbodies, and Watercourses** for the existing conditions survey demonstrating the wetland boundary). NPV confirmed this wetland boundary delineation during the May 2023 site visit. Ecological Analysis and NPV agree that the Project Site does not contain wetland areas landward of the delineated wetland boundary along the shoreline.

Figure 3.I.1, NYSDEC Freshwater Wetlands shows no NYSDEC Article 24 regulated freshwater wetlands on the Project Site. By email correspondence dated June 30, 2023, NYSDEC Region 3 staff confirmed that, "the area is **not currently** mapped as Freshwater Wetland pursuant to Environmental Conservation Law Article 24. But the law was changed, and new standards and as-yet undrafted regulations will become effective in 2025. We cannot at this time say portions of the site will not be under Article 24 jurisdiction in the future."

The underwater lands and shoreline of the Hudson River along the Project Site are not NYSDEC regulated Article 25 tidal wetlands. The New York State Department of Environmental Conservation (NYSDEC) tidal wetland maps do not extend north of the Tappan Zee Bridge (Governor Mario M. Cuomo Bridge) as shown in **Figure 3.I.2, NYSDEC Tidal Wetlands** This was confirmed by the NYSDEC.

The National Wetland Inventory (NWI) classifies the wetland areas along the Hudson River shoreline of the Project Site as "**E1UBL6**", as shown in **Figure 3.I.3, National Wetlands Inventory**. This represents:



NPV

Figure 3.I.1
NYSDEC Freshwater Wetlands

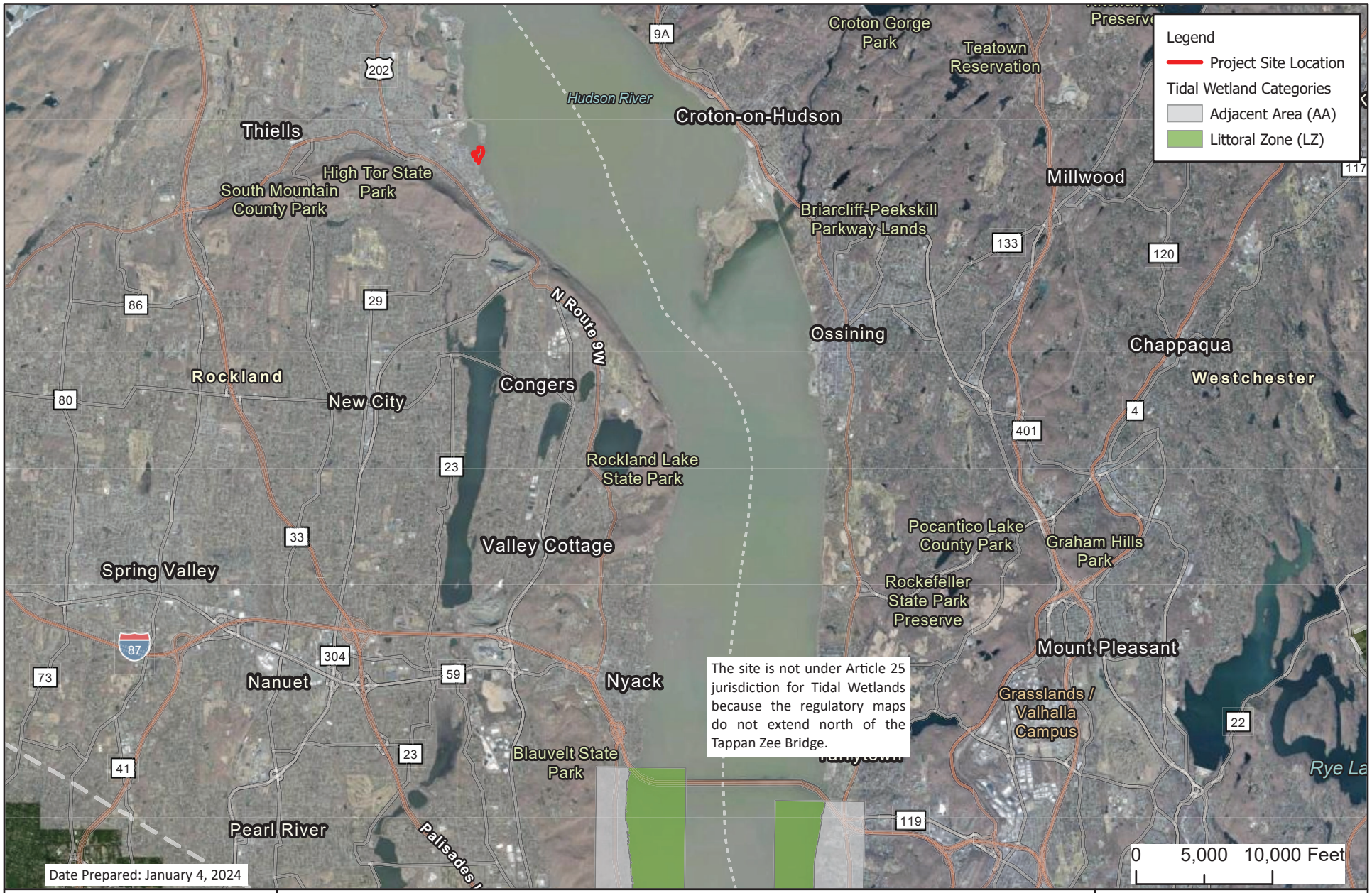
Sources: ESRI WMS; NYS GIS Clearinghouse accessed May 18, 2023; NYSDEC, 2016

Scale: 1 inch equals 1,200 feet

N

Haverstraw Chair Factory
Rockland County, NY

DEIS



NPV

Figure 3.I.2
NYSDEC Tidal Wetlands

Sources: ESRI WMS; NYS GIS Clearinghouse accessed May 18, 2023; NYSDEC, 2016

Scale: 1 inch equals 10,000 feet

N

Haverstraw Chair Factory
Rockland County, NY

DEIS



NPV

Figure 3.I.3
National Wetlands Inventory

Sources: ESRI WMS; NYS GIS Clearinghouse accessed May 18, 2023; USFWS, 2021
Scale: 1 inch equals 200 feet

N

Haverstraw Chair Factory
Rockland County, NY

DEIS

- System **Estuarine (E)**: The Estuarine System consists of deepwater tidal habitats and adjacent tidal wetlands that are usually semi enclosed by land but have open, partly obstructed, or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines, there is appreciable dilution of sea water. Offshore areas with typical estuarine plants and animals, such as red mangroves (Rhizophora mangle) and eastern oysters (Crassostrea virginica), are also included in the Estuarine System.
- Subsystem**Subtidal (1)**: The substrate in these habitats is continuously covered with tidal water (i.e., located below extreme low water).
- Class **Unconsolidated Bottom (UB)**: Includes all wetlands and deepwater habitats with at least 25% cover of particles smaller than stones (less than 6-7 cm), and a vegetative cover less than 30%.
- Water Regime **Subtidal (L)**: Tidal salt water continuously covers the substrate.
- Water Chemistry **Oligohaline (6)**: Coastal Halinity 0.5-5 ppt

Regulated activities along the shoreline of the Project Site would likely be subject to the following federal, State and local review. The following federal, State and local regulations are applicable to the Project Site and are summarized below.

NYS ENVIRONMENTAL CONSERVATION LAW (ECL) – NYSDEC ARTICLE 15

According to the NYSDEC, "the protection of New York's diverse water resources ensures that rivers, streams, lakes, and ponds continue to provide essential ecological and commercial services. Preserving fish and wildlife habitat, safeguarding our drinking water, and allowing industrial and agricultural ventures to responsibly flourish are maintained through Article 15, Title 5 of the ECL." NYSDEC staff confirmed that, "our jurisdiction is limited to the area below Mean High Water for Excavation/fill and below Spring High Tide for Section 401 Water Quality Certification."

- Section 608.5, Excavation or placement of fill in navigable waters.
- Section 608.9 Water Quality Certification (WQC)

U.S. ARMY CORPS OF ENGINEERS (USACE)

The USACE will need to perform a jurisdictional determination to confirm the location of the navigable waters of the United States. The USACE also regulates the disposal of dredged or fill material into waters of the United States under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. The WQC mentioned above must be issued by the State before federal permitting of the proposed shoreline activities.

- Section 10, Rivers and Harbors Act of 1899
- Section 404, Federal Clean Water Act
- Nationwide Permit 13

NEW YORK STATE DEPARTMENT OF STATE (NYSDOS)

- Coastal/General Consistency Determination

LOCAL WATERFRONT REVITALIZATION PROGRAM- HAVERSTRAW WATERFRONT ADVISORY COMMISSION

In accordance with Chapter 242 of the Village of Haverstraw Code, the Project will need to be reviewed for consistency with the LWRP policy standards and conditions. According to the Village Code, the Planning

Board will need to refer the Project to the Waterfront Advisory Commission for review and recommendation to the aforementioned board.

3.I.2. PROPOSED SHORELINE IMPROVEMENTS

The Project proposes shoreline and in-water activities/improvements associated with this project. Shoreline improvements are necessary for protection, resiliency, water-related enjoyment and native habitat creation. The proposed work includes:

- A ±8 foot (ft) wide pedestrian path stretching ±1520 ft will be constructed landward of Mean High Water (MHW). The path is intended to provide access and vistas around the proposed upland residential development of the project site.
- Removal of old stone wall and rip-rap.
- Installation of approximately 2,200 linear feet (LF) of stone revetment along most of the Project Site shoreline.
- Low velocity areas along the shoreline will be filled with clean sand (atop the stone revetment) and stabilized with staked planting and native surface plantings.
- High velocity areas along the shoreline will be filled with clean sand (atop the stone revetment) to match the existing grade (to current MHW level) with a minimum 6-inch coverage at the toe of the revetment.

3.I.3. POTENTIAL IMPACTS OF PROPOSED SHORELINE IMPROVEMENTS

The proposed shoreline improvements have been designed to clear debris from the nearshore area, including the removal of the existing rock wall. The Project would construct two types of shoreline improvements to stabilize the shoreline. The stabilization methods include 2,000 square yards (SY) of **vegetated stone revetment** and 3,500 SY of **unvegetated stone revetment**. The mudline would be excavated to remove enough existing sediment to install the proposed planted and riprap revetement with layers of armor stones, bedding stones, clean sand and geotextile fabric. To maintain the elevation of the existing mudline, a net zero cut/fill below Mean High Water (MHW) is proposed. Both revetments would require disturbance to the watercourse – including excavation and fill – to properly establish the native planting areas. The live cutting/live stake plantings in the planted revetment are further discussed in **Chapter 3H, Vegetation and Wildlife** and would consist of native (site and habitat appropriate) plantings for the area. Additional details related to these improvements can be found in **Appendix B, Site Plans** on the Shoreline Concept Plan Sheet. Disturbance of native and non-native vegetation along the banks of the shoreline as well as temporary disturbance to the waterway will occur during construction; however, Best Management Practices [BMP] (erosion control, turbidity curtains, etc.) can be implemented to minimize impacts.

3.I.4. MITIGATION MEASURES

Potential impacts to the Hudson River shoreline and waters along the Project Site can be mitigated. The proposed shoreline improvement components of the Project are intended to provide a net ecological and resiliency benefit to the Project Site relative to the existing conditions of the site and adjacent areas. BMPs during construction and operation will be used to ensure that any impacts are minimized to the greatest extent practicable.

During construction, the following BMP can be implemented to ensure disturbance or construction activities would not result in the degradation of wetlands, waterbodies, or watercourse at or near the Site:

- Plans shall comply with all applicable standards and requirements set forth in the Village Code.
- Any and all wetland permits and certifications would be obtained by the authorizing jurisdiction and all applicable requirements from the Village, NYSDEC, USACE and DOS will be strictly adhered to and implemented. Final deign and information would be obtained during Site Plan review.
- Construction debris and solid waste generated during the construction process and future operations shall be collected, contained, and safely disposed at a facility that is approved for acceptance of these materials to prevent impacts to adjacent wetlands from debris.
- Development of the Site Plan will include regionally appropriate plantings and appropriate mitigation such Including a turbidity curtain to contain the suspended sediment and preventing it from moving beyond the immediate work area to minimize environmental impacts from the shoreline improvements and associated disturbances.

The design of the Project Site itself, as well as anticipated operations, will incorporate several measures to ensure the protection of wetlands and waterbodies and avoid adverse impacts. For example, disturbed areas will be revegetated with native species appropriate to the site. This will eliminate the need for pesticides and fertilization and minimize maintenance.

3.J. FLOODPLAINS AND SEA LEVEL RISE

3.J.1. EXISTING CONDITIONS

FLOODPLAINS

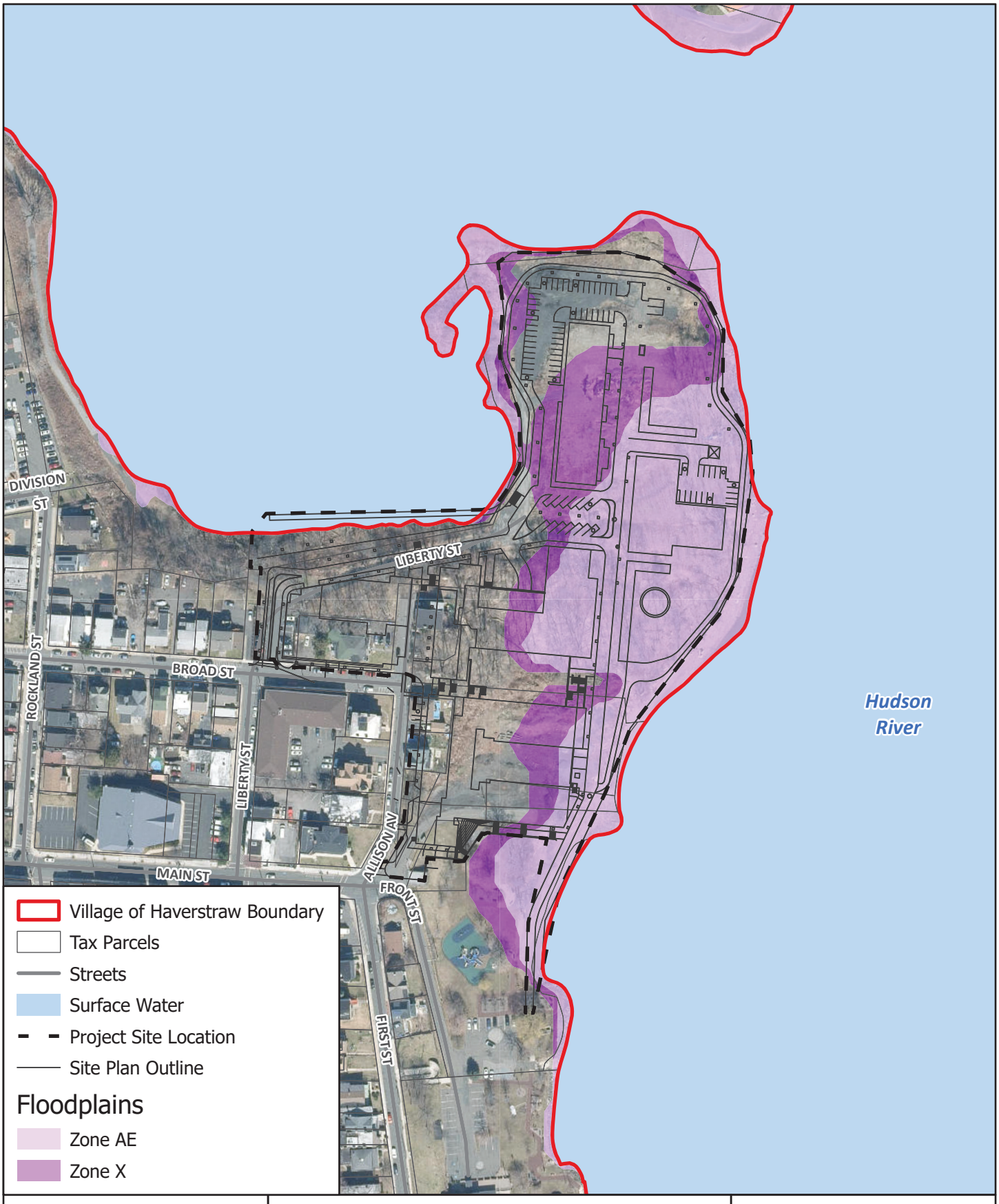
The current adopted Hudson River flood elevations published on Flood Insurance Rate Maps (FIRM) by the Federal Emergency Management Agency (FEMA) are from 2014 and are shown in **Figure 3.J.1, FIRM Panel No. 36087C014G**. This map places portions of the project site in Zone AE (light violet on Figure 3.J.1) which is consistent with a flood to elevation 7 during the 1% flood (also known as the 100-year flood). Additional areas of the project site are located in Zone X, which is defined as the "area of moderate flood hazard, usually the area between the limits of the 100- year (1%) and 500-year (0.2%) floods."

The 2014 flood maps are holdover elevations from an earlier FIRM set dating back to 1981 (but keyed to the North American Vertical Datum of 1988). The County was undergoing a flood study in 2012 when Hurricane Sandy devastated much of the Hudson River. Observed elevations during Sandy were used as the basis for Advisory Base Flood Elevations (ABFE) released in 2013. These maps proposed a Zone A (1% flood) elevation of 11, which encompassed a greater extent of the project site, with a Zone V (1% Flood subject to wave action) of elevation 12 for the periphery of the site. **Figure 3.J.2, Advisory Flood Hazard Areas** show the ABFE flood zones on the Project Site. **Table 3.J.1, ABFE Labels** provides additional information related to the symbology and labels of the zones in the figure.

These advisory flood elevations were never adopted as preliminary BFEs by FEMA, possibly because of objections to the flood study by other communities in the region. In 2014 FEMA released new FIRMs for Rockland County, that included revised flood elevations for upland areas and held over the earlier adopted elevations for the tidally influenced Hudson River. These adopted elevations continued to be the basis for the Village's Chapter 141 Flood Damage Prevention Chapter.

In 2021, the Village of Haverstraw amended Chapter 141, to key requirements to the higher advisory base flood elevations as shown in the 2013 maps on the basis that they are believed to be more accurate than the 2014 adopted FIRMs. The Flood Damage Prevention Chapter includes several construction standards, the most applicable to the proposed project being:

- The requirement that the finished floor elevation of habitable spaces must be two feet above the base flood elevation for areas within Zone A.
- Enclosed areas below the lowest floor of the structure must be open in two places having at least one square inch for every square foot of enclosed area subject to flooding to automatically equalize hydrostatic pressure.
- Stricter requirements for construction in the V Zone (Coastal High Hazard Area):
    - No construction on fill or spread footings.
    - Buildings should be constructed to withstand water forces from waves and wind load.
    - New structures must be constructed on pilings, columns or shear walls such that the bottom of the lowest horizontal structural member supporting the lowest elevated floor is at least two feet above the base flood elevation.



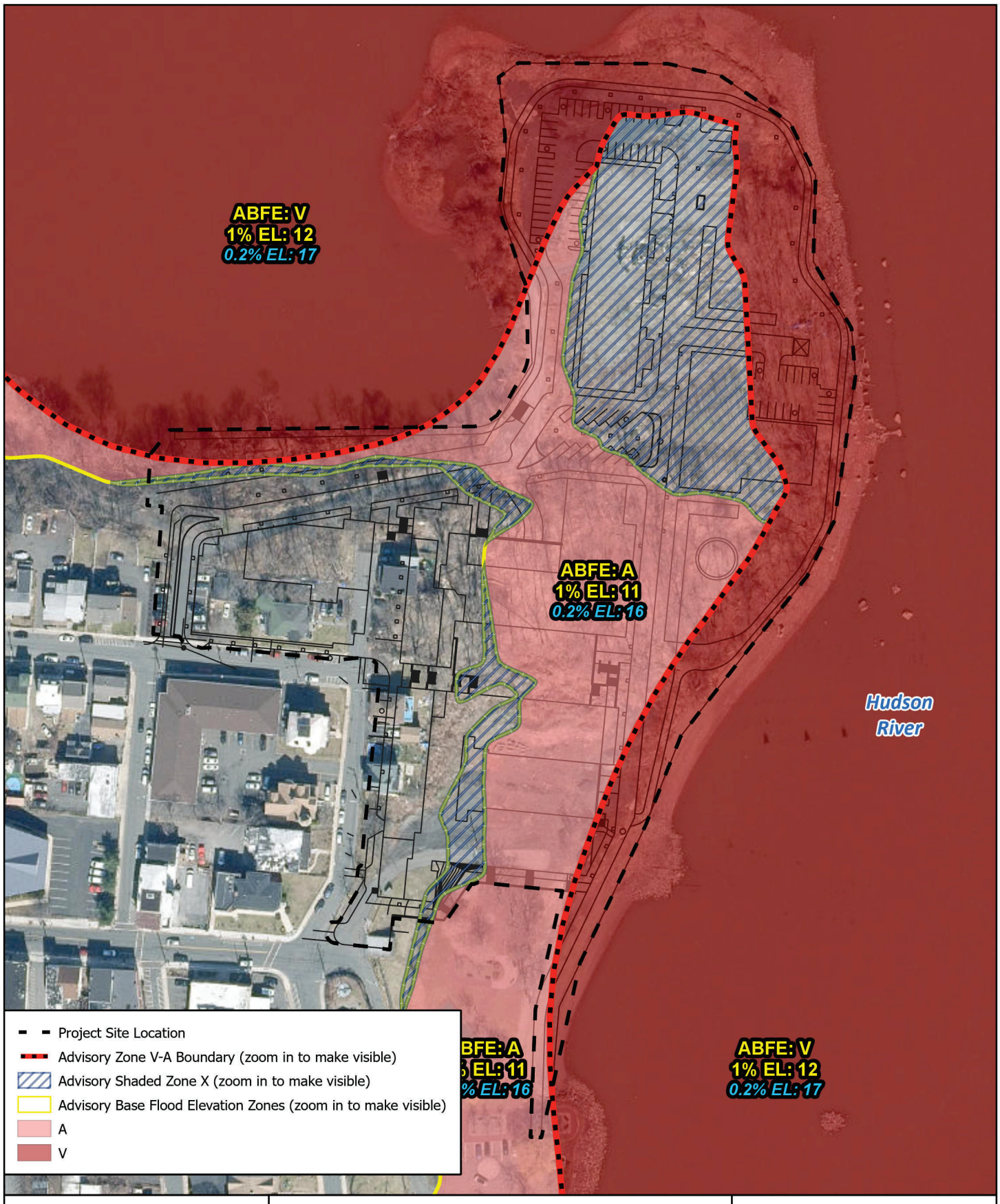
NPV

Figure 3.J.1
FIRM Panel No. 36087C014G

Sources: Rockland County GIS 2023, FEMA 2023
Scale: 1 inch equals 205 feet

N

Chair Factory DEIS
Village of Haverstraw



NPV

Figure 3.J.2
Advisory Flood Hazard Areas

Sources: Rockland County GIS 2023, FEMA 2013
Scale: 1 inch equals 193 feet

N

Chair Factory DEIS
Village of Haverstraw

Table 3.J.1: ABFE Labels

Symbol	Label	Meaning
	Advisory Base (1% Annual Chance) Flood Elevation [ABFE]	The coastal water surface elevation of a flood having a 1% annual chance of being equaled or exceeded in any given year. It is expressed in feet referenced to the North American Vertical Datum of 1988 (NAVD88) and can reflect the elevation of an Advisory Flood Zone V or A.
	Advisory 0.2% Annual Chance Flood Elevation	The coastal water surface elevation of a flood having a 0.2% annual chance of being equaled or exceeded in any given year. It is expressed in feet referenced to the North American Vertical Datum of 1988 (NAVD88).
	Advisory Zone V	Is comprised of the area subject to high velocity wave action (a 3-foot breaking wave) from the 1% annual chance coastal flood. Zone V is subject to more stringent building requirements than other zones because these areas are exposed to a higher level of risk.
	Advisory Zone A	is comprised of the area subject to storm surge flooding from the 1% annual chance coastal flood. These areas are not subject to high velocity wave action but are still considered high risk flooding areas.
	Advisory Shaded Zone X	Shows areas of moderate coastal flood risk outside the regulatory 1% annual chance flood but within the limits of the 0.2% annual chance flood level.

Source: Advisory Base Flood Elevation (ABFE) Information for New Jersey and New York: Glossary of Map Layers and Key Terms, FEMA.

In the last few years flood studies have been conducted for other projects in the Village (Harbors at Haverstraw) and in neighboring communities (Ba-Mar Mobile Home Community). Based on these studies, it is believed that the ABFEs are slightly higher (approximately 6-12") than actual current 1% storm models, so use of the ABFEs are believed to be slightly conservative.

SEA LEVEL RISE

6 NYCRR Part 490 "establishes science-based projections of sea-level rise for New York State's tidal coast, including… the main stem of the Hudson River, north of New York City to the federal dam at Troy."[9] **Table 3.J.2, Sea Level Rise** provides the values established for New York City and the Lower Hudson Region expressed in inches over the 2001-2004 NAVD88 baseline. The nearest NOAA monitoring station is the

[9] Part 490, Projected Sea-level Rise - Express Terms - NYS Dept. of Environmental Conservation

Haverstraw Bay Station, which is controlled by the Battery station of Southern Manhattan. Current month (December 2023) high tides range from 0.99 feet to 2.35 feet above NAVD88. Historical data shows that between the Part 490 baseline years of 2001-2004 and the last 34 months (2020-2023) of monthly MSL as observed at the Battery indicated a change of 5.63 inches, which is tracking the medium Part 490 projections.

Table 3.J.2: Sea Level Rise

Time Interval	Low Projection	Low-Medium Projection	Medium Projection	High-Medium Projection	High Projection
2020s	2 inches	4 inches	6 inches	8 inches	10 inches
2050s	8 inches	11 inches	16 inches	21 inches	30 inches
2080s	13 inches	18 inches	29 inches	39 inches	58 inches
2100	15 inches	22 inches	36 inches	50 inches	75 inches

Source: Part 490, Projected Sea-level Rise - Express Terms - NYS Dept. of Environmental Conservation.

CHAPTER 141, FLOOD DAMAGE PREVENTION – VILLAGE CODE

Chapter 141, Flood Damage Prevention of the Village of Haverstraw's Village Code establishes regulations related to floodplains in the Village. The following is the statement of purpose for the chapter.

It is the purpose of this chapter to promote the public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- *A. Regulate uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities;*
- *B. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;*
- *C. Control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters;*
- *D. Control filling, grading, dredging and other development which may increase erosion or flood damages;*
- *E. Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands; and*
- *F. Qualify for and maintain participation in the National Flood Insurance Program.*

3.J.2. POTENTIAL IMPACTS

The Project is proposing development within a floodplain, but no fill is proposed below the Mean High-Water line. Moreover, the Floodplain Plan as shown in **Appendix B, Site Plans** shows the Site's existing condition of 49,904 cubic yards of floodplain will be replaced by a proposed 50,039 cubic yards of floodplain volume. This increases the available volume for the floodplain by 135 cubic yards on the Project Site. This

volume of area includes the lowest levels of the parking garages under Buildings 1, 2, and 4 and the Hotel which allow for flood inundation.

The Proposed Project will comply with all applicable portions of Chapter 141, Flood Damage Prevention, including but not limited to Article IV, Construction Standards. As discussed in the existing conditions, the Project Site is in Zones V, A, and X of the 2013 Advisory Base Flood Elevations. The Floodplain Plan and Site Program in **Appendix B, Site Plans** provide information related to the proposed structures, the floodplain, and proposed elevations, including cross sections showing where the floodplains will be in relation to the structures.

Building 3 is located outside all FEMA advisory flood zones. Building 4 is located in the Advisory X Zone (0.2% flood). Building 2 is located in the advisory A zone (1% flood) and advisory X zone (0.2% flood). Building 1 is located in the advisory A, X and V Zones (1% flood subject to wave action). The Hotel is located in the advisory V and X zones.

ELEVATION 0 TO 7

The lowest site elevations correspond with the public esplanade, public open spaces and surface parking areas at the north end of the site. These areas are generally proposed (with a few exceptions) at or above elevation five. These areas will likely flood during the current-year 1% storm and will flood during higher-high tides by the 2080s based on medium-range projections and by the 2050s based on the high-range projections.

The proposed shoreline work will likely help to reduce the extent of the V-zone and wave-action impacts to the esplanade and parking areas. Currently, the river-facing shoreline is gradually sloping clay with some brushy vegetation establishing steeper slopes where roots have helped soil resist erosion. These variably sloping areas are proposed to be replaced with uniform river-facing armored stone revetments with a crest of approximately six feet and with grasses planted within the stone voids and rising a few feet further atop the revetment.

These grass-topped revetments will generally be more dampening to wave action than the current shoreline and will likely reduce the areas of the site subject to wave action (V zones).

ELEVATION 7 TO 16

The project proposes interior surface parking garages at seven feet. These areas are designed to flood and allow river flood waters to travel through the structure without impediment. These areas will flood during the current 1% storm event. These events are generally known in advance and the building owner will identify and provide parking off-site during storm events. A possible area for parking may be at Haverstraw Elementary School, which will usually be closed during a 1% storm.

Interior structured parking areas are anticipated to remain above high tides into the 2100s under the medium projections but become inundated by the 2090s under the high projections.

ELEVATION 16 TO 25

The Hotel is partially located in the V zone (the wing closest to the river). The Village's flood prevention chapter does not allow horizontal structural elements to be located within the V zone. Based on a finished floor elevation of 16 feet, it is anticipated that the lowest horizontal structural element associated with the Hotel will be no lower than elevation 14. This will provide two feet of free board to the V-zone, which will meet Village code standards. Additionally, the two feet of free board will clear flood elevations through the 2080s based on medium projections and through the 2050s based on high projections.

The remainder of the hotel and Building 4 are located with their lowest habitable finished floor elevation at 16 feet. This will remain above high tide under all projections and above Zone A flood elevations based on all medium projections and through the 2100s based on high projections.

ELEVATION 25+

Portions of Buildings 1 and 2 are proposed to be located in Zone A, X and V. The lowest habitable finished floor elevation of Buildings 1 and 2 is 25 feet, and the lowest elevation for horizontal structural elements is anticipated to be no lower than 23 feet. These elevations are anticipated to remain above flood elevations under all sea level rise scenarios.

CONDITIONAL LETTER OF MAP REVISION (CLOMR)

A Conditional Letter of Map Revision (CLOMR) is "a letter from FEMA commenting on whether a proposed project, if built as proposed, or proposed hydrology changes would meet minimum National Flood Insurance Program standards."[10] The CLOMR does not change the National Flood Insurance Program Map when provided, but does indicate whether the project will be recognized by FEMA when completed. This would later possibly result in the changing of the existing regulatory floodway, the BFEs, or the Special Flood Hazard Area. The Project Sponsor understands that the Proposed Project will require flood insurance and is not anticipating applying for a CLOMR at this time.

3.J.3. MITIGATION MEASURES

The project elements most exposed to sea level rise and flooding are the public promenade and open spaces, the surface parking at the north end of the site, and the hotel.

PUBLIC PROMENADE AND PUBLIC OPEN SPACES

The public promenade should be designed to survive the wave action of the V zone. While the shoreline improvements may remove the V zone from these areas of the site, sea level rise over time will likely reduce the effectiveness of the rip rap and living shoreline. Materials used should not be easily lifted by wave action – pavers and paving stones should be avoided. Asphalt or concrete could be a viable surface, but the edges should include some curbing extending into the ground to avoid wave action undermining the asphalt surface.

As sea-levels rise the promenade and open space areas will increasingly become unusable during high tide. The Village will need to decide whether it wishes to raise the esplanade atop a berm or boardwalk to

[10] Letters of Map Revision and Conditional Letters of Map Revision | FEMA.gov

increase its longevity. The Village will need to closely monitor DEC policies as sea levels rise if it wishes to ensure continued use of these public lands.

Because these open spaces will eventually be subjected to inundation, structural improvements to the area should be limited and any electrical services below elevation six should be wet-proofed or pole-mounted. Current uses of the public space are envisioned as a fenced dog park and landscaped amphitheater without any significant structures proposed.

SURFACE PARKING

The Village via its 2021 Comprehensive Plan has announced its intent to embrace its urban character and continue to encourage population growth. It is likely that as the Village grows, its residents will be decreasingly dependent on individual automobiles and increasingly served by shared automobiles, livery services, bicycle use and pedestrianism and mass transit. It is likely that parking demand for individual autos will decrease over the next 30 to 50 years (the time it is projected to take under the high projection for high tides to inundate surface parking areas).

HOTEL

Under the high projections and as conceptually designed, the hotel may become unusable during severe weather as early as the 2050s. As stated previously, the project includes significant shoreline improvements including riprap and living shoreline. These improvements will likely shrink the area of the site subject to wave action. If the shoreline improvements dissipate the wave action prior to the hotel, this structure would remain above Zone A elevations based on all medium projections, and through the 2100s based on high projections.

With regard to the hotel, it is recommended that the applicant consider measures to remove the hotel from the ABFE Zone V via one or more of the following methods:

- Performing a flood study to determine the extent of the V zone after improvement of the shoreline.
- Modifying shoreline design to increase dissipation of wave action in the vicinity of the hotel.
- Realigning the building footprint of the hotel outside of the V Zone.
- Increasing the elevation of the hotel's lowest horizontal structural elements for that portion within the V Zone to meet Village code standards.

3.K. ARCHEOLOGICAL AND HISTORICAL RESOURCES

Known archaeological and historical resources include properties listed on the State and National Registers of Historic Places and properties eligible for State or National Register listing. Eligible properties include those that may meet the criteria of eligibility for State or National Register listing. As construction of the Project would require a New York State permit, a submission to the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) was made to initiate a consultation pursuant to New York State's Environmental Quality Review Act (SEQRA) and Section 14.09 of the New York State Historic Preservation Act (NYSHPA) so that archaeological and historic resources would be identified, and potential project impacts assessed. Cultural and Historic Resources for the purposes of Section 106 of the National Historic Preservation Act (NHPA) are defined as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP), including artifacts, records, and remains that are related to and located within such properties and properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization that meet the National Register criteria.

3.K.1. EXISTING CONDITIONS

HISTORICAL RESOURCES

The majority of the Project Site is vacant property, mostly wooded or cleared with some paved roadways. Four multi-family residences occupy a small portion of the site, with three located along the east side of Allison Avenue north of Main Street and one located on the north side of Broad Street west of Allison Avenue. A small portion of the project site is used as a grassed open space area and a stone overlook structure as part of Emeline Park.

On September 26, 2023, the Division of Historic Preservation of the New York State OPRHP provided comments on the Project that were transmitted through the New York State Cultural Resource Information System (CRIS). The submitted materials (Site Plans, Public Notice of Positive Declaration, and Historic and Cultural Resources Chapter) were reviewed in accordance with the NYSHPA, and relate only to Historic/Cultural resources, not New York State Parkland. See **Appendix L**, **Historical and Archaeological Resources** for the referenced materials.

As a part of comments provided by OPRHP, it was noted that the Project Site is located adjacent to two historic resources listed in the State and National Registers of Historic Places (see **Figure 3.K.1, Historical Resources**). The first of these is the Fowler Library Building located at the northwest corner of Main Street and Allison Avenue. The library is an architecturally and historically significant small, turn-of-the-century public library. Also known as the King's Daughter's Public Library, the building is an example of a late 19th and 20th Century Revival style building built in 1903. The library was built through the efforts of the King's Daughters Society, a social service organization, and has been physically and socially important to the community since its construction. The back of the building is approximately 76 feet from the proposed Project Site boundary.

The other adjacent listed historic building is the Haverstraw United Post Office, built in 1935-1936, located at the southwest corner of Main Street and First Street. The Post office is listed as a "distinguished example

of a Colonial Revival style public building," [11]and was designed by Louis, A. Simon, the Supervising Architect of the U.S. Treasury Department. The building was a part of a public building program initiated by the federal government in response to unemployment from the Great Depression.[12] The back of the building is 120 feet from the Chair Factory site boundary.

Seven properties located within and adjacent to the Project Site have been determined by OPRHP to be Not Eligible for the State and National Registers of Historic Places. Four of these properties are located on the Project Site and are proposed for demolition, including 4 Allison Avenue, 6 Allison Avenue, 8 Allison Avenue and 9 Allison Avenue. Three of these properties are adjacent to the Project Site, include 3 Allison Avenue, 5 Allison Avenue, and 7 Allison Avenue. Additionally, several properties located south of the Project site, along 1st Street, have been identified by OPRHP as Undetermined and Eligible properties. OPRHP has noted that this section of 1st Street and the buildings remaining on Allison Avenue could eventually be located within a historic district and considered contributing versus Not Eligible, upon further surveying and documentation of this neighborhood.

PREVIOUS ARCHEOLOGICAL AND CULTURAL ASSESSMENTS

The parcels included in the Project Site have been under consideration for development in the past, in which requisite OPRHP assessments were conducted. In 2001, Hartgen Archeological Associates performed a Phase IA Literature Study and Archaeological Sensitivity Assessment for several waterfront parcels, part of which included the Project Site. In 2008, Pan American Consultants conducted a Phase IB Cultural Resources Investigation for several parcels, two of which included lots 27.09 1-3 and 27.46 1-78 within the Project Site. A Phase 1B was conducted by City/Scape Cultural Resource Consultant in 2002 for a parcel along the waterfront south of the Project Site. The results of the Phase 1B testing can be extrapolated regarding sensitivity of the entire Project Site.

Hartgen's Phase IA found no reported precontact sites within a one-mile radius of the study area. However, New York State Museum (NYSM) files contain two reported sites to the north of the Project Site with 'traces of occupation', which may indicate a general sensitivity. Their report concluded that based on proximity to these two sites and the physiographic characteristics, the overall project area lies within an area considered sensitive to the presence of precontact cultural material.[13] In Pan American Consultants' report, it was stated that "nineteenth century cultural materials consisting of domestic debris (primarily glass and domestic ceramics) was identified in 4 of the trenches at a typical depth of 30 inches in the southern portion of the project area. The same material was found in an erosion context of the river shore in the same area. This material represents a nineteenth century dump. No National Register-eligible cultural resources were identified, and no additional work is recommended." [14]

City/Scape concluded that "for the purposes of the Phase IB Field Reconnaissance, the issue of greatest significance in testing the site is the fact that the worker, or tenement, housing associated with the DeNoyelles Brickyard is clearly indicated on historic maps. It was considered that these residential

[11] Cultural Resource Information System (CRIS), 2002, https://cris.parks.ny.gov

[12] Cultural Resource Information System (CRIS), 2002, https://cris.parks.ny.gov

[13] Hartgen Archeological Associates, Inc., Phase IA Literature Review and Archeological Sensitivity Assessment; Downtown Redevelopment Project Parcels A, B, C, D, E and DPW, Village of Haverstraw, Rockland County, New York. Submitted to MGD Holdings, LLC, Hawthorne, New York

[14] Schieppati, Frank et. at. Phase IB Cultural Resources Investigation for the Proposed Waterfront Development at the Foot of Main Street, Village of Haverstraw, Rockland County, New York. Prepared for Henningson, Durham & Richardson Architecture and Engineering, P.C. New York, NY

structures, along with their privies and other features, might still be extant below surface."[15] Because of the extensive historic disturbance as a result of the previous industrial activities, clay mining, and past landslides and land disturbances, little, if any of the land on the Project Site can be considered potentially sensitive for pre-contact resources. All of the parcels have undergone extensive prior disturbance, minimizing archeological and historic resources on site.

3.K.2. POTENTIAL IMPACTS

The proposed Project is expected to generate actions that may disturb sub-surface cultural resources or impact above ground resources. Actions that may be performed include demolition, ground disturbance, new construction, or visual impacts to historic structures or landscapes.

The ORPHP has reviewed the Project's building plans and renderings dated August 8, 2023, the draft Cultural Resources Chapter from the DEIS received August 29, 2023, and the Village of Haverstraw Public Notice of Positive Declaration dated August 24, 2023. Based on their review, it is the OPRHP's opinion that the proposed development of the mixed-use commercial and residential complex, as described, will have No Adverse Impact on historic and archaeological resources.

3.K.3. MITIGATION MEASURES

The New York State OPRHP would continue to be consulted as part of the SEQRA process and project notification paperwork would be submitted electronically using the agency's CRIS. Based upon responses received from the OPRHP to date, the Proposed Action would not have a significant adverse impact on historical or archaeological resources of the Project Site. If construction plans change, the Applicant would coordinate with OPRHP and would provide all required analyses and obtain all necessary approvals. The developer of the Project would comply with all State regulations with regards to any additional archaeological finds at the Project Site. As a result, no mitigation of the Proposed Action is necessary.

[15] CITY/SCAPE: Cultural Resource Consultants, Haverstraw Downtown Waterfront Development Project (Parcel A); Phase IB Archaeological Field Reconnaissance Survey for MGD Holdings LLC, Hawthorne, NY



NPV

Figure 3.K.1
Historical Resources

Sources: Rockland County GIS, 2023
Scale: 1 inch equals 307 feet

N

Chair Factory DEIS
Village of Haverstraw

3.L. TRAFFIC AND TRANSPORTATION

3.L.1. EXISTING CONDITIONS

The Project Site is located on the Village of Haverstraw waterfront and has frontage along Allison Avenue, Broad Street and Liberty Street. Primary vehicle access to the Project is proposed from Liberty Street which intersects with Broad Street. The majority of the Project Site is vacant property, with three multi-family residences located on the Project Site along the east side of Allison Avenue north of Main Street and one multi-family residence located on the north side of Broad Street west of Allison Avenue. The Village owns multiple waterfront properties totaling approximately 12.9 acres (8.7 upland acres, including 0.1 acres to be alienated from Emeline Park). The Project Sponsor is also trying to secure ownership and control of the four residential properties totaling approximately 0.6 acres.

Site visits and a subsequent Traffic Impact Study (TIS) (see **Appendix M, Traffic Impact Study)** were completed to identify and assess possible traffic issues associated with the Proposed Action and identify any necessary mitigation. The TIS, dated December 2023, was prepared by Nelson Pope Engineers Architects Surveyors of Mellville, NY, and can be viewed in **Appendix M, Traffic Impact Study**. The following description and discussion of the existing roadway and traffic conditions in the area of the Project Site rely on the date and findings from the TIS.

ROADWAY CONDITIONS INVENTORY

A detailed inspection and inventory of roadway network conditions for the below 14 roadways in the study area was performed as part of the Traffic Impact Study found in **Appendix M, Traffic Impact Study.** The inventory includes existing roadway geometry, location and geometry of existing driveways and intersections along with signing, signal timings, phasing, and cycle lengths, the roadway's functional classification (e.g. north-south two-way local roadway), roadway width, parking availability and curb heights, traffic control devices, surrounding land uses, the condition of pavement markings, maintenance jurisdiction (Village, County or NYS) and posted speed limits.

- Broad Street from Broadway to Allison Avenue
- West Broad Street from Hudson Avenue to Broadway
- New Main Street from State Route 9W to Broadway
- Main Street (continuation of New Main Street) from Broadway to Allison Avenue
- Maple Avenue from West Street to Lincoln Street
- West Street from Riverside Ave / Maple Avenue to Main Street / New Main Street
    - West Street from Riverside Ave/ Maple Avenue
    - West Street from Maple Avenue to Fairmount Avenue
    - West Street from Middle St to Main St / New Main Street
- Broadway from Main Street/ New Main Street to Westside Avenue
- Tor Avenue from West Street to Hudson Avenue
- Gurnee Avenue from NYS Route 9W to Conklin Avenue
- NYS Route 9W from Short Clove Road to Gurnee Avenue
- Westside Avenue from NYS Route 9W to Broadway

EXISTING PARKING CONDITIONS

Four residential buildings are currently located on the periphery of the Project Site and no development is located within the existing borders. There is two-way on-street parking along the frontage of Broad Street and parking on the opposite side of the street from the development along Allison Avenue. The existing buildings along both Broad Street and Allison Avenue have off-street parking available with private driveways which are all accessible on from Allison Avenue and Broad Street which are private driveways.

EXISTING CRASH DATA

The most recent three-years of crash data for the study area intersections was obtained from NYSDOT's Accident Location Information System (ALIS). The data was tabulated and summarized and more detailed information about the accident data is provided in the Traffic Impact Study found in **Appendix M, Traffic Impact Study**. Within the study area, there were a total of 409 crashes from January 1, 2020, through December 31, 2022. No fatal crashes were recorded during the study period. a majority of the crashes, 42.8% (175), involved property damage only, 14.2% (58 crashes) involved injury, 0 crashes resulted in a fatality, and 43% of crashes were non-reportable. The locations with the highest number of crashes are Westside Avenue at Route 9W, Gurnee Avenue at Route 9W and NYS Route 9W at Short Clove Road , which experienced 46, 57, and 50 crashes respectively or an average of 19.0, 16.7 and 15.3 crashes per year. The majority of crashes resulted in property damage only, 5.9% at Westside Avenue at Route 9W and 4.9% at Gurnee Avenue at Route 9W. Again, the majority of crashes (42.8%) resulted in property damage only. Within the study area, only 8 of the 27 locations experienced 3 or more crashes annually.

The three most prevalent crash types were:

- Rear end crashes (23.4%),
- Overtaking crashes (23.2%), and
- Other/unknown type crashes (19%).

It is noted that 15 pedestrian/bicycle crashes (3.7%) were reported.

EXISTING TRAFFIC CONDITIONS

The Traffic Impact Study included descriptions of the 27 study intersections. Turning movement counts were conducted when school was in session listed below using Miovision cameras on Wednesday April 26, 2023, and on Saturday April 29, 2023 for all intersection except Gurnee Avenue at Railroad Underpass was collected Wednesday April 26, 2023, and on Saturday June 10, 2023 and Gurnee Avenue at NYS Route 9W was collected Tuesday May 2, 2023, and on Saturday June 10, 2023 The recording was conducted from 6 am to 9 am during the weekday AM peak period, from 4pm to 7pm during the weekday PM peak period and from 11 am to 2pm during the Saturday peak period. More details on the traffic conditions at these intersections are available in **Appendix M, Traffic Impact Study**.

The list of intersections are listed below:

- Route 9W at Short Clove Road – (Saturday counts only)
- Riverside Avenue at Short Clove Road
- Riverside Avenue at Harbor Pointe Drive – (Saturday counts only)
- West Street at Girling Drive – (Saturday counts only)

- Maple Avenue at West Street – (Saturday counts only)
- Maple Avenue at Tor Avenue
- Maple Avenue at Fairmount Avenue
- New Main Street at Route 9W
- New Main Street at Hudson Avenue
- New Main Street at Clove Avenue
- New Main Street at Maple Avenue
- New Main Street at West Street/Broadway
- West Broad Street at Hudson Avenue
- West Broad Street at Conklin Avenue
- West Broad Street at Maple Avenue
- W Broad Street/Broad Street at Broadway
- Westside Avenue at Route 9W
- Westside Avenue at Conklin Avenue
- Westside Avenue/Broadway at Samsondale Avenue
- Gurnee Avenue at Railroad Underpass
- Gurnee Avenue at Route 9W
- Broad Street at Wayne Street
- Broad Street at Rockland Street
- Broad Street at liberty Street
- Main Street at Wayne Street/4th Street
- Main Street at Rockland Street/3rd Street
- Main Street at Liberty Street/2nd Street

ASSESSMENT OF EXISTING TRAFFIC CONDITIONS

The TIS analyzed traffic capacity for all intersections within the study area. Level of Service (LOS) is defined as the different operating conditions that occur at an intersection under various traffic volume loads. LOS is designated from A to F, with LOS "A" representing the best operating conditions and LOS "F" representing the worst operating conditions. Below Is the summation of the levels of service provided within the individual intersections. More information is provided in **Appendix M, Traffic Impact Study.**

Signalized Intersections

NYS Route 9W at Short Clove Road
Currently the signalized intersection of Route 9W at Short Clove Road operates at overall Level of Service B during the weekday AM Peak and Level of Service A during the weekday PM, Saturday peak hours, with all approach movements operating at Level of Service D or better during the analyzed peak hours.

NYS Route 9W at New Main Street
Currently the signalized intersection of NYS Route 9W at New Main Street operates at overall Level of Service B during the weekday AM, weekday PM, Saturday peak hours, with all approach movements operating at Level of Service D or better during the analyzed peak hours.

New Main Street at West Street Broadway
Currently the signalized intersection of New Main Street at West Street Broadway operates at Level of Service A during the weekday AM Peak and Level of Service B during the weekday PM, Saturday peak hours, with all approach movements operating at Level of Service B or better during the analyzed peak hours.

NYS Route 9W at Westside Avenue
Currently the signalized intersection of NYS Route 9W at Westside Avenue operates at overall Level of Service C during the weekday AM, weekday PM, Saturday peak hours with all approach movements operating at Level of Service D or better during the analyzed peak hours.

Westside Avenue and Conklin Avenue
Currently the signalized intersection of Westside Avenue and Conklin Avenue operates at overall Level of Service B during the weekday AM, weekday PM, Saturday peak hours with all approach movements operating at Level of Service C or better during the analyzed peak hours.

NYS Route 9W at Gurnee Avenue
Currently the signalized intersection of NYS Route 9W at Gurnee Avenue operates at overall Level of Service B during the weekday AM, weekday PM, Saturday peak hours with all approach movements operating at Level of Service C or better during the analyzed peak hours.

Unsignalized Intersections
The Level of Service results for all the unsignalized intersections show that all the intersections operate at acceptable Level of Service D or better during both Existing Conditions except for the northbound approach at intersections of Westside Avenue/Broadway at Samsondale Avenue that operate at Level of Service E in the AM Peak and Level of Service F in the PM Peak during the Existing Conditions.

3.L.2. POTENTIAL IMPACTS

NO BUILD CONDITION

The No Build Condition represents traffic conditions expected at the study intersections in the future year 2026 without the construction of the proposed Facility. The No Build Condition traffic volumes are estimated based on two factors as follows:

1. Increases in traffic due to general population growth and developments outside of the immediate project area. This traffic increase is referred to as ambient growth.
2. Other planned projects located near the project site, which may affect traffic levels and patterns at the study intersections in this report.

Annual Traffic Growth

A 2.0% annual growth factor was obtained from a review of available resources, growth trends demonstrated through historic traffic data, and information provided in the annual growth factors developed for the New York Metropolitan Transportation Council's Best Practices Model (BMP) and used to increase the Existing 2023 volumes for a period of four years to project volumes to the year 2027 (No Build Volumes).

Other Planned Projects

"Other Planned Projects" is a term that refers to developments located near the project site that are currently under construction or in the planning stages. Traffic generated by these projects may significantly influence the operations of the study intersections and would not be represented in the field data collected.

At the time of the study two other planned projects, 49 West Broad Street (56 units of multifamily residential), Admiral's Cove at 51 Girling Drive (245 units of multi-family residential and 2,100 sf restaurant space), were currently under construction or in the planning stages within the study area. Hence the traffic from these planned projects was added to the ambient Traffic Volumes to develop the 2027 No Build Volumes.

BUILD CONDITIONS

The Project includes a mixed-use, mixed-income, walkable development of up to 450 residential housing units which will include mixed-income affordable housing, amenity space, 5,000 sq.ft. of retail space, and 120 units of hotel space with 496 structured parking spaces and 93 on-street parking spaces. Access to the site will be provided via a full access driveway on Liberty Street.

Trip Generation

To identify the impacts, the Project may have on the adjacent street system, it is necessary to estimate the magnitude of traffic volume generated during the peak hours and to estimate the directional distribution of the site traffic when entering and exiting the subject property. The trip generation estimates for the proposed development were prepared utilizing data found under Land Use Code "310 –Hotel", Land Use Code "221 – Multi Family Housing (Midrise)", and Land Use Code "822 – Strip Retail Plaza" within the Institute of Transportation Engineers' publication, *Trip Generation, 11th Edition*. This publication sets forth trip generation data obtained by traffic counts conducted at sites throughout the country. The following **Table 3.L.1 Trip Generation (Proposed Project)** summarizes the trip generation estimates for the proposed retail development.

Table 3.L.1: Trip Generation (Proposed Project)

Time Period	Distribution	Project
Weekday AM Peak Hour	Enter	85
	Exit	174
	Total	**259**
Weekday PM Peak Hour	Enter	167
	Exit	128
	Total	**295**
Saturday Midday Peak Hour	Enter	169
	Exit	144
	Total	**303**

Source: Trip Generation, 11th Edition, published by ITE

As can be seen from the table above, the Project is projected to generate 259 trips (85 entering and 174 exiting) during the weekday AM peak hour, 295 trips (167 entering and 128 exiting) during the weekday PM peak hour and 303 trips (169 entering and 144 exiting) during the Saturday midday peak hour.

Trip Distribution and Assignment

The volume of site traffic that would travel through the study intersections during peak hours was distributed and assigned to each movement based on the existing roadway and travel patterns. The nature of the proposed land use and its associated travel patterns were considered as well.

TRAFFIC IMPACT ANALYSIS

In order to identify the impacts created by the Project, capacity analyses were conducted at the study intersections for the No Build and Build Conditions during the weekday AM, weekday PM, Saturday AM, Saturday PM, Sunday AM, and Sunday PM peak hours. The results of the capacity analyses for the No Build and Build Conditions were compared to determine the impact that will be created on the study intersections by the Proposed Project.

Signalized Intersections

The Traffic Impact Study found that one signalized intersection requires mitigation following the completion of the Project:

NYS Route 9W at New Main Street

After the completion of the proposed project, the intersection will operate at an overall Level of Service C, B, and B during the weekday AM Peak, PM Peak, Sat Peak respectively, with all approach movements operating at Level of Service D or better except for a Level of Service E for the west bound left turn approach movement during the AM peak hour. Therefore, a signal adjustment was made for the AM peak hour to improve all approach movements to operate at Level of Service D or better.

Unsignalized Intersections

The Traffic Impact Study found that three signalized intersections require mitigation following the completion of the Project:

Broad Street/West Broad Street at Broadway

To mitigate these impacts of the Project, the intersection is proposed to be controlled with an All-Way stop condition which change the eastbound No Build AM peak hour Level of Service C to the Mitigated Build Level of Service A with a decrease of 8.8 seconds of delay and the eastbound No Build PM peak hour Level of Service D to the Mitigated Build Level of Service B with a decrease of 21.4 seconds. The westbound No Build AM peak hour Level of Service B to the Mitigated Build Level of Service B with a decrease of 2.5 seconds of delay and westbound the PM peak hour Level of Service changed from Level of Service D to Level of Service B with a decrease of 11.5 seconds of delay.

Westside Avenue/Broadway at Samsondale Avenue

After the completion of the proposed project with the current configuration of Samsondale Avenue with stop control, the Level of Service and delays remained the same so to mitigate the impact of the Level of Service F, the intersection is proposed as an All-Way stop control. This reconfiguration changed the Level of

Service for all movements in the AM peak hours to Level of Service C, all movements in the PM peak hours to a Level of Service D, and all movements in the SAT Midday peak hours to a Level of Service B.

Broad Street at Liberty Street
After the completion of the proposed project there will be changes in levels of service. The northbound Build Level of Service F, C, and D for the AM, PM, and SAT Midday peak hours respectively. To mitigate and improve the Level of Service, an All-Way stop control is proposed which will improve the northbound Build Level of Service F, C, and D to the Mitigated Level of Service A, B, and A respectively.

ON-SITE TRAFFIC ACCESS

An on-site Access Routes Plan is shown in **Appendix M, Traffic Impact Analysis**. The Plan shows routes for both vehicles and pedestrians throughout the Project Site. Truck turning movements were also analyzed for the Project Site, including the main vehicular access from Broad Street and Liberty Street. Roadway alignments have been provided to ensure the largest Village Fire Department vehicles are able to navigate the site from all approaches and within the Site. Representatives of the Project team met with the Haverstraw Fire Department Council on October 24, 2023, to review emergency access to the development proposed at the Project Site. Access for Fire Department vehicles would be able to accommodate the current types of vehicles that would respond to the Project Site.

As noted in **Appendix M, Traffic Impact Analysis**, a new All-Way stop sign is proposed at the intersection of Broad Street and Liberty Street, including main access into the Project Site. The new stop sign will improve the Level of Service for the northbound Build Level of Service for the AM Weekday Peak, PM Weekday Peak and the Saturday Peak to Level of Service A, B, and A respectively.

IMPACTS ON SURROUNDING STREETS

Access for construction vehicles would be from two locations:

- Gate 1 at the intersection of Liberty Street and Broad Street (vehicular);
- Gate 2 at the intersection of Broad Street and Allison Avenue (vehicular); and

Construction vehicles are to utilize Liberty Street, Broad Street and Alison Avenue upon entering and leaving the site. Vehicles would then utilize the local street network to travel to and from the site.

PARKING

Appendix A, Traffic Impact Study, describes parking for the conceptual uses on the Project Site. The Project parking is designed to provide spaces for Buildings 1, 2, 3, 4, and the hotel to individually contain enough parking to support the base parking demand they create for their respective programs. In addition to the base parking demand, the parking layout will accommodate public parking to facilitate access to retail and community spaces as well as site amenities such as the waterfront park. Due to the physical layout of parking facilities, public parking access will be limited to the on-street parking spaces along Allison Avenue, Broad Street, and Liberty Square within the Project Site (totaling 24 spaces) along with structured parking spaces within Parking Area A which is located below both Building 1 and 2 (totaling 344 spaces across two floors). This shared parking in both on-street and structured conditions totals 358 spaces. The remainder of structured and surface parking is reserved for their respective buildings. Building 3 parking demand (residential only) is fully accommodated through two floors of structured car park totaling 76 parking spaces.

Building 4 parking demand (residential only) is accommodated through a combination of a structured parking facility totaling 84 parking spaces and an additional 13 spaces of the shared parking spaces at Liberty Square for a combined total of 97 Parking Spaces. All structured and off-street parking associated with Buildings 1, 2, 4, and the Hotel are accessible from Liberty Square. Parking for Building 3, all of which is in a structured facility, is accessible from the northwest side of the building via the planned extension of Liberty Street.

Parking within the Project Site will be managed through signage as well as a permit or vehicle tag system. For visitors, a time limit will be posted on the signage. The specifics of which system will be used will be identified during the site plan review with the Village of Haverstraw. The property management will be responsible for enforcement of all structured and off-street parking facilities while the Village of Haverstraw will be responsible for enforcement of on-street parking regulations on Allison Avenue, Broad Street, and Liberty Street as well as Liberty Square. All residents and visitors will be notified through signage and other means that parking issues should be taken up with property management and a phone number and e-mail will be posted for immediate response.

To determine an efficient ratio of parking for the various uses at the Project Site, the development team assessed the patterns of peak parking usage at similar scale multifamily developments which exist within or in proximity to the Village of Haverstraw. This survey of parking use was broken into two phases described below.

Phase One of the parking assessment included a single evening audit of 12 existing multi-family properties during their anticipated peak usage timeframe (between 11pm and 6am). The aggregate scope of the 12-property survey included 1,977 residential units with 195 of those units having a form of an ownership structure (condominium or cooperative) and the remainder being multi-family rental apartment buildings. An aggregate total of 2,774 parking spaces were surveyed. The analysis developed a base of 1.15 required parking spaces per residential unit.

Phase Two of the parking survey focused on validating the results of phase one's findings and to identify an hour-by-hour utilization of parking for select sites. To select sites for an hour-by-hour survey, the development team met with the Village of Haverstraw planning and engineering departments to review findings of the phase one survey and to ask for input on which sites should be included in the phase two survey. Mountainside Apartments, Pavion Apartments, and Tor View Village were chosen based on a best fit reflection of the project's residential program size, site layout, parking format, and proximity. The aggregate of these three sites represents 856 residential units containing 1,207 parking spaces. The three sites were each surveyed on an hourly basis over three days.

The averaged results of the phase one survey and the more detailed phase two survey of select comparable site were used as the basis for the proposed parking ratio of 1.15 parking spaces per residential unit.

Shared Parking Model

Shared Parking, 2nd Edition describes shared parking as follows: "Shared parking is defined as parking space that can be used to serve two or more individual land uses without conflict or encroachment. The opportunity to implement shared parking is the result of two conditions: Variations in the peak accumulation of parked vehicles as the result of different activity patterns of adjacent or nearby land uses (by hour, by day). Relationships among land use activities that result in people's attraction to two or more land uses on a single

auto trip to a given area or development." Most zoning codes are based upon peak parking demand ratios for individual land uses. While this appropriately recognizes that separate land uses generate different parking demands on an individual basis, it does not reflect the fact that the combined peak parking demand, when a mixture of land uses shares the same parking supply, can be substantially less than the sum of the individual demands. For example, office uses peak in the early afternoon of a weekday, while a cinema peaks in the evening hours of a weekend. Thus, these two land uses are excellent candidates for sharing a parking supply between them.

The parking analysis also assumes the utilization of shared parking, which is defined as a parking space that can be used to serve two or more individual land uses without conflict or encroachment. This shared parking model utilizes a series of assumptions, in addition to the base ULI/ICSC and empirical data, and substantial locally collected data to develop the parking demand model. For each land use in the Project, the shared parking analysis calculates the parking demand for that land use based on the hourly and weekday vs. weekend adjustment of parking ratios set forth in Shared Parking, 2nd Edition. The resulting sum of the individual land use hourly parking demands represents the total parking demand for the entire site. The parking demand ratio is utilized by the model to generate parking demand estimates for the selected land uses. The time-of-day factor reveals the hourly parking pattern of the analyzed land use. One factor that affects the overall parking demand at a particular development is the number of residents, visitors, and employees that arrive by automobile. It is common that mixed-use projects and districts have patrons/visitors captured within the site itself based on the mixed-use nature of the Project. The mode split accounts for the number of residents, visitors, and employees that do not arrive by individual automobile or are internally captured (transit, walk, or other). Parking ratios utilized both the locally sourced parking survey and ULI based parking ratios for residential, hotel, retail and community uses. A mode split adjustment redefines the default value from 100% of all patrons using an individual vehicle to arrive and park, to a certain percentage who will arrive in a carpool with another person (those not assumed in the auto occupancy rate), walk, bike, bus, or use a shared-car service. The applied adjusted parking ratios are as follows:

- ***Residential:*** *1.15 spaces per residential unit X 450 Units = 517.5 parking spaces.*
- ***Hotel:*** *0.80 spaces per room x 86 rooms = 68.8 parking spaces.*
- ***Retail:*** *1 space per 400sf of retail X 8,000sf in retail space = 20 parking spaces.*
- ***Community:*** *1 space per 400sf of office x 5,000sf in community space = 12.5 parking spaces.*

Independently these aggregate uses would result in a total of 618.8 required parking spaces. An offset in peak parking utilization times of the mixed-use program for the site allows for implementation of a shared parking strategy. The shared parking strategy (limited to on-street and Parking Area A located below Building 1 and 2) results in a reduction in the total parking demand from 618.8 to 589 parking spaces which matches the parking provided on the site.

3.L.3. MITIGATION MEASURES

Based on the ITE trip generation manual, the proposed 450 residential housing units with 5,000 SF of retail space and 120 units of hotel space would have generated 259 trips (85 entering and 174 exiting) during the weekday AM peak hour, 295 trips (167 entering and 128 exiting) during the weekday PM peak hour and 303 trips (169 entering and 144 exiting) during the Saturday midday peak hour.

Capacity analyses were conducted at all the study intersections for the 2023 Existing, 2027 No Build and 2027 Build conditions during the weekday AM, weekday PM, Saturday Midday peak hours. The results of the analyses are described below:

- During the No Build Condition, all the signalized intersections studied operate at overall Level of Service D during the weekday AM, weekday PM, Saturday peak hours with all approach movements operating at Level of Service D or better during the analyzed peak hours. ***Only NYS Route 9W at New MainStreet would need a signal adjustment to improve all approach movements operating at Level of Service D or better.***
- During the Build Condition, all the unsignalized intersections studied operates at Level of Service D or better during the analyzed peak hours except for the following: Broad Street/West Broad Street at Broadway which had some impacts with a Level of Service F in the eastbound and westbound PM peak hours. By installing all-way stop control, the Level of Service was improved to Level of Service B or better. Westside Avenue/Broadway at Samsondale Avenue which had some impacts with a Level of Service F in the eastbound AM and PM peak hours. ***By installing all-way stop control, the Level of Service was improved to Level of Service D or better. Broad Street at Liberty Street which is proposed as the entrance/exit to the Proposed Project had some impacts with a Level of Service F in the northbound AM peak hours. By installing all-way stop control, the Level of Service was improved to Level of Service B or better.***

The impacts of construction vehicles upon adjacent streets and within the local street network will be minimized through the incorporation of several mitigation measures:

- Construction vehicles and equipment would be parked on the Project Site in designated staging areas, when possible.
- Truck drivers would be urged to limit excessive use of residential streets, encouraging use of Main Street to reach 9W quickly.
- No construction activities would occur outside of the permitted hours as per Chapter 157, Noise of the Village Code.
- Identification of suitable places on-site for vehicle and heavy equipment parking and prohibit the parking of trucks, or prolonged idling, on public streets or within the shoulder area of public streets.

Based on the results of the Traffic Impact Study the construction of the proposed facility will not result in an adverse traffic impact at the study intersections and the surrounding roadways and the Project site parking layout and overall supply are well balanced with the aggregate parking demand across all programmed uses on the site. In addition, the overall parking strategy results in ample midday parking capacity for public parking to access waterfront park features.

3.M. CONSTRUCTION

3.M.1.POTENTIAL IMPACTS

SCHEDULE

The proposed construction schedule of the Project includes a site work phase along with two main construction phases spanning a total period of about 29 months from the initial site clearing to the finalization of landscaping and site furniture, with some overlapping timelines. **Table 3.M.1, Construction Schedule,** provides a breakdown of the phasing along with the projected number of months each phase would last. The estimated number of months is weather dependent and subject to change.

Table 3.M.1: Construction Schedule

CONSTRUCTION PHASE	START	FINISH	TOTAL NUMBER OF MONTHS
Site Work	September 2024	January 2027	29
Phase I- Buildings 1 & 2	October 2024	July 2026	22
Phase II-	January 2025	November 2026	23
Building 4	January 2025	September 2026	21
Building 3	March 2025	November 2026	21
Hotel	May 2025	January 2027	21

Phase I focuses on the construction of Buildings 1 and 2, including residential and commercial uses. Phase II focuses on completing the remaining two residential buildings, Buildings 3 and 4, and then completing the Hotel. Throughout the entirety of the construction, site work would be completed including but not limited to the completion of the Liberty Street extension, outdoor structures such as walkways and walls, outdoor lighting and furniture, and landscaping.

SITE ACCESS

There would be three access locations to the Site when construction begins, two vehicular and one pedestrian:

- Gate 1 at the intersection of Liberty Street and Broad Street (vehicular);

- Gate 2 at the intersection of Broad Street and Alison Street (vehicular); and
- Gate 3 at the southeastern corner of the Project Site at Emeline Park (pedestrian).

There would be an increase in the number of vehicles travelling to the Site during construction, including construction vehicles and worker vehicles. As a result, there is the potential for construction related traffic on Liberty Street and Alison Street, but there would be no queuing of construction vehicles on Liberty Street. **Chapter 3L, Traffic and Transportation**, further discussed the potential impacts and associated mitigations related to the traffic and transportation of the Project Site.

SITE ORGANIZATION, DUST, AND EROSION

During construction, there would be approximately five field offices, 11 garbage containers, and eight portable toilets throughout the Project Site. The Construction Staging Plan can be found in **Appendix B, Site Plans** for further understanding of the location of the aforementioned. Additionally, the Project is anticipating a need to export approximately 2,500 cubic yards of fill from the Site, as discussed in **Chapter 3G, Geology – Soils and Topography**. Excess soil and earth materials that cannot be re-used on-site would be stockpiled on the Site and then would be disposed off-site in accordance with Village of Haverstraw, New York State and federal regulations. In addition, the Project Site would control erosion related impacts by sequencing site disturbance activities to establish erosion controls, minimize disturbed areas, maintain existing vegetation as much as possible, and stabilize newly disturbed areas as soon as possible. All construction related temporary sediment barriers and sediment traps would be designed in accordance with the 2016 *NYS Standards and Specifications for Erosion and Sediment Control*.

It is likely that dust would be generated because of the preparation of the Site, such as during the site clearing of the first four and a half months of the Project, and the excavation associated with each of the buildings. There is no dust anticipated to be generated as a result of post-construction activities on the Site.

NOISE

Noise would be generated by vehicles, equipment, tools, and personnel during the construction process. The Project is located in close proximity to several residential properties along Alison Avenue and Broad Street, the Haverstraw King's Daughters Library, the First Christian Church of the Good Shepherd on Main Street, and Emeline Park directly south of the Site. In accordance with Chapter 157, Noise, of the Village Code, no construction activities would take place after 10:00 p.m. or before 7:00 a.m. According to Section 157-7, Exceptions, the Chapter otherwise does not apply to "sounds that originate on construction sites between the hours of 7:00 a.m. and 10:00 p.m."[16] Compliance with the Village regulations would ensure that construction does not take place at night or during early morning hours when residents are typically at home and are most sensitive to noise, thereby eliminating any late night/early morning noise concerns. Noise is expected to be temporary and intermittent during the construction process, depending on project phase and type of work activity.

ROCK REMOVAL/BLASTING

As discussed in **Chapter 3G, Geology – Soils and Topography**, there is no rock removal or blasting anticipated as a part of the Proposed Project due to the depth of the bedrock. If rock removal or blasting becomes

[16] https://ecode360.com/10994437#10994409

necessary, the Project Sponsor would adhere to all necessary regulations and obtain all required permits for the Village as discussed in Chapter 128, Explosives of the Village Code.

3.M.2.MIITIGATION MEASURES

The majority of the impacts associated with construction would be temporary (during the 28-month construction period) and would conclude when the Project is completed, such as noise and traffic. These are temporary, construction-related unavoidable impacts. Much of the Project Site and the construction activity associated with the Project will take place at a lower elevation than residences along Allison Avenue and Broad Street. The Project would incorporate the following mitigation measures to minimize impacts:

- To mitigate construction impacts on traffic:
  - Construction vehicles and equipment would be parked on the Project Site in designated staging areas, when possible.
  - Stabilized construction entrances at Gates 1 and 2 would be maintained to help reduce dust, sand and pebbles from being tracked on to roads.
  - Truck drivers would be urged to limit excessive use of residential streets, encouraging use of Main Street to reach 9W quickly.
- The construction contractor would develop and comply with a dust mitigation plan as a part of the construction contract. This may include:
  - wetting bare soils.
  - maintaining slow on-site construction vehicle speeds.
  - immediate seeding/planting of bare ground as soon as possible after clearing.
  - installing silt fencing.
  - stabilizing any stockpiles on the Site.
- No construction activities would occur outside of the permitted hours as per Chapter 157, Noise of the Village Code.
- Identification of suitable places on-site for vehicle and heavy equipment parking and prohibit the parking of trucks, or prolonged idling, on public streets or within the shoulder area of public streets.

With the incorporation of the mitigation described the Project would not create a construction related significant adverse impact.

4. OTHER ENVIRONMENTAL IMPACTS

4.1. UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

The potential adverse impacts of the project have been assessed in all subsections of **Chapter 3, Existing Conditions, Environmental Impacts, and Mitigation Measures** of this DEIS, and mitigation measures have been identified for the topics that were reviewed. Some impacts from the Proposed Action, however, are unavoidable, and cannot be completely prevented or avoided by applying reasonable and feasible mitigation techniques as required by SEQRA. Unavoidable adverse environmental impacts are as follows:

SHORT TERM IMPACTS

- Potential dust generation, erosion, and sedimentation may occur during construction (**Chapter 3J, Geology- Soils and Topography,** and **3M, Construction** of this DEIS). Minor dust conditions would be temporary and controlled to the extent practicable by implementing best management practices to limit dust, soil erosion, and sedimentation. These practices would include wetting of loose exposed soil if needed, flagging of non-disturbance areas, installation of silt fencing and stabilizing construction entrances, identifying stockpile areas and stabilization of temporary stockpiles as needed, preparation of a dust mitigation plan, and stormwater and erosion plans, and development in accordance with the Site Plan and SWPPP.
- Temporary increases in truck traffic and other construction-related activities that would generate noise during the course of the construction period (**Chapter 3M, Construction**, of this DEIS). Construction activities would be conducted in conformance with Village requirements including restricting construction activities in accordance with permissible construction timetables outlined under Chapter 157, Noise of the Village Code.
- For the shoreline improvements, there may be suspended sediment in the waterway during the in-water excavation (**Chapter 3I, Wetlands, Waterbodies, and Watercourses** in this DEIS). Development of the Site Plan will include regionally appropriate plantings and appropriate mitigation including a turbidity curtain to contain the suspended sediment and preventing it from moving beyond the immediate work area to minimize environmental impacts from the shoreline improvements and associated disturbances.

LONG TERM IMPACTS

- The Project would result in the alteration of the wildlife habitats along the shoreline of the Project Site. Despite this, the proposed changes work to improve the poor habitat environment along the shoreline, rather than entirely removing it. The live cuttings will encourage the development of wetland habitat while providing stabilization for the development of the Site (**Chapter 3H Vegetation and Wildlife**, of this DEIS).

4.2. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

This subsection identifies those natural and human resources discussed in the subsections of **Chapter 3, Existing Conditions, Environmental Impacts, and Mitigation Measures** of this DEIS that would be consumed, modified, irreversibly affected, or otherwise made unavailable for future use as a result of the Proposed Action. Irretrievable and irreversible commitments of resources involve primarily the commitment of natural resources on-site, many building materials used in construction, and the consumption of nonrenewable energy sources.

The Proposed Action would result in the following irreversible and irretrievable commitment of resources:

- Approximately 3.4 acres of trees would be removed from the Project Site. The Project proposes the planting of approximately 120 trees with additional plants, shrubs and wetland plantings that are native and Site appropriate. Given that most of the habitat on the Project Site consists of invasive or undesirable species, this is an improvement of the Site ecological conditions (**Chapter 3.H, Vegetation and Wildlife**, of this DEIS).

4.3. GROWTH-INDUCING, SECONDARY AND CUMULATIVE IMPACTS

The cumulative impacts of the Action will be analyzed in consideration of the policies and development activities in adjoining communities.

Growth-inducing aspects of the Proposed Action are those characteristics that would cause or stimulate additional development, either directly due to development under the Proposed Action itself, or indirectly, as a result of an increased population attracted to the area, new market demands, or additional potential for development nearby (i.e., “secondary” development).As discussed throughout the DEIS, the Proposed Action involves a mixed-use development including multi-family residences, a hotel, commercial, and parkland. Each of these parts of the Project Action could result in positive growth-inducing, secondary and cumulative impacts.

GROWTH INDUCING ASPECTS

There will likely be no major growth inducing aspects of the project. As noted in the Village’s 2021 Comprehensive Plan, three major waterfront development sites in the Village were identified for development. These included the site of the Harbors at Haverstraw development (completed and occupied), the site of the Admiral’s Cove development (completed and partially occupied). The third site identified is the Project Site. Several other infill developments have been proposed and could be developed in the next five to ten years. The completion of the Proposed Action may induce some additional infill development in addition to the infill development already proposed in the area, but it would not induce major growth in the Village.

SECONDARY IMPACTS

It is anticipated that the Project would likely result in positive secondary impacts on the Village, mostly through an increase in shoppers and visitors to downtown Haverstraw. As discussed in C**hapter 3C, Fiscal and Economic Impacts**, the Project is estimated to result in an increase of 798 residents to the population of the Village of Haverstraw. Of the 450 residential units, 133 will be affordable housing units and 317 will be market rate, adding much needed affordable and market rate housing units to the housing stock of the Village. Also, the downtown and its restaurants, shops and service-oriented business are within walking distance, or a short-drive or bicycle ride, from the Project Site. These downtown businesses would likely benefit from the increased activity due to the added residents of the Project Ste or those visiting the Project Site's residential, commercial, public services or open space uses, including occasional larger events at the hotel, commercial spaces and open space areas.

Construction of the residences, commercial retail spaces, and hotel will also create both short-term and long-term job opportunities. In the short-term, development will create construction jobs, and jobs may be created indirectly based on increased patronage of material suppliers. In the long-term, the proposed project will create a number of permanent operation and maintenance-related jobs and provide spaces for new businesses to establish themselves in the Village.

CUMULATIVE IMPACTS

It is anticipated that that the Proposed Action will have no significant cumulative impacts within the Village and surrounding communities related to the variety of local services discussed in **Chapter 3D, Community Services**.

Traffic and Transportation

It is anticipated that the Proposed Action will have no significant cumulative impacts on traffic within the Village and surrounding communities. As described in **Chapter 3L, Traffic and Transportation**, two other planned projects, 49 West Broad Street (56 units of multifamily residential), Admiral's Cove at 51 Girling Drive (245 units of multi-family residential and 2,100 sf restaurant space), were currently under construction or in the planning stages within the study area. The traffic from these planned projects was added to the ambient Traffic Volumes to develop the 2027 No Build Volumes.

According to the analysis in **Chapter 3L**, the Proposed Action would have generated 259 trips during the weekday AM peak hour, 295 trips during the weekday PM peak hour and 303 trips during the Saturday midday peak hour. Capacity analyses were conducted at all the study intersections for the 2023 Existing, 2027 No Build and 2027 Build conditions during the weekday AM, weekday PM, Saturday Midday peak hours. The results of the analyses are described below:

- During the No Build Condition, all the signalized intersections studied operate at overall Level of Service D during the weekday AM, weekday PM, Saturday peak hours with all approach movements operating at Level of Service D or better during the analyzed peak hours. Only NYS Route 9W at New MainStreet would need a signal adjustment to improve all approach movements operating at Level of Service D or better.
- During the Build Condition, all the unsignalized intersections studied operates at Level of Service D or better during the analyzed peak hours except for the following:

- Broad Street/West Broad Street at Broadway which had some impacts with a Level of Service F in the eastbound and westbound PM peak hours. By installing all-way stop control, the Level of Service was improved to Level of Service B or better.
- Westside Avenue/Broadway at Samsondale Avenue which had some impacts with a Level of Service F in the eastbound AM and PM peak hours. By installing all-way stop control, the Level of Service was improved to Level of Service D or better.
- Broad Street at Liberty Street which is proposed as the entrance/exit to the proposed Apartment Complex had some impacts with a Level of Service F in the northbound AM peak hours. By installing all-way stop control, the Level of Service was improved to Level of Service B or better.

According to the analysis in **Chapter 3L**, the Project site parking layout and overall supply are well balanced with the aggregate parking demand across all programmed uses on the site. In addition, the overall parking strategy results in ample midday parking capacity for public parking to access waterfront park features.

During the busiest phase of construction, truck trips would be required daily to complete the necessary excavation and material transport for building construction, and heavy equipment (e.g., excavators, backhoes, bulldozers) would be used to excavate and grade soil, and load dump trucks. During this phase, an estimated 40-50 truck trips and 30-40 construction personnel would visit the Project Site during peak weekday traffic hours (8:00 a.m.to 9:00 a.m. and 4:15 p.m. to 5:15 p.m.) This temporary increase in traffic and operation of construction equipment is unavoidable.

Demographics

It is anticipated that that the Proposed Action will have no significant cumulative impacts within the Village related to demographics. As noted in **Chapter 3D.1, Demographics**, the proposed Project of 450 residential units will add an estimated population of 798 additional residents to the Village of Haverstraw. Of the 450 residential units, 133 will be affordable housing units and 317 will be market rate. The recently completed Admiral's Cove development, located along the Village's waterfront, includes 245 multi-family units. A 56-unit multi-family development at 49 West Broad Street has been approved but has not yet been constructed. These two additional developments will result in approximately 474 residents and 136 residents respectively. These three developments would add a cumulative total of 1,409 residents to the Village. This would result in a 11.4 percent increase in the population of the Village. The Project and the two additional projects add a total of 751 much-needed affordable and market rate housing units to the housing stock of the Village.

Schools

The Project Site is located within the North Rockland Central School District. Within the Village of Haverstraw, the recently completed Admiral's Cove development includes 245 multi-family units, and a 56-unit multi-family development at 49 West Broad Street has been approved but not yet constructed. These two additional developments would result in approximately seven and 18 public school aged children respectively. The Proposed Project would result in approximately 49 public school aged children. These three developments would add a cumulative total of approximately 73 public school aged children. It is anticipated that the Proposed Action and the other recently constructed or approved projects in the Village will have no significant cumulative impact upon the North Rockland School District.

Police Department

The Town of Haverstraw Police Department serves the Village of Haverstraw, the Village of West Haverstraw and the area of the Town outside the two Villages. Within the Village of Haverstraw, the recently completed

Admiral's Cove development includes 245 multi-family units, and a 56-unit multi-family development at 49 West Broad Street has been approved but not yet constructed. Based on the planning standards published in the Urban Land Institute's Development Assessment Handbook, the increase in population could result in a cumulative increased demand of 2.8 police personnel and 0.8_additional vehicles. It is anticipated that the Proposed Action and the other recently constructed or approved projects in the Village will have no significant cumulative impact upon the Town of Haverstraw Police Department.

Fire Department

The Village of Haverstraw Fire Department serves the Village of Haverstraw. Within the Village of Haverstraw, the recently completed Admiral's Cove development includes 245 multi-family units, and a 56-unit multi-family development at 49 West Broad Street has been approved but not yet constructed. Based on the planning standards published in the Urban Land Institute's Development Assessment Handbook, the increase in population could result in a cumulative increased demand of 2.3 fire personnel and 0.3 additional vehicles. It is anticipated that the Proposed Action and the other recently constructed or approved projects in the Village will have no significant cumulative impact upon the Village of Haverstraw Fire Department.

Emergency Services (EMS)

The Town of Haverstraw Volunteer Ambulance Corps serves the Village of Haverstraw, the Village of West Haverstraw and the area of the Town outside the two Villages. As discussed in **Chapter 3D.3, Police, Fire and Emergency Services (EMS)**, the proposed project will include a mix of residential, commercial and community service space, a hotel and open space. Within the Village of Haverstraw, the recently completed Admiral's Cove development includes 245 multi-family units, and a 56-unit multi-family development at 49 West Broad Street has been approved but not yet constructed. Based on the planning standards published in the Urban Land Institute's Development Assessment Handbook, the increase in population could result in a cumulative increased demand of 0.2 emergency services personnel and 0.1 additional vehicles. It is anticipated that the Proposed Action and the other recently constructed or approved projects in the Village will have no significant cumulative impact upon the Town of Haverstraw Volunteer Ambulance Corps.

Solid Waste

As discussed in **Chapter 3D.4, Solid Waste**, solid waste collection, recycling and disposal will be provided by a private waste carter during construction and upon completion of the project. The private waste carters serving the Project will provide off-site disposal of all refuse and recycling materials produced by the Project. As all solid waste collection and recycling collection will be completed by a private carter, there will be no significant cumulative adverse impact on the Village or surrounding communities as a result of the Project.

Recreation and Open Space

As discussed in **Chapter 3D.5, Recreation and Open Space**, approximately 4.2 acres of the Project Site will become new parkland for public use. The addition of the 4.2 acres of new parkland will provide opportunities for waterfront access, open space and passive recreation for the public in the Village of Haverstraw and the region. The recently completed Admiral's Cove development, located along the Village's waterfront, includes 245 multi-family units and a 2,100 square foot restaurant as well as a riverfront pathway and open spaces. A 56-unit multi-family development at 49 West Broad Street has been approved but not yet constructed. The open space and recreational opportunities to be provided on the Project Site and at the Admiral's Cove development provide for new open spaces within the Village and along the waterfront and thus result an overall positive cumulative impact on recreation and open space in the Village.

4.4. ENERGY USE AND CONSERVATION

SEQRA requires that lead agencies identify and assess potential adverse environmental impacts and prevent or mitigate such impacts to the maximum extent practicable. Consistent with this requirement, SEQRA can be used to identify and assess climate change impacts, as well as steps to minimize the release of greenhouse gas emissions (GHGs) that cause climate change. Many measures that minimize emissions of GHGs would also advance other long-established State and local policy goals, such as energy efficiency and conservation; the use of renewable energy technologies; waste reduction and recycling; and smart and sustainable economic development. The SEQR 2009 *Guide to Assessing Energy Use and Greenhouse Gas Emissions* outlines the consideration that must be given to energy conservation and GHG emissions within EIS reviews.[17]

The following is an assessment of energy conservation and GHG emissions from the Project:

SITE PREPARATION AND PROJECT CONSTRUCTION

The majority of the Project Site is vacant, with four residences occupying a small portion of the Site. Therefore, an increase in energy use and GHG emissions is expected. Clearing, grading, driveway, and parking lot construction; installation of utilities and site infrastructure; and construction of the various buildings would require the use of construction vehicles, heavy equipment, and power tools such as chainsaws that utilize nonrenewable fossil fuels. This work would take place over a two-phase 29-month construction schedule and involve various levels of activity and energy demand, depending on the phase. During the construction period, energy use and GHG impacts would occur on-site, as well as off-site along roadways from construction vehicle traffic and manufacturing of building materials and equipment. Once an electrical connection is made, additional but minor indirect, off-site emissions are expected at electric generating stations that provide non-renewable electricity to the Orange and Rockland transmission network.

Tree Removal

The removal of trees and other vegetation that absorb carbon dioxide (CO_2) and generate oxygen would also have an impact, albeit a small impact with a project of this type and scale. Nevertheless, the Project has been designed to remove 3.4 acres of trees from the Site. The majority of these are considered invasive or undesirable species for the Site. A total of approximately 120 trees would be planted (**Chapter 3H, Vegetation and Wildlife**, of this DEIS). Tree and other landscape plantings would include mostly native, regionally appropriate species. The replacement trees and plantings would help to partially offset the CO_2 impact of the tree removal.

Construction Vehicle Traffic

Operation of construction vehicles and equipment during construction would utilize energy resources, particularly diesel fuel and gasoline, and in turn release GHGs. During the busiest phase of construction, truck trips would be required daily to complete the necessary excavation and material transport for building construction, and heavy equipment (e.g., excavators, backhoes, bulldozers) would be used to excavate and grade soil, and load dump trucks. During this phase, an estimated 40-50 truck trips and 30-40 construction

[17] Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impact Statements (ny.gov)

personnel would visit the Project Site during peak weekday traffic hours (8:00 a.m.to 9:00 a.m. and 4:15 p.m. to 5:15 p.m.) To reduce the amount of GHGs, the prolonged idling time of construction vehicle and equipment will be limited when possible. Also, the storage of large trucks on-site at the end of each day rather than returning them to contractor headquarters for overnight storage will be encouraged.

BUILDING/SITE DESIGN AND OPERATION MEASURES

The Project incorporates several buildings which will require heating, ventilation and air conditioning (HVAC) systems order to function properly. HVAC systems would be selected based on the intended use of the spaces to be served and would consider air quality, air distribution, fume capture and exhaust, equipment operations, chemical storage temperature limits, and maintainability/operability. All electric utilities are anticipated to be developed within a neighborhood geothermal pilot project. As a result, an increase in energy demand and associated GHG emissions can be expected during project facility operation.

Indoor and outdoor lighting is also an important factor in terms of energy use and conservation; therefore, LED lighting would be used for all indoor, outdoor, and emergency lighting. Lighting plans would be designed to reduce light-related impacts such as excessive lighting, light trespass, glare, impacts on nocturnal wildlife, as well as excess energy demand.

4.5. CLIMATE CHANGE

The Project includes various strategies to reasonably reduce nonrenewable energy consumption and curb the release of GHG emissions. Based on the above analyses and in consideration of the following mitigations, significant adverse energy related impacts are not expected from this essential facility.

ENERGY CONSERVATION

- Solar panels are being considered on several of the Project's rooftops.
- The Project will be directly adjacent to downtown and will connect to the existing street grid, sidewalks, pedestrian and bicycle trails to encourage less automobile usage for residents and visitors to the commercial, community services, hotel and open space uses.
- Energy conservation techniques would be universally implemented in the design and operation of the facility and facility design would comply with the 2020 Energy Conservation Code of New York State.
- Exterior lighting would be limited to only what is necessary to ensure a safe and secure indoor and outdoor work and living environment. This would help to eliminate unnecessary illumination where and when it is not needed, and address the potential for light trespass, visually disruptive glare, "skyglow" that can affect views of the night sky, impacts on nocturnal wildlife, and excessive energy use and GHG emissions where the power is generated.
- Proposed indoor, outdoor, and emergency lighting systems would consist of LED fixtures to reduce energy demands.
- Illumination levels and conservation strategies would be based on the NYS energy conservation code, electrical code, and recommendations of the Illuminating Engineers Society of North America.
- Energy conservation measures would be instituted to ensure lights are shut off when and where they are not needed.
- The lighting systems would be designed to include the following energy conservation strategies:

- Minimize energy consumption to the extent practicable to reduce potential environmental impacts;
- Use long-life fixtures requiring low maintenance;
- Provide instant relight or dimming capability in certain areas;
- Be controlled manually or automatically;
- Exterior fixtures would be equipped with motion sensors, photoelectric sensors, and automatic timers.

CONSTRUCTION RELATED ENERGY CONSERVATION

- Reduce impervious surfaces through the use of pervious pavement and green roofs on appropriate portions of the Project Site.
- Promote and facilitate the recycling of garbage and other solid wastes on the Site.
- Limit the area of disturbance and removal of existing trees and shrubs to the extent practicable at the Project Site and landscape the Project to help retain oxygen-producing and CO_2 absorbing vegetation, including the Project's 120 proposed trees.
- Limit prolonged construction vehicle and equipment idling time when possible. Keep large trucks on-site at the end of each day rather than returning them to contractor headquarters for overnight storage.
- Retain reusable soil on-site to the extent practicable to reduce off-site shipments and truck trips.

SEA LEVEL RISE AND FLOODING

As discussed in **Chapter 3J, Floodplains and Sea Level Rise**, the project elements most exposed to sea level rise and flooding are the public promenade and open spaces, the surface parking at the north end of the site, and the hotel.

The public promenade and surface parking should be designed to survive the wave action of the V zone. While the shoreline improvements may remove the V zone from these areas of the site, sea level rise over time will likely reduce the effectiveness of the rip rap and living shoreline. Materials used should not be easily lifted by wave action – pavers and paving stones should be avoided. Asphalt or concrete could be a viable surface, but the edges should include some curbing extending into the ground to avoid wave action undermining the asphalt surface.

Under the high projections, the hotel may hotel may become unusable during severe weather as early as the 2050s. As stated previously, the project includes significant shoreline improvements including riprap and living shoreline.

5. ALTERNATIVES

In accordance with SEQRA, numerous alternatives were considered for the Project. Alternatives were identified that represented reasonable and feasible land use, technology and other options to the Project that would achieve the Project Sponsor's objectives and remain within their capabilities and potentially reduce environmental impacts. The discussion and analysis of the alternatives should be conducted at a level of detail sufficient to allow for this informed comparison, to be conducted by the decision-making agencies. Alternative 2 is the "No Action" alternative, which is required by SEQRA and is intended to represent site conditions if the Proposed Action - including the proposed zoning and development - is not implemented and the Site is developed in accordance with the existing conditions. For the subject application, the following alternatives were specified in the Scope:

- Alternative 1: No Build (Discuss the scenario where the status of existing land use remains unchanged).
- Alternative 2: No Action (Discuss the scenario in which buildout were to occur under current zoning based upon the 2003 SEQRA analysis adopting the current Waterfront Planned Development District (WPDD).)
- Alternative 3: Alternative Plan Based on Identified Significant Environmental Impacts (As a result of the DEIS analysis, if a significant environmental impact is identified that cannot be mitigated without a change in the site plan, the revised site plan will be evaluated under this Alternative.)
- Alternative 4: All Proposed Buildings would be Built Above the Flood Base Elevation. (Discuss the scenario in which all buildings would be constructed above the Flood Base Elevation.)
- Alternative 5: No Hotel. (Discuss the scenario in which the hotel is not constructed.)
- Alternative 6: Reduced Footprint Alternative. (Discuss an alternative where the project sponsor is unable to purchase one or more of the project parcels that are not currently owned by the project sponsor or Village of Haverstraw.)

Table 5.1, Comparison of Project Alternatives on the next page provides a summary of each of the alternatives.

5.1. ALTERNATIVE 1: NO BUILD

DESCRIPTION OF ALTERNATIVE 1

This alternative anticipates that the status of the existing land use, including vacant waterfront property and residential properties, will remain unchanged. In other words, there would be no improvements done to the Site, including but not limited to land disturbance, grading, placement of buildings, vehicle/pedestrian improvements, landscaping, or shoreline improvements.

COMPARISON OF IMPACTS OF ALTERNATIVE 1 VERSUS THE PROJECT

Land Use, Zoning, and Public Policy

The No Build alternative would have no adverse impact in relation to the existing land use, zoning and public policy associated with the Project. Despite this, leaving the Project Site undeveloped will leave a prime location in the Village underutilized and will not achieve the goals of the Project Sponsor nor the 2021 Village's Comprehensive Plan. The Plan identified the Site as a "Strategic Site" for improvements to the

Table 5.1: Comparison of Project Alternatives

	Proposed Action	Alternative 1: No Build	Alternative 2: No Action	Alternative 3: Alternative Plan Based on Identified Significant Environmental Impacts	Alternaive 4A: All Proposed Buildings would be Built Above the Base Flood Elevation.	Alternative 4B: All Proposed Buildings would be Built Above Elevation 9'.	Alternative 5: No Hotel	Alternative 6: Reduced Footprint Alternative
Description	-	The status of existing land use remains unchanged.	If buildout were to occur under the current 2003 SEQR analysis adopting the current Waterfront Planned Development District (WPDD)	As a result of the DEIS analysis, if a significant environmental impact is identified that cannot be mitigated without a change in the site plan, the revised site plan will be evaluated under this Alternative.	All buildings would be constructed above the Flood Base Elevation.	All buildings would be constructed above elevation 9'.	If the Hotel is not constructed.	If the Project Sponsor is unable to purchase one or more of the project parcels that are not currently owned by the Project Sponsor or Village of Haverstraw.
# Residential Units	450 units	0	225 units	N/A	450 units	450 units	450 units	446 units
Hotel Keys	86	0	55	N/A	86	86	0	86
Retail/Community Space	13,000 sf	0	15,000 sf	N/A	13,000 sf	13,000 sf	13,000 sf	13,000 sf
Areas of Disturbance	412,624 sf	0	412,624 sf	N/A	412,624 sf	412,624 sf	412,624 sf	404,792 sf
Open Space	4.2 acres of new parkland	No alienation of 0.1 acres of Emeline Park	Development of waterfront promenade/trailway	N/A	4.2 acres of new parkland	4.2 acres of new parkland	4.2 acres of new parkland	4.2 acres of new parkland
Fill	-2,500 CY	0 CY	-2,500 CY	N/A	28,663 CY	-500 CY	-2,500 CY	-2,500 CY
Incremental Water and Sewer Usage	Water: 90,770 gpd Wastewater: 90,770 gpd	Water: 0 gpd Wastewater: 0 gpd	Water: 53,920 gpd Wastewater: 53,920 gpd	N/A	Water: 90,770 gpd Wastewater: 90,770 gpd	Water: 90,770 gpd Wastewater: 90,770 gpd	Water: 71,570 gpd Wastewater: 71,570 gpd	Water: 90,330 gpd Wastewater: 90,330 gpd
Residential Population	836	46	378	N/A	836	836	836	829
School-age Children (public)	59	10	19	N/A	59	59	59	56
Parking	589	0	432	N/A	589	589	591	605

Village's downtown and riverfront areas. This included the identification of preferred uses such as residential, hotel as well as public improvements such as an extension of the Henry Hudson Quadricentennial Park trail to Emeline Park, all of which are achieved through the Proposed Action.

Community Character and Visual

The character of the Site, including visual appearances, noise, and lighting would remain unchanged in this scenario.

Community Services

In this scenario, the Project Site's conditions would continue to warrant oversight on the part of police and fire protection personnel. The existing residential properties at the site would continue to require services for education, solid waste handling, and park/recreational facilities.

Utilities

There would be no impact to the utilities associated with the Project Site in the No Build alternative. The current water, sewage, and electricity associated with the residential portions of the Project Site would continue. The vacant portions of the Project Site do not currently use utilities.

Stormwater

In the No Build alternative, the vacant portion of the Site will remain without onsite water quality treatment taking place.

Geology- Soils and Topography

As there would be no additional land disturbance at the Project Site and there would be no adverse impact to the soil or topography of the Project Site.

Vegetation and Wildlife

As there would be no additional land disturbance at the Project Site, there would be no adverse impact to vegetation or wildlife of the Project Site. Invasive species would continue to inhabit the Project Site, and the improvements proposed by the Project Sponsor would not be implemented. Moreover, the native plant species that were proposed would not be used on the Project Site to provide more appropriate native habitats.

Wetlands Waterbodies and Watercourses

In terms of the overall hydrology associated with the Project Site, there would be no impact to any wetlands, waterbodies or watercourses on or around the Site. The proposed shoreline improvements, to help stabilize and grow the natural habitats on the shoreline of the Project Site would not be implemented nor allow for associated positive impacts at the site.

Floodplains and Sea Level Rise

Under a No Build alternative, there would be no impacts associated with floodplains. The location of the floodplains would remain the same at the Site. The Site would be negatively impacted by sea level rise, as it would become inundated by increased water levels, under the current predictions. The development of the Project Site is intended to allow the Site to continue to be used when flooded or when the sea level rises.

Archeological and Historical Resources

Since this alternative does not result in any additional land disturbance, the potential impacts due to the disruption of the sub-surface cultural resources or above group resources will be nonexistent. The ORPHP has reviewed the Project and determined it would have no adverse impact on historic and archeological resources. Therefore, if the Project were to not occur, there would still be no adverse impacts to these resources.

Traffic and Transportation

This alternative would generate no additional vehicle trips. Therefore, the existing LOS's at local intersections would remain as they currently exist, and no changes in the levels of usage on local roadways would occur. There would be no impacts to either the pedestrian environment or to public transit resources with this alternative.

Construction

As there would be no construction in this scenario, there would be no impacts associated with such activity.

5.2. ALTERNATIVE 2: NO ACTION

DESCRIPTION OF ALTERNATIVE 2

This alternative anticipates that the Proposed Action is not implemented. In other words, this alternative considers if buildout were to occur under the current Waterfront Planned Development Zoning District as analyzed in the 2003 SEQRA analysis. This analysis established a Project area of "five land use sub-areas designated as Sites A through E." Sites C through E essentially correspond to the Project Site. **Figure 5.1, Map 5A Proposed Waterfront Promenade from the 2005 Village of Haverstraw LWRP** on the following pages shows the location of these Sites.

Assumptions were made in order to complete the comparison below. These include assuming the Project Site would be developed according to maximum allowed buildout in addition to applying the same housing unit type ratio as the Proposed Project. A maximum buildout incorporates 10,000 50,000 sf of restaurant use with catering, 40,000 sf of inns for short-term lodging, 10,000 sf of water-dependent uses, and 15,000 sf of retail uses. In addition, the residential build out of 225 units of housing would include 34 studio/efficiency units, 109 one-bedroom, 72 two-bedrooms, and 10 three-bedroom units. The 432 parking spaces for this alternative are based on the following: 33 spaces for the restaurant; 17 spaces for the efficiency units, and 382 spaces for the 1-bedroom or larger units. This calculation does not include additional spaces needed in accordance with the employee count of the restaurant, nor any spaces for water-dependent retail, or inn

uses. The Project under Alternative 2 was also to incorporate the following, although some portions were completed through the development of Sites A and B:

- The development of a public Hudson River waterfront promenade/trailway which will facilitate recreational access to the existing public riverfront trail at Emeline Park in the Village and to existing trailways to Stony Point State Park and Hook Mountain State Park
- The development of permanent facilities for a public ferry service across the Hudson River to Ossining, New York for use by Rockland County commuters and area tourists; and
- The development of public community and recreational facilities which may include, but shall not be limited to, a new community swimming pool facility, new in-line skating facility and new recreational (ball) fields and associated facilities.

Map 5A Proposed Waterfront Promenade

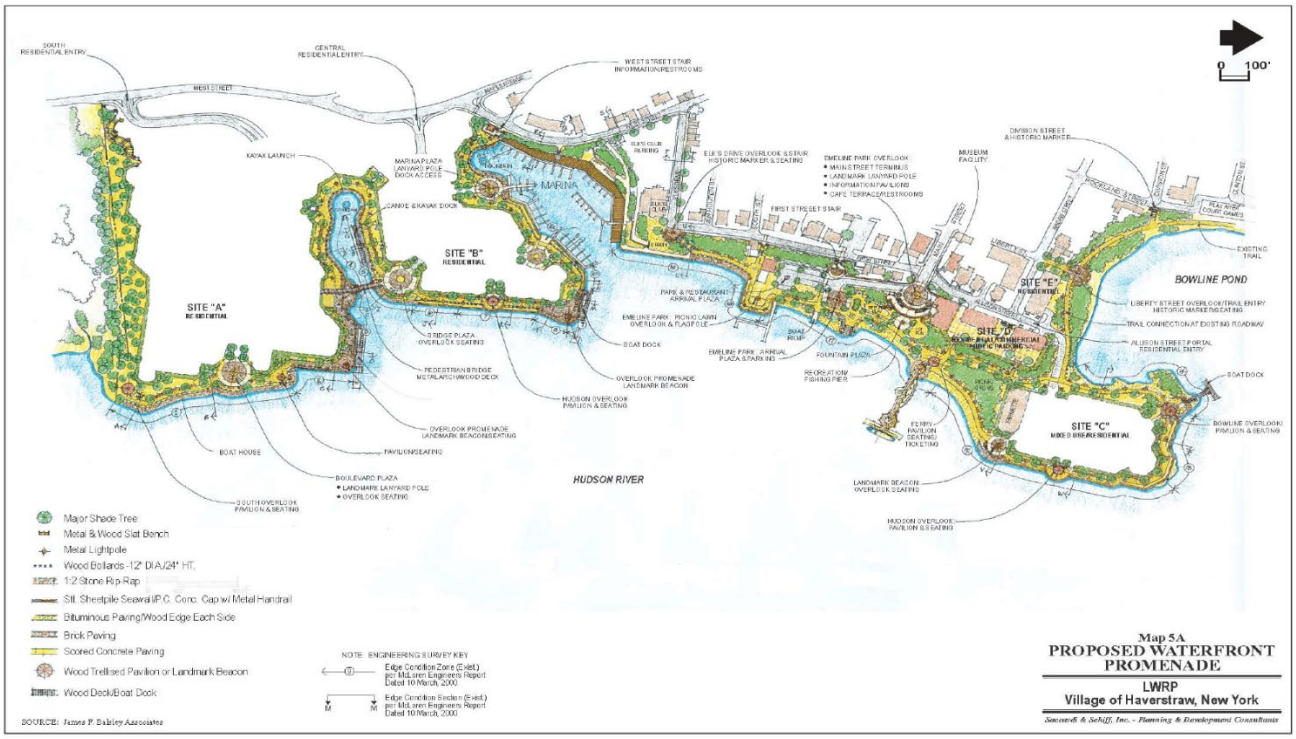


Figure 5.1: Map 5A Proposed Waterfront Promenade from the 2005 Village of Haverstraw LWRP.

COMPARISON OF IMPACTS OF ALTERNATIVE 2 VERSUS THE PROJECT

Land Use, Zoning, and Public Policy

The No Action alternative would have no adverse impact in relation to the existing land use, zoning and public policy associated with the Project, as the Project would be completed in accordance with the previously current zoning and associated regulations. Despite this, the property has not been developed and during the Village's 2021 Comprehensive Plan the Project Site was identified as needing additional zoning amendments to encourage the redevelopment of the Project Site.

Community Character and Visual

The character of the Site, including visual appearances, noise, and lighting would experience changes lesser than those associated with the Project. The maximum building height under this alternative was 60 feet, with a maximum of 43 feet for the first row of buildings located adjacent to the promenade. The Project has building heights around 70 feet, for Buildings 1, 2, and the hotel, 60 feet for Building 4, and 52 feet for Building 3. The Proposed Action will also include a greater residential density for the Project Site, which would be permitted under the proposed new zoning. The higher residential density of the Project, when compared to Alternative 2, allows for more financial benefits, such as taxes, to support the Village and other proposed uses on the Site. Moreover, the lower density associated with Alternative 2 would not offset the costs of the infrastructure needed to properly develop the Site. The current zoning also requires a minimum of 30 feet separate between buildings, but unlike the Project does not specifically position those separations to encourage and emphasize the scenic views of the Village.

Community Services

In this scenario, the proposed improvements to the Project Site would result in a similar increase in demand for police, fire, and emergency services. In terms of school children, there will be a smaller increase in the expected enrollment. The taxes collected from the proposed development would offset the additional cost of services and school-aged children.

Utilities

The impact on utilities, such as sewer and water, is less than the Project. Despite having fewer residential units, the alternative allows for a maximum buildout involving 10,000 sf of restaurant use with catering, 40,000 sf of inns for short-term lodging, 10,000 sf of water-dependent uses, and 15,000 sf of retail uses. The following table shows the general calculations for the increase in water and sewage usage to be associated with Alternative 2. Overall, there would be an increase of 53,920 GPD for water demand and 53,920 GPD for sewer demand. Given the lesser economic benefits to this alternative, a similar increase in sewer and water demand appears to be an extraneous impact.

Table 5.2: Alternative 2 – Sewer and Water Usage Calculation

Use		Units/Bedrooms		Hydraulic Loading	Average Daily Demand (Sewer and Water)
Residential	**Studio**	34 Units	34 Bdrms	110 GPD/bedroom	34,870 GPD
	One-bedroom	109 Units	109 Bdrms		
	Two-bedroom	72 Units	144 Bdrms		
	Three-bedroom	10 Units	30 Bdrms		
Restaurant[18]		300 seats		35 GPD/seat	10,500 GPD
Inn[19]		55 sleeping units		110 GPD/sleeping unit	6,050 GPD
Water-dependent		10,000 sf		0.1 GPD/sf	1,000 GDP
Retail		15,000		0.1 GPD/sf	1,500 GDP
				Total	**53,920 GPD**

Source: New York State Design Standards for Intermediate Sized Wastewater Treatment Systems, 2014.

Stormwater

Similar to the Project, the No Action alternative would require a SWPPP and would need to be constructed in accordance with all NYSDEC technical standards for erosion and sediment control. In addition, the Village's Stormwater Management Officer would be involved in the final review of the SWPPP. As a result, Alternative 2 would result in no impact to stormwater. The Project implements several stormwater management practices such as green roofs, porous pavement, and stormwater planters some of which may be considered in this alternative.

Geology- Soils and Topography

Impacts to geology would be similar to those associated with the Project. It is assumed the same volume of fill would be required to level the Project Site off and allow for proper development. Unavoidable impacts to steep slopes and associated with the overall disturbance of land would be the same.

Vegetation and Wildlife

As there would be the same disturbance of the entirety of the Project Site for Alternative 2, possible unavoidable impacts to vegetation and wildlife would be the same as the Project. The invasive vegetation

[18] Assuming 60% of the square footage is the dining area, bar, restroom and waiting area and fine dining necessitates approximately 20 square feet per guest/seat. Restaurant Table Capacity Calculator by Square Footage - OakStreetMFG

[19] Assuming 10% of the square footage is the lobby, hallways, "back of house", etc. and the units will average 650 square feet.

would for the most part be removed from the Project Site, allowing for the implementation of native, regionally appropriate species to be incorporated.

Wetlands Waterbodies and Watercourses

The impacts to wetlands, waterbodies, and watercourses would be similar to those identified with the Project. The proposed shoreline improvements, to help stabilize and grow the natural habitats on the shoreline of the Project Site would likely also be incorporated as part of this alternative.

Floodplains and Sea Level Rise

Due to the location of the Project Site in relation to the Hudson River, it is likely for there to be impacts to the Site due to flooding and sea level rise. The current zoning requires buildings to be set back from the shoreline a minimum of 45 feet (or 30 feet for 20% of the shoreline). When compared to the shoreline set back, around 15 feet from the shoreline to the Hotel footprint, of the Proposed Project, Alternative 2 does require the buildings to be further setback from the shoreline. Additionally, the existing zoning requires the following:

- The requirement that the finished floor elevation of habitable spaces must be two feet above the base flood elevation.
- Areas of structure subject to flooding must allow flood waters to travel through the site via open design or breakaway walls.
- Stricter requirements for construction in the V Zone:
    - No construction on fill.
    - Pile foundations required.
    - New structures must have the bottom of the lowest horizontal structure member supporting the lowest elevation floor elevated two feet above the base flood elevation.

In comparison with the Proposed Project, Alternative 2 would be more limited in terms of the location of the proposed buildings and would require significant additional site costs which may cause the project to be infeasible.

Archeological and Historical Resources

Given the disturbance to the Project Site would be the same for this alternative as for the Project, there would be no impacts to archeological and historical resources.

Traffic and Transportation

This alternative would generate additional vehicle trips, although fewer than the Project. There would be no negative impacts to the pedestrian environment, allowing for a new developed area for pedestrians to be able to enjoy the riverfront and explore the Village from downtown. Public transit resources will be impacted in a similar although less amount with this alternative. This alternative established site access similar to the Project through the incorporation of an extension of Liberty Street as well as an extension of Main Street. Through the development of the Project, it was determined that an extension from Main Street would not be practical, due to the extensive steep slopes associated with that portion of the Site. Therefore, the traffic and transportation associated with this alternative were determined to be unattainable.

Construction

The same short-term construction impacts associated with the Project would likely result from the improvements associated with Alternative 2.

5.3. ALTERNATIVE 3: ALTERNATIVE PLAN BASED ON IDENTIFIED SIGNIFICANT ENVIRONMENTAL IMPACTS

DESCRIPTION OF ALTERNATIVE 3

This alternative incorporates any changes to the Project needed as a result of the DEIS analysis. If a significant environmental impact was identified that could not be mitigated without a change in the site plan, the revised site plan will be evaluated under this Alternative. As shown throughout this DEIS, the Project will not result in an unmitigated significant environmental impact. As a result, any further analysis of this alternative is not necessary.

5.4. ALTERNATIVE 4: ALL PROPOSED BUILDINGS WOULD BE BUILT ABOVE THE BASE FLOOD ELEVATION

This alternative was identified as a result of the majority of the Project Site being located on waterfront property adjacent to the Hudson River.

DESCRIPTION OF ALTERNATIVE 4A

As described in **Chapter 3J, Floodplains and Sea Level Rise**, the Proposed Project incorporates parking structures at elevation 7' (NAVD88), with lowest habitable spaces at elevation 16' for the hotel and Building 4. Therefore, the Proposed Project already establishes all construction above the base flood elevation of the effective FEMA Flood Insurance Rate Maps (FIRMs). This alternative therefore assesses the comparative impacts of increasing the parking structure elevation above the Advisory Base Flood Elevation (elevation 11').

This alternative was developed in response to Alternative 4A, which was believed to be cost-prohibitive. This alternative would raise the parking structure elevation for all buildings to at least elevation 9'. This would involve the import of 28,663 cubic yards of fill as opposed to the 2,500 cubic yards of cut under the Proposed Project. This would also provide two feet of freeboard for all structures including non-habitable garages, which may result in better flood insurance rates. The Project Sponsor has indicated that the additional cost of filling and grading associated with this alternative may be feasible, given the improvement to project economics from lowering flood insurance rates.

COMPARISON OF IMPACTS OF ALTERNATIVES 4A/B VERSUS THE PROJECT

Land Use, Zoning, and Public Policy

As is the case with the Project, no negative impacts to land use, zoning or public policy would be associated with Alternatives 4A/B. The form-based zoning would be implemented in the same manner as is proposed and encouraged for future use throughout the Village in appropriate locations.

Community Character and Visual

The character of the Site, including visual appearances, noise, and lighting would experience changes similar to those associated with the Project. The buildings closest to the Hudson River would be increased four feet in height. This would increase the visibility of Building 4 from Jefferson and Bowline Park as well as other locations to the west. The overall layout of the Site would otherwise be very similar to the Project.

Community Services

In this scenario, the proposed improvements to the Project Site would result in the same increase in demand for police, fire, and emergency services. The increase in school-aged children would also be the same as the Project as the number and ratio of housing units is unaltered.

Utilities

The impact on utilities, such as sewer and water, is the same as the Project.

Stormwater

Similar to the Project, Alternatives 4A/B would require a SWPPP and would need to be constructed in accordance with all NYSDEC technical standards for erosion and sediment control. In addition, the Village's Stormwater Management Officer would be involved in the final review of the SWPPP. As a result, Alternatives 4A/B would result in no impact to stormwater. The Project implements several stormwater management practices such as green roofs, porous pavement, and stormwater planters, which would also be implemented as a part of this alternative.

Geology- Soils and Topography

Impacts to geology would be slightly greater than those associated with the Project. Under Alternative 4B, 500 yards of cut would be required.

Vegetation and Wildlife

As there would be the same area of disturbance for Alternatives 4A/B as the Proposed Project, possible unavoidable impacts to vegetation and wildlife would be the same as the Project. The invasive vegetation would for the most part be removed from the Project Site, allowing for the implementation of native, regionally appropriate species to be incorporated.

Wetlands Waterbodies and Watercourses

The impacts to wetlands, waterbodies, and watercourses would be the same as those identified with the Project. The proposed shoreline improvements, to help stabilize and grow the natural habitats on the shoreline of the Project Site would likely also be incorporated as part of this alternative.

Floodplains and Sea Level Rise

Alternative 4A would locate structured parking above elevation 11', effectively elevating it above estimated current 1% flood levels. This would hypothetically allow vehicles to remain parked during the 1% storm. Practically, the site operator and residents would not know if an impending severe storm was a 1% storm or 0.2% storm, and the vehicles would still require removal. Also, sea level rise would subject the parking structures to 1% flooding as early as year 2040.

Under Alternative 4B, the parking structures would be raised to elevation 9'. This would provide an additional two feet of freeboard between the structure parking areas and the current effective FIRMs, on which flood insurance rates are based. This could potentially result in lower flood insurance costs for the project. Since actual 1% flooding is already believed to occur to elevation 11', this would not result in any significant improvement over the Proposed Project.

Archeological and Historical Resources

The disturbance to the Project Site would be the same for this alternative as for the Project, and therefore would be no impact to archeological and historical resources.

Traffic and Transportation

Based on trip generation rates published by the ITE, this alternative would result in the same impacts as the Project**.**

Construction

The same short-term construction impacts associated with the Project would likely result from the improvements associated with Alternatives 4A/B. As previously stated, there would also be a greater use for fill which could result in greater construction impacts due to dust.

5.5. ALTERNATIVE 5: NO HOTEL

DESCRIPTION OF ALTERNATIVE 5

This alternative anticipates the Project Site is developed in a similar manner to the Project, with Building 1-4 built following the same layout as the Project. The only change to the Site Plan would be the replacement of the hotel with a parking lot. This change results in an additional two spots for the Project Site, as the 71 proposed with the hotel would become 73. Moreover, the spots would be public parking, as the valet service associated with the Hotel would not be needed. The layout related to this alternative can be found in **Appendix N, Alternatives**.

COMPARISON OF IMPACTS OF ALTERNATIVE 5 VERSUS THE PROJECT

Land Use, Zoning, and Public Policy

As is the case with the Project, no negative impacts to land use, zoning or public policy would be associated with Alternative 5. The form-based zoning would be implemented in the same manner as is proposed and encouraged for future use throughout the Village in appropriate locations.

Community Character and Visual

The character of the Site, including visual appearances, noise, and lighting would experience changes similar to those associated with the Project. The hotel, which is proposed to have waterfront views would instead be a parking lot. Putting a parking lot in place of the hotel will result in more of a negative impact on the visual appeal of the Site.

Community Services

In this scenario, the proposed improvements to the Project Site would result in a similar increase in demand for police, fire, and emergency services. The increase in school-aged children would also be the same as the Project as the number and ratio of housing units is unaltered. While the increases in community services will be very similar, the fiscal benefits, such as property and sales tax, will be less without the hotel. Moreover, the hotel does not add to the increase in school-aged children but does present added fiscal benefits to the Project. As a result, this alternative does not align with the goals of the Project Sponsor, nor will it offset the increased demand for community services to the same degree as the Project.

Utilities

The impact on utilities, such as sewer and water, are slightly less than the Project. The net decrease in demand for Alternative 5, when compared to the Project, is 19,200 GDP for both water and sewer.

Stormwater

Similar to the Project, Alternative 5 would require a SWPPP and would need to be constructed in accordance with all NYSDEC technical standards for erosion and sediment control. In addition, the Village's Stormwater Management Officer would be involved in the final review of the SWPPP. As a result, Alternative 5 would result in no impact to stormwater. The Project implements several methods of stormwater management measures such as green roofs, porous pavement, and stormwater planters which would also be implemented as a part of this alternative.

Geology- Soils and Topography

Impacts to geology would be similar to those associated with the Project. Alternative 5 would result in the same area of land disturbance and require the same amount of fill to help level the Project Site. Unavoidable impacts to steep slopes and associated with the overall disturbance of land would be the same.

Vegetation and Wildlife

As there would be the same area of disturbance for Alternative 5 as the Project, possible unavoidable impacts to vegetation and wildlife would be the same as the Project. The overly invasive vegetation would for the most part be removed from the Site, allowing for the implementation of native, regionally appropriate species to be incorporated.

Wetlands Waterbodies and Watercourses

In terms of the overall hydrology associated with the Project Site, the impacts to wetlands, waterbodies, and watercourses would be the same as those identified with the Project. The proposed shoreline improvements, to help stabilize and grow the natural habitats on the shoreline of the Project Site would also be incorporated as part of this alternative.

Floodplains and Sea Level Rise

Under Alternative 5, the impacts to the floodplains and sea level rise would be similar as the Project.

Archeological and Historical Resources

Given the disturbance to the Project Site would be the same for this alternative as for the Project, there would be no impacts to archeological and historical resources.

Traffic and Transportation

There would likely be slightly vehicle trips to and from the site without the hotel, when compared to the Proposed Project. Similar to the Project, this alternative would involve the installation of All-Way stop controls at the intersections identified in the Traffic Analysis study in **Appendix M, Traffic Impact Study.**

Construction

The same short-term construction impacts associated with the Project would likely result from the improvements associated with Alternative 5.

5.6. ALTERNATIVE 6: REDUCED FOOTPRINT ALTERNATIVE

DESCRIPTION OF ALTERNATIVE 6

This alternative anticipates the Project Site is developed but the Project Sponsor is unable to purchase one or more of the project parcels that are not currently owned by the Project Sponsor or Village of Haverstraw. More specifically, the analysis below is based on the property 8 Allison Avenue being removed from the Project and the existing dwelling remaining in place The number of residential units is reduced from 450 to 446, and the total parking is increased to 605 spaces, an increase of 16 spaces. The overall design of the Site is largely unchanged, with the exception of Building 2 no longer having frontage on Allison Avenue. As a result, Building 2 does not have a layout that emphasizes nor maximizes views of the Hudson River. The courtyard between Buildings 1 and 2 would be smaller, and the internal courtyard of Building 2 would also decrease in size. Building 2's unit count would increase from 128 units over 6 floors to 137 over 5 floors. This

increase would lead to the sixth floor of Building 1 needing to be removed to remain within the permitted maximum of 450 units for the Site. Otherwise, Buildings 1, 3, and 4 as well as the Hotel remain largely the same. The layout related to this alternative can be found in **Appendix N, Alternatives**.

COMPARISON OF IMPACTS OF ALTERNATIVE 5 VERSUS THE PROJECT

Land Use, Zoning, and Public Policy

As is the case with the Project, no negative impacts to land use, zoning or public policy would be associated with Alternative 6. The form-based zoning would be implemented in the same manner as is proposed and encouraged for future use throughout the Village in appropriate locations.

Community Character and Visual

The character of the Site, including visual appearances, noise, and lighting would experience changes less ideal than to those associated with the Project. Building 2 would not be laid out in a way to maximize views of the Hudson River. Moreover, the courtyard area between Buildings 1 and 2 would decrease in width. The sixth floor to Building 1 would be removed, but the layout of Buildings 1, 3, and 4 as well as the hotel would be unchanged. Overall, the changes to the plan would result in more of a negative impact on the community character and visuals of the Site.

Community Services

In this scenario, the proposed improvements to the Project Site would result in a very similar increase in demand for police, fire, and emergency services. The increase in school-aged children would also be similar to the Project as the number and ratio of housing units is only slightly altered.

Utilities

The impact on utilities, such as sewer and water, are slightly less than the Project, there would be a decrease in the number of dwelling units from 450 to 446. **Table 5.3, Alternative 6 - Sewer and Water Usage Calculation** shows the general calculations for the increase in water and sewage usage to be associated with Alternative 6. Overall there would be and increase of 90,330 GPD for water demand and 90,330 GPD for sewer demand, only 440 GPD less than the Project. The ratio of unit types from the Project was applied to this alternative.

Table 5.3: Alternative 6 – Sewer and Water Usage Calculation

Use		Units/Bedrooms		Hydraulic Loading	Average Daily Demand (Sewer and Water)
Residential	**Studio**	66 Units	66 Bdrms	110 GPD/bedroom	69,630 GPD
	One-bedroom	215 Units	215 Bdrms		
	Two-bedroom	143 Units	286 Bdrms		
	Three-bedroom	22 Units	66 Bdrms		
Retail/community Space		15,000 sf		0.1 GPD/sf	1,500 GPD
Hotel	**Sleeping Units**	10,000 sf		110 GPD/sleeping unit	13,200 GPD
	Banquet Hall	250 seat		20 GPD	**5,000 GPD**
	Lounge, Bar	100 seats		10 GPD	**1,000 GPD**
				Total	**90,330 GPD**

Source: New York State Design Standards for Intermediate Sized Wastewater Treatment Systems, 2014.

Stormwater

Similar to the Project, Alternative 6 would require a SWPPP and would need to be constructed in accordance with all NYSDEC technical standards for erosion and sediment control. In addition, the Village's Stormwater Management Officer would be involved in the final review of the SWPPP. As a result, Alternative 6 would result in no impact to stormwater. The Project implements several stormwater management practices such as green roofs, porous pavement, and stormwater planters which would also be implemented as a part of this alternative.

Geology- Soils and Topography

Impacts to geology would be similar to those associated with the Project. Alternative 6 would result in a slightly smaller area of land disturbance - 404,792 sf compared to the proposed the Project's 412,624 sf of disturbance. Alternative 6 would require the same amount of fill to help level the Project Site. However, an additional 1,000 CY of fill would need to be brought from offsite to allow for the leveling of the Site as proposed because the property that would be excluded as part of this alternative is a cut only portion of the Site, providing fill material for other areas of the Project Site. This results in an increase in the cost to level the Project Site. Unavoidable impacts to steep slopes and associated overall disturbance of land would essentially be the same as the Project.

Vegetation and Wildlife

Possible unavoidable impacts to vegetation and wildlife would be essentially the same as the Project. The invasive vegetation would for the most part be removed from the Site, allowing for the implementation of native, regionally appropriate species to be incorporated.

Wetlands Waterbodies and Watercourses

In terms of the overall hydrology associated with the Project Site, the impacts to wetlands, waterbodies, and watercourses would be the same as those identified with the Project. The proposed shoreline improvements, to help stabilize and grow the natural habitats on the shoreline of the Project Site would also be incorporated as part of this alternative.

Floodplains and Sea Level Rise

Under Alternative 6, the impacts to the floodplains and sea level rise would be similar as the Project.

Archeological and Historical Resources

Given the disturbance to the Project Site would be the slightly less for this alternative as for the Project, there would be no impacts to archeological and historical resources.

Traffic and Transportation

This alternative would not result in any unmitigated impacts to traffic and transportation. Similar to the Project, this alternative would involve the installation of All-Way stop controls at the intersections identified in the Traffic Analysis study in **Appendix M, Traffic Impact Study**. Additionally, the access to the Site would be through the same extension of Liberty Street. The housing units are very similar in count to the Proposed Project as well as the hotel and other improvements occupying essentially the same areas.

Construction

The same short-term construction impacts associated with the Project would likely result from the improvements associated with Alternative 6.

5.7. SUMMARY AND CONCLUSIONS

The above analysis of project alternatives provides a basis for comparing some of the characteristics, benefits, and potential impacts of alternative actions with those of the Proposed Action. Future conditions and potential impacts and benefits under Alternative 4, 5, 6, and the Proposed Project are similar in some respects but different in others. Alternative 4A would be cost prohibitive to the Project Sponsor. Alternative 4B would provide some cost savings to the Project Sponsor and would not otherwise have appreciable differences with the Proposed Project. Alternative 5 and 6, while not very different in overall impacts to the Proposed Action, would result in a decrease in economic benefits to the project and community due to the reduction in the overall development program. The main issue associated with No Action and Alternative 2, is that these actions are not in keeping with the goals or mission of the Village. The Proposed Action meets the mission and goals of the Village while minimizing the environmental impacts associated with the Project.

APPENDICES