

WEST BRIGHTON

BROWNFIELD OPPORTUNITY AREA

MARCH 2016



WBCLDC
WEST BRIGHTON COMMUNITY
LOCAL DEVELOPMENT CORPORATION



NYCPLANNING
DEPARTMENT OF CITY PLANNING CITY OF NEW YORK

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Table of Contents

EXECUTIVE SUMMARY.....	1
BACKGROUND.....	1
PUBLIC PARTICIPATION STRATEGY.....	3
BROWNFIELD ANALYSIS.....	7
STRATEGIC SITE SELECTION.....	7
RECOMMENDATIONS.....	7
1 PROJECT DESCRIPTION AND BOUNDARY.....	16
1.1 LEAD PROJECT SPONSORS.....	16
1.2 PROJECT OVERVIEW AND DESCRIPTION.....	16
1.3 BROWNFIELD OPPORTUNITY AREA BOUNDARY DESCRIPTION AND JUSTIFICATION.....	21
1.4 COMMUNITY VISION AND GOALS AND OBJECTIVES.....	24
2 PUBLIC PARTICIPATION PLAN AND TECHNIQUES TO ENLIST PARTNERS.....	26
2.1 PUBLIC PARTICIPATION PLAN.....	26
STEERING COMMITTEE.....	26
STAKEHOLDER OUTREACH AND MEETINGS.....	26
TRANSPORTATION WORKSHOPS.....	27
PUBLIC MEETINGS.....	29
INTERACTIVE COMMUNITY WORKSHOPS.....	30
INTERACTIVE COMMUNITY PORTAL.....	31
OUTREACH STRATEGIES.....	31
3 Analysis of the Brownfield Opportunity Area.....	32

INTRODUCTION.....	32
3.1 COMMUNITY AND REGIONAL SETTING.....	36
HISTORICAL SETTLEMENTS.....	36
DEMOGRAPHICS AND SOCIOECONOMICS.....	39
ECONOMIC AND EMPLOYMENT INDICATORS.....	43
HOUSING TRENDS.....	44
3.2 INVENTORY AND ANALYSIS.....	45
EXISTING LAND USE.....	45
LAND USE CONTROLS.....	50
LAND OWNERSHIP.....	56
TRANSPORTATION.....	57
PARKS AND OPEN SPACE.....	63
NATURAL RESOURCES AND ENVIRONMENTAL FEATURES.....	67
FLOOD RESILIENCY.....	72
BUILDING INVENTORY.....	73
HISTORIC OR ARCHAEOLOGICALLY SIGNIFICANT AREAS.....	76
INFRASTRUCTURE.....	77
ECONOMIC AND MARKET TRENDS ANALYSIS.....	84
3.3 BROWNFIELD, ABANDONED, AND VACANT SITES.....	87
3.4 STRATEGIC SITES.....	89
STRATEGIC SITE 1: 561, 565 RICHMOND TERRACE.....	97
STRATEGIC SITE 2: RICHMOND TERRACE (UNKNOWN ADDRESS).....	99
STRATEGIC SITE 3: 1149 RICHMOND TERRACE.....	103

STRATEGIC SITE 4: 1115 RICHMOND TERRACE.....	105
STRATEGIC SITE 5: 1125 RICHMOND TERRACE.....	106
STRATEGIC SITE 6: RICHMOND TERRACE (UNKNOWN ADDRESS).....	107
STRATEGIC SITE 7: 100 BROOK STREET.....	108
STRATEGIC SITE 8: 105 JERSEY STREET.....	110
STRATEGIC SITE 9: 33 VAN STREET.....	111
STRATEGIC SITE 10: 1641 RICHMOND TERRACE.....	112
4 RECOMMENDATIONS.....	113
4.1 SUPPORT AND CREATE NEIGHBORHOOD CENTERS.....	114
4.2 CREATE QUALITY JOBS AND WORKPLACES.....	120
4.3 IMPROVE ACCESS TO WATERFRONT, PARKS, AND OPEN SPACE.....	122
4.4 IMPROVE CONNECTIONS AND MOBILITY.....	125
4.5 ADDRESS ENVIRONMENTAL CHALLENGES.....	128
APPENDIX A: LIST OF FIGURES, IMAGES, MAPS, AND TABLES	134
APPENDIX B: LIST OF BROWNFIELD SITES.....	139
APPENDIX C: TRANSPORTATION WORKSHOP CONCEPTUAL DESIGNS.....	142

Executive Summary

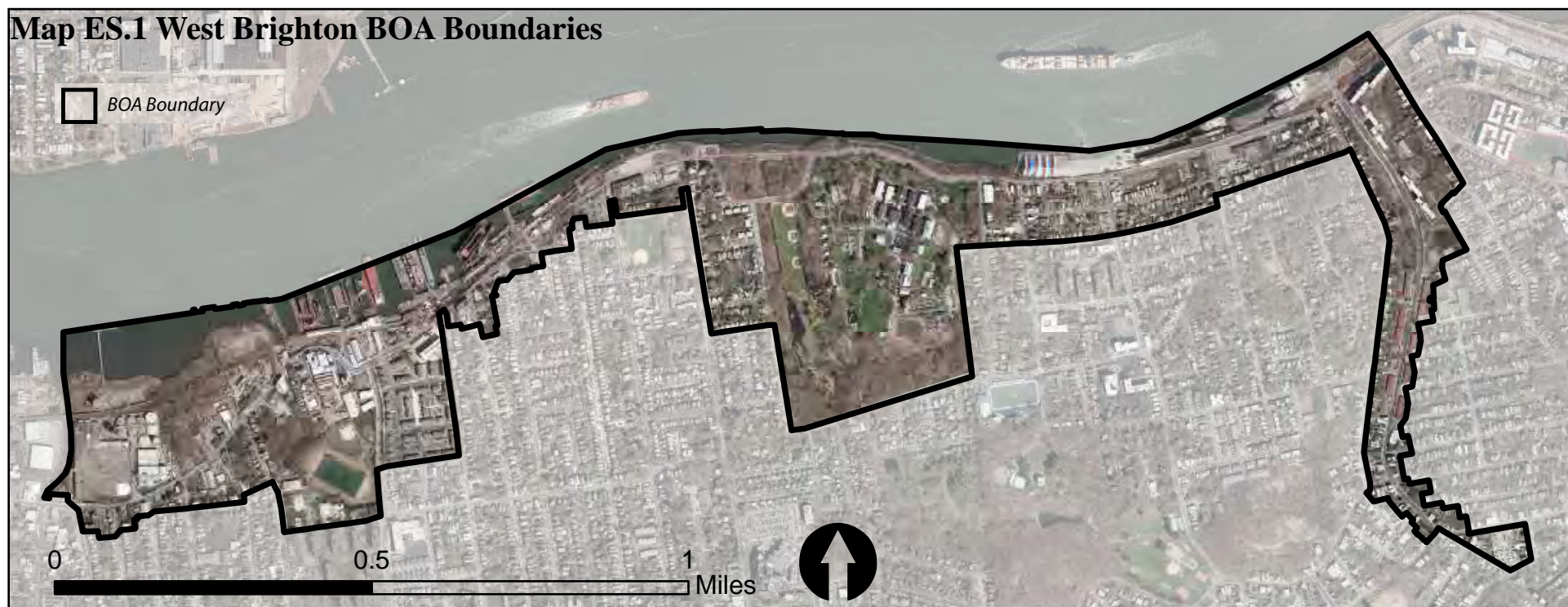
BACKGROUND

The West Brighton Brownfield Opportunity Area (BOA) encompasses North Shore neighborhoods whose identities were shaped by their relationship to the New York Harbor waterfront and its maritime history. During the 1800s and early 1900s, the West Brighton BOA two-mile wide waterfront attracted industrial uses that relied on waterways for their operations. The expansion of industry and transportation infrastructure on the North Shore brought residents to the area and created new neighborhood centers. Today, the historical development of this area presents both environmental and economic

challenges to the community. The BOA study represents the next step in a community-driven planning process to re-imagine West Brighton as a waterfront community where thriving and healthy communities coexist harmoniously with a truly 21st century maritime and industrial economy. The industrialization of the West Brighton BOA began in 1819 with the establishment of the New York Dyeing and Printing Establishment's cloth dyeing factory. Other industries also sought to capitalize on the North Shore's expansive waterfront by starting operations in Factoryville, which is now known as the West Brighton neighborhood. With the expansion of

industry in the area, the North Shore began to experience a construction of new infrastructure to support the new industries. By the 1880s, Baltimore and Ohio (B&O) Railroad Company's North Shore Railroad opened passenger and freight service for the growing industrial and residential development occurring throughout the North Shore at the time. The industrialization of the North Shore continued into the twentieth century with the establishment of Caddell Dry Dock and Repair in 1916 and U.S. Gypsum in 1926 and the growth of the shipbuilding industry during the World Wars. The post-war maritime decline and the advent of the automobile, however,

Map ES.1 West Brighton BOA Boundaries



Map ES.2 West Brighton BOA Subareas

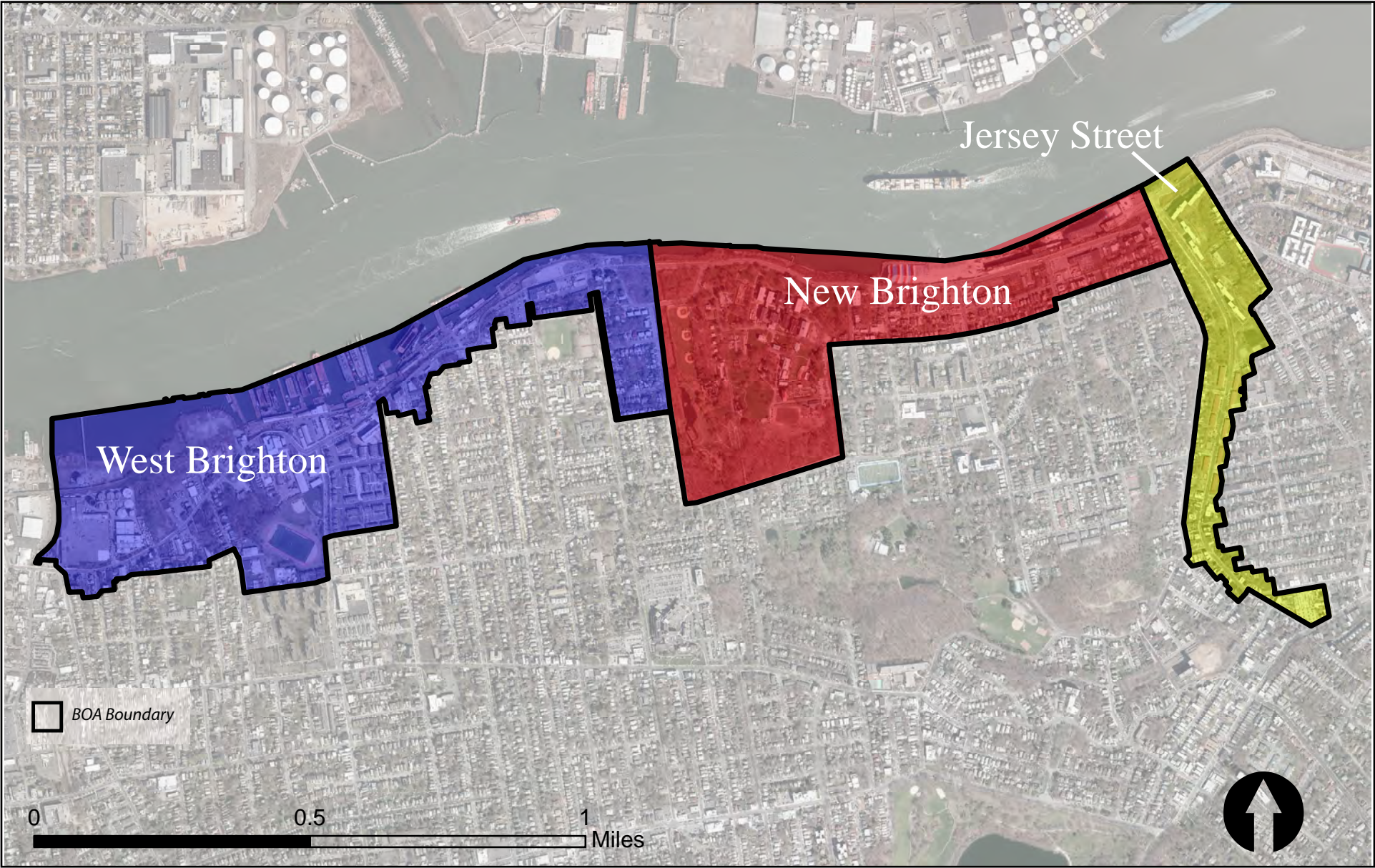




Image ES. 1 Snug Harbor Waterfront

significantly altered the fortunes of the communities in the West Brighton BOA. Wartime shipbuilding and associated operations ceased on the waterfront, causing a domino effect that would leave swaths of vacant land and numerous struggling maritime businesses. Additionally, competition with large, auto-oriented shopping centers resulted in the North Shore's decreased role as the commercial hub of Staten Island and a decline in public transit use. The last SIRT North Shore streetcar ran in 1953, and ferry service from Port Richmond to New Brunswick, New Jersey, and Manhattan ended in 1962. While most of the industry of this nature

has moved from the North Shore, the legacy of these activities remains in the built environment and the contamination left behind. Shipments of coal, gasoline, and other sources of fuel were delivered to the North Shore and stored locally for distribution, and remnants from this period could contribute to a brownfields designation. A brownfield is a vacant or underutilized property where contamination or perceived contamination has deterred investment and redevelopment. Such potentially contaminated area can have severe adverse effects on the surrounding communities.

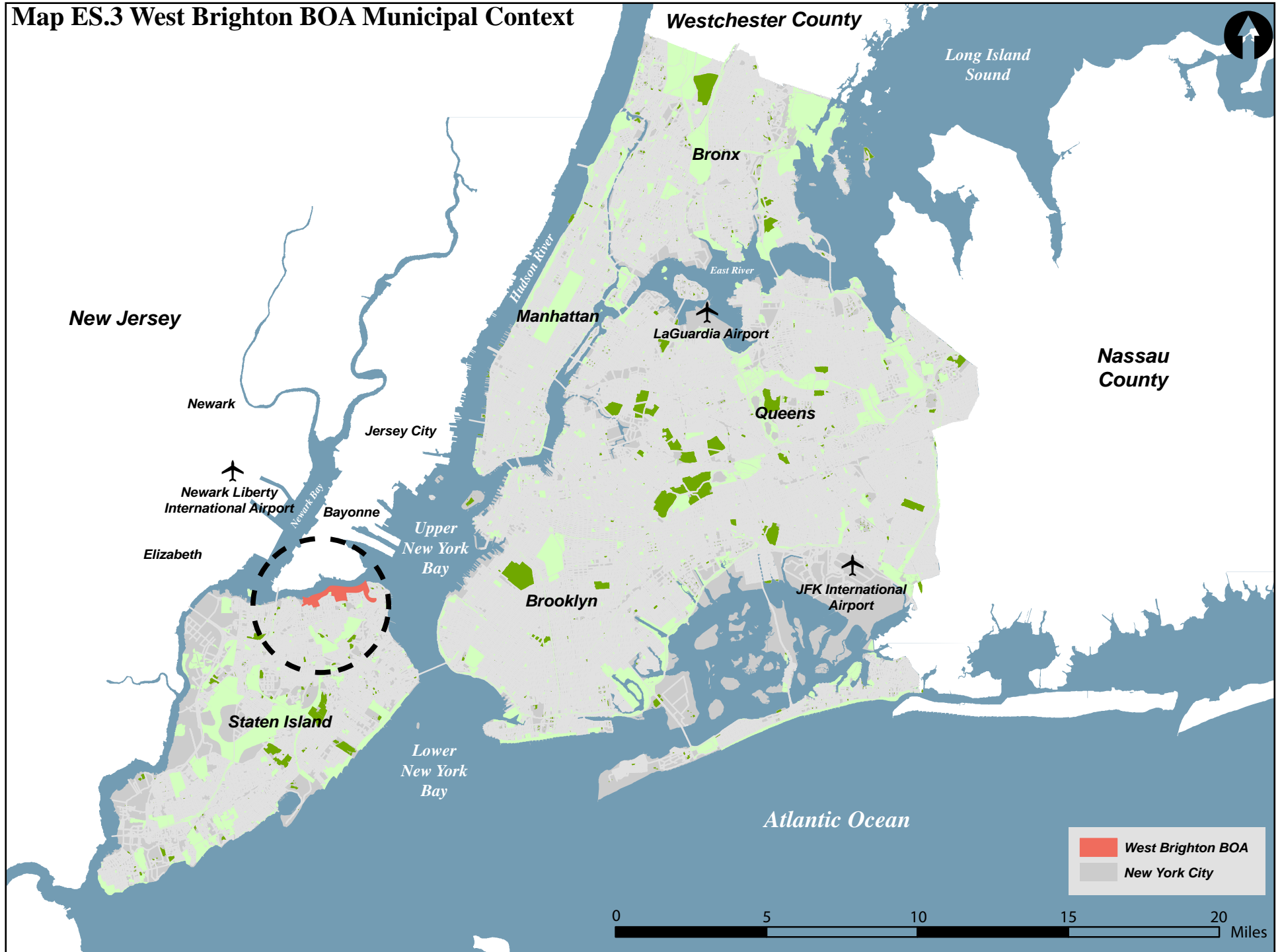
Through the Brownfield Opportunity Areas (BOA) Program, the New York State Department of State (DOS) provides financial and technical assistance to municipalities and community-based organizations to complete revitalization plans and implementation strategies for areas affected by the presence of brownfield sites, as well as site assessments for strategic sites.

Since initiating the West Brighton BOA project in 2012, the NYC Department of City Planning (DCP) and the West Brighton Community Local Development Corporation (WBCLDC) has worked with the community and stakeholders to craft a strategic plan for revitalizing areas affected by the presence of brownfield sites. The planning process included an extensive outreach strategy that brought residents, business owners, community leaders, and elected officials into the discussion about the area's future; conducting an existing and historical analysis of contaminated or potentially contaminated sites; identifying a set of strategic sites for redevelopment that could revitalize the surrounding community; and composing a set of recommendations for achieving the community vision for the BOA.

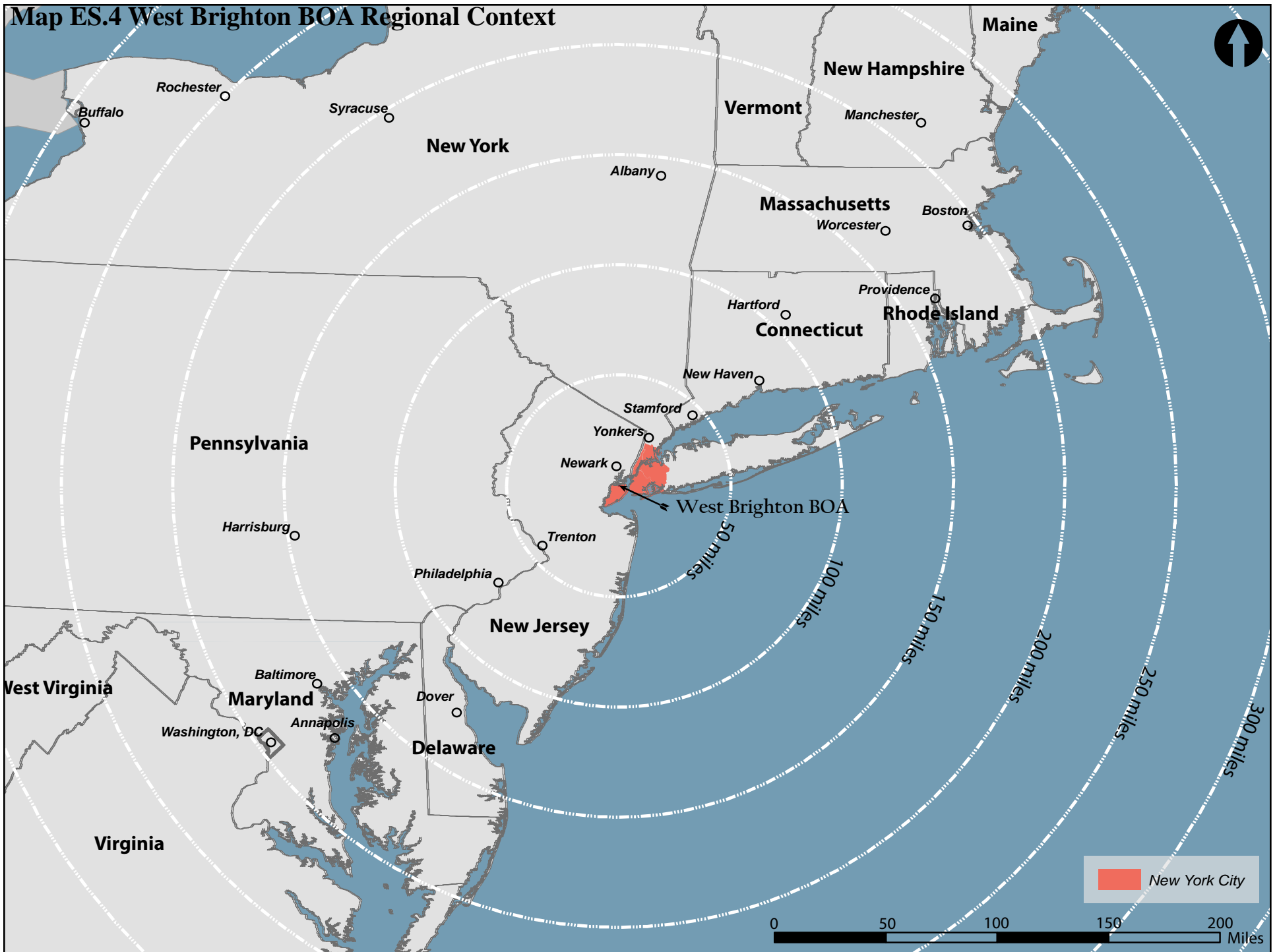
PUBLIC PARTICIPATION STRATEGY

In order to guarantee that the BOA planning process culminated in community-wide consensus, the DCP and WBCLDC developed an outreach strategy that brought residents, business owners, community leaders, and elected officials into the discussion about the area's future. Our

Map ES.3 West Brighton BOA Municipal Context



Map ES.4 West Brighton BOA Regional Context



multi-pronged public participation strategy consisted of:

Regular and targeted meetings with the BOA Steering Committee

The role of the BOA Steering Committee was to provide community input, review and comment on presentation materials prior to public meetings and to assist in public outreach in order to develop consensus regarding the final recommendations. WBCLDC hosted a series of Steering Committee meetings and individual discussions with members throughout the BOA planning process.

Stakeholder Outreach and Meetings

As part of the BOA planning process, the BOA team identified a wide range of stakeholders within the study area. The BOA team held ongoing meetings with these stakeholders to engage in discussions about critical planning issues within the BOA and build consensus on a vision for the future of West Brighton.

Transportation Workshops

In 2014, DCP hosted a series of workshops with a number of agencies and property owners to identify alternative scenarios that would provide a wider/straighter Richmond Terrace, pedestrian and bicycle connections, and protected BRT lanes/station areas that would also allow waterfront businesses to invest in job creation. Three workshops were held, with each focused on a major property along the waterfront through which the North Shore ROW is located.

Through these workshops, DCP was able to reach consensus with property owners and city agencies on a number of preferred alignment options for the BOA's future transportation infrastructure.

Public Meetings

A series of public meetings were held throughout the BOA planning process. The first public meeting, an Open House, was held in April 2013. The purpose of this meeting was to introduce the NYS BOA program to the public and to present a comprehensive analysis of existing conditions in the BOA. The second public meeting, a Visioning Workshop, was held in November 2014. The Visioning Workshop was intended to build consensus on a number of focused, preliminary planning and urban design recommendations.

Interactive Community Workshops

In addition to the Visioning Workshops, the BOA team led a series of small, pop-up interactive workshops at public gathering spaces over summer 2015, which allowed the team to bring planning directly to the community and include more West Brighton residents in the planning process. The workshop exercises were designed to gather specific insight to existing land use and infrastructure challenges of the West Brighton neighborhood and assist in building consensus for potential future rezoning efforts in West Brighton.

Conducting focused outreach for the three subareas within the BOA—West Brighton, New Brighton, and Jersey—Street provided the BOA team with insight to the local stakeholders' vision for their neighborhood.



Image ES. 2 Transportation Workshop



Image ES. 3 Public Meeting

Conducting focused outreach for the three subareas within the BOA—West Brighton, New Brighton, and Jersey—Street provided the BOA team with insight to the local stakeholders’ vision for their neighborhood. The vision for New Brighton is a mixed-use corridor (residential and commercial) that features mid-rise buildings and connects the destinations at St. George and Snug Harbor, while preserving the waterfront views of the upland residential neighborhood. The community envisions Jersey Street as a walkable and safe corridor that features a diverse set of local retail uses and expanded community facilities, such as health, education, recreational, and job training

centers. The community vision for West Brighton includes new commercial spaces along Richmond Terrace for franchises and small businesses. The new retail spaces would support the surrounding industrial businesses and an expanded open space network that features both active and passive uses and new commercial uses that help reconnect the neighborhood with the waterfront.

BROWNFIELD ANALYSIS

The West Brighton BOA report includes an analysis of existing and historical land uses in the study area. This analysis has

identified 41 sites within the study area as having potential environmental issues (Map ES.4). Twenty-four lots within the BOA area classified as a New York State Open Petroleum Spill Location, New York State Petroleum Bulk Storage Site, and/or a New York State Chemical Bulk Storage Sites, and fourteen lots within the study area present an historical use that could have potentially caused contamination on the site. Two lots in the study area have a New York City Environmental (E) designation (Appendix B). Properties with an NYC Environmental designation need to satisfy environmental requirements pertaining to potential hazardous materials contamination, high ambient noise levels, or air emission concerns.

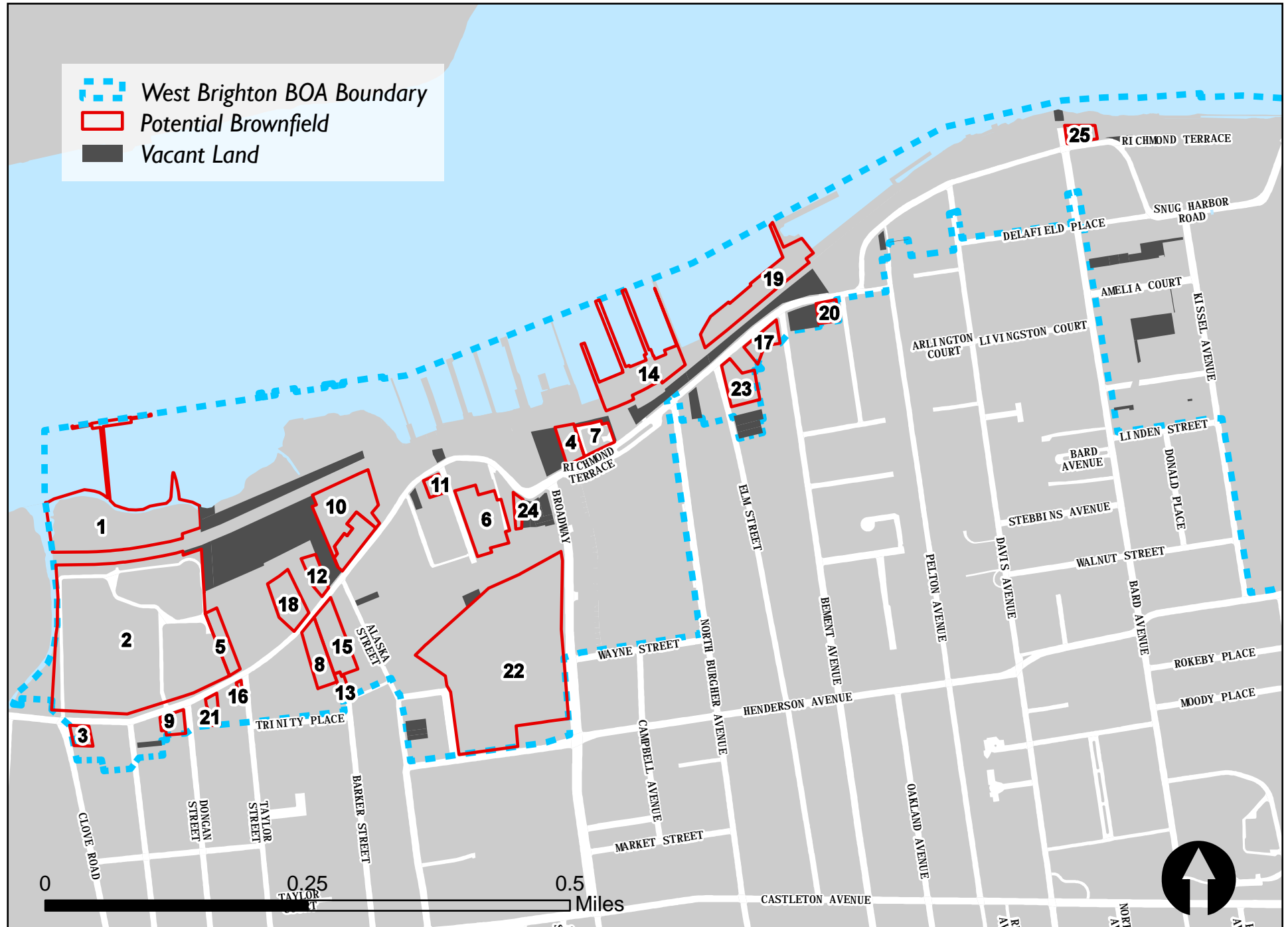
STRATEGIC SITE SELECTION

By using the selection criteria listed in the *New York State Department of State’s Guidance for Brownfield Opportunity Area Applicant*, the West Brighton BOA team identified 10 brownfield, underutilized, or vacant sites whose strategic redevelopment presents a unique opportunity to achieve the community’s vision and revitalization of the area (Map ES.5). The criteria used for the strategic sites include the following: size, location, community support, owner willingness, capacity for redevelopment, catalyst for the revitalization of the surrounding community, and potential to improve quality of life or public amenities.

RECOMMENDATIONS

As a result of the extensive public outreach and existing conditions analysis conducted

Map ES.5 Potential Brownfield Sites - West Brighton Subarea



[illegible]

in this report, the West Brighton BOA report proposes a series of recommendations for achieving the community's vision. These recommendations were developed in coordination with local property owners

and other city agencies. Each task item identifies the lead agency for implementing the recommendation and the supporting agencies for the completion of the task. The West Brighton BOA Recommendations

Action Agenda provides a summary of the recommendations listed in this report (Table ES-1).

Map ES.7 Strategic Sites

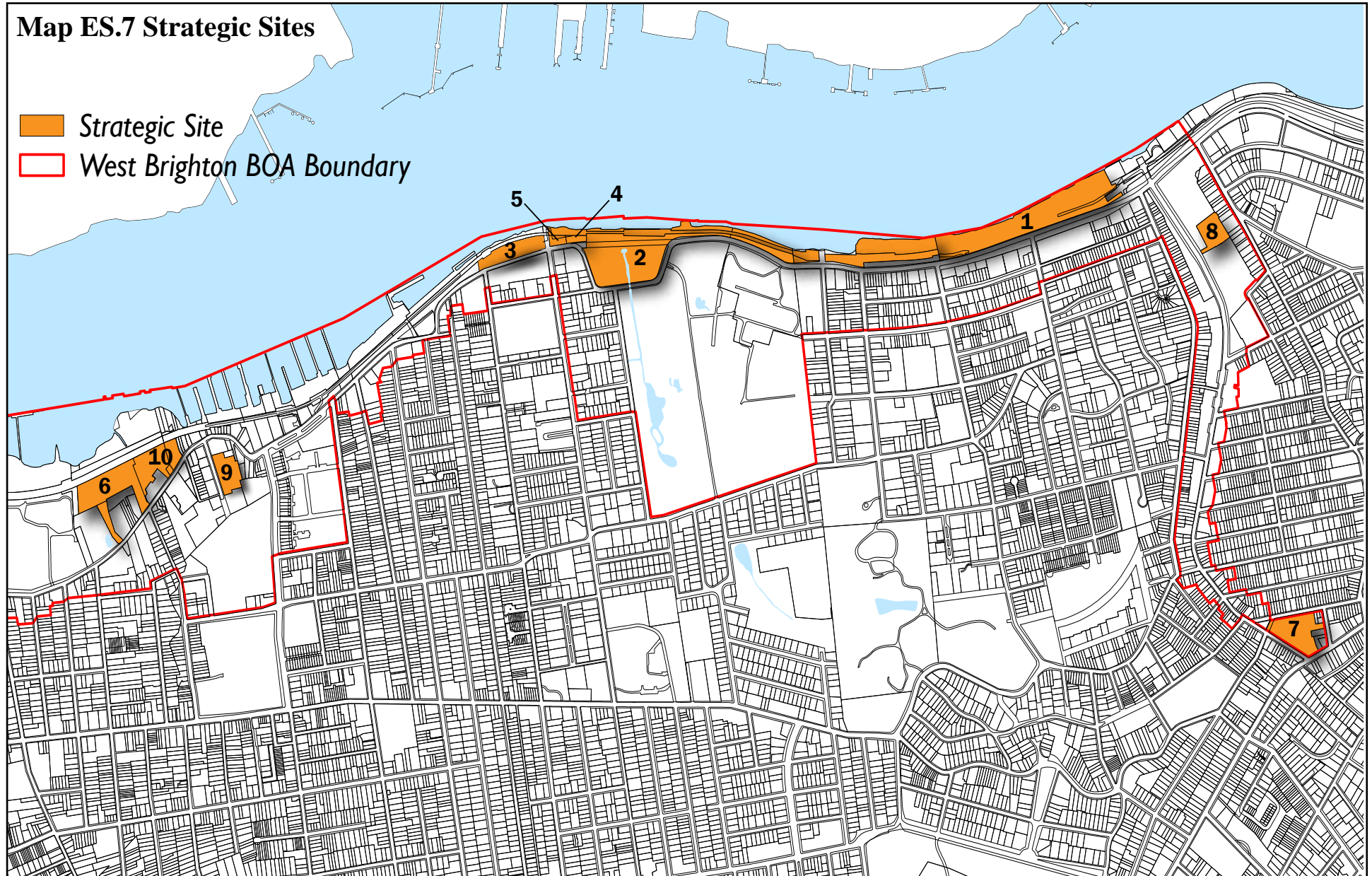


Table ES.1 West Brighton BOA Recommendations Action Agenda

West Brighton BOA Recommendations			
Support and Create Neighborhood Centers	1. Create a mixed-use corridor along Richmond Terrace in New Brighton		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Explore a zoning proposal to promote mixed-use development of medium- to high-density with market-rate and affordable housing along the south side of Richmond Terrace between Jersey St. and Snug Harbor	DCP	DOT, SCA, DEP, DPR
	Assist with conducting Environmental Site Assessments for strategic brownfield sites to advance remediation efforts and future redevelopment opportunities	OER	DCP, NYSDOS
	Investigate potential street improvements on Richmond Terrace between Jersey Street and Lafayette Avenue to improve access to and through the corridor	DOT	DCP, NYCEDC, DEP
	2. Relocate Segments of the former North Shore Railroad Right-of-Way to improve transit to North Shore Neighborhoods		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Explore land swap proposal with property owners to facilitate development, improve mobility, and provide safe access to area parks and open spaces	NYCEDC	MTA/NYCT, DOT, DCP, FTA, Property Owners
	Advance the environmental review and design process for the North Shore Bus Rapid Transit (BRT) proposal	MTA/NYCT	DOT, DCP, NYCEDC, FTA, DPR, Property Owners
	3. Support a mixed-use corridor on Jersey Street		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Advance relocation and construction of new site for DSNY Garage	DSNY	DPR, NYCEDC, DCP
	Advance redevelopment plans for DSNY Garage site that encourages a diversity of uses, including residential, commercial, and community facilities	NYCEDC	DCP, DSNY, DPR, HPD
	Explore zoning proposal with property owners, community stakeholders, and related city agencies for strategic development sites that support existing public and private affordable housing sites	DCP	NYCHA, NYCEDC
	Assist with conducting Environmental Site Assessments for strategic brownfield sites to advance remediation efforts and future redevelopment opportunities	OER	OER, NYSDOS
	Encourage redevelopment of existing private sites to provide additional housing, retail, and services by fully utilizing the existing zoning on Jersey Street	DCP	HPD, NYCHA, SBS, NYCEDC

	4. Encourage commercial uses along Richmond Terrace in West Brighton		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Explore zoning proposal to promote the expansion or creation of new commercial uses along Richmond Terrace	DCP	DOT, DEP, SBS, NYCEDC
	Encourage use of FRESH zoning incentives to attract fresh food stores to underserved areas	DCP	
Create Quality Jobs and Workplaces	1. Support maritime industry		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Encourage the expansion of commercial uses to support maritime jobs and businesses	DCP	NYCEDC
	Advance strategies of DCP's <i>Resilient Industry</i> study to reduce flood hazards for businesses, identify emergency preparedness guidelines, and identify regulatory and financial tools that encourage shoreline improvements and flood mitigation measures	DCP	NYCEDC
	Explore a potential expansion of available mooring space for maritime businesses at off-shore areas of city-owned properties	SBS	DCAS, DPR
	Explore creation of a maritime training facility	NYCEDC	DCP, DOE
	2. Relocate the former North Shore Railroad ROW to support job creation		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Explore land swap proposal with property owners to remove RR ROW from maritime property to allow for business expansion and job creation	NYCEDC	MTA/NYCT, DOT, DCP, FTA, Maritime Property Owners
	Evaluate transit improvement alternatives, including the proposed MTA Bus Rapid Transit Plan, expanded bus service and others	MTA/NYCT	DOT, DCP, NYCEDC, FTA, DPR, and Maritime Property Owners
	3. Expand commercial uses near the MTA-proposed BRT station in West Brighton		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Dependent upon MTA's advancing of their BRT proposal, explore zoning proposal with property owners, local stakeholders, and related city agencies to expand commercial opportunities near a proposed BRT station	DCP	MTA/NYCT, DOT, NYCEDC, SIEDC, WBCLDC

Improve access to waterfront, parks, and open space	1. Create publicly accessible waterfront parks and destinations		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Improve public waterfront access at Snug Harbor waterfront	DPR	DCP, DCA, DOT, MTA/NYCT
	Ensure future North Shore Greenway development provides access to Snug Harbor and Heritage Park	DOT	DPR, MTA/NYCT, DCP
	Explore potential bicycle and pedestrian connections from upland neighborhoods to Heritage Park, including dedicated crosswalks on Richmond Terrace	DOT	DCP, DPR
	Investigate options for expanding Heritage Park using publically-owned land	DPR	DCP, DOT, MTA/NYCT
	Coordinate the potential reconstruction Snug Harbor ferry dock to generate revenue for and increase access to Snug Harbor and surrounding sites in the BOA	NYCEDC	Snug Harbor, DOT, DCA, NYCEDC, SBS
	Investigate options for closure of Bard Avenue street end to provide public open space under DOT plaza program	DOT	DCP, MTA/NYCT
	2. Advance planning for a North Shore Greenway		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Explore appropriate alignment for proposed Greenway to facilitate land swaps with property owners affected by present location of North Shore RR ROW	DOT	NYCEDC, MTA/NYCT, DPR, DCP, FTA, Maritime Property Owners
	Ensure planned Bank Street bicycle and pedestrian path (North Shore Greenway Phase 1) provides connection to Richmond Terrace and points beyond	DOT	DOT, DPR, DCP, NYCEDC, Property Owners
	Explore potential street improvements, including bicycle and pedestrian infrastructure, on Richmond Terrace from Jersey Street to Lafayette Avenue to accommodate traffic connections and future rezonings	DOT	MTA/NYCT, DCP
	Explore pedestrian and bicycle improvements along the Snug Harbor waterfront as part of the North Shore Greenway proposal	DOT	MTA/NYCT, DPR, Snug Harbor
	Identify appropriate location for the proposed North Shore Greenway from Snug Harbor to Heritage Park	DOT	MTA/NYCT, NYCEDC, DCP, DPR
	3. Promote and protect working waterfront views and maritime overlooks		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Explore zoning tools that permit transparent fencing at appropriate locations while maintaining secure facilities to ensure community awareness of industrial activities in their neighborhood	DCP	NYCEDC, Maritime businesses
	At street ends, coordinate with maritime businesses to encourage the installation transparent fencing to allow views of maritime activity and maintain on-site security	DCP	NYCEDC, Maritime businesses
	Explore public/private partnerships to maintain city-owned and vacant waterfront properties and to preserve waterfront view corridors	NYCEDC	DPR, MTA/NYCT, DCAS, DOT

Improve Connections and Mobility	1. Support the implementation of the MTA North Shore Bus Rapid Transit Proposal		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Explore potential land swap proposals with property owners to create a transitway running contiguous to Richmond Terrace	NYCEDC	MTA/NYCT, DOT, DCP, FTA, DPR, Property Owners
	Advance environmental review and engineering study for proposed Bus Rapid Transit system	MTA/NYCT	DOT, NYCEDC, DPR, DCP
	Identify appropriate BRT station locations	MTA/NYCT	DOT, NYCEDC, DPR, DCP
	2. Coordinate MTA North Shore BRT planning with transportation and streetscape improvements on the North Shore		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Implement recommendations of North Shore Transportation Improvement Strategy	DOT	MTA/NYCT, NYCEDC, DCP
	Explore land swap proposals to allow straightening of hazardous curves on Richmond Terrace at Bement Avenue and Broadway intersections	DOT	NYCEDC, DCAS, Property Owners
	Explore potential designs for the construction of street improvements on city-owned portion of Richmond Terrace between Jersey Street and Lafayette Avenue to improve traffic flow and safety	DOT	MTA/NYCT, DCP
	Investigate the potential of implementing the proposed North Shore Greenway - Pedestrian and Bicycle amenities on Richmond Terrace from Jersey Street to Snug Harbor	DOT	MTA/NYCT, DPR, Snug Harbor
	Investigate the potential of implementing the proposed North Shore Greenway - Pedestrian and Bicycle path along Snug Harbor waterfront	DOT	MTA/NYCT, NYCEDC, DCP, DPR, Snug Harbor
	3. Improve safety for pedestrians, bicyclists and drivers		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Explore locations for additional signalized intersections on Richmond Terrace to promote safe driving speeds and pedestrian safety	DOT	MTA/NYCT
	Implement sidewalk improvements along Richmond Terrace to create safe pedestrian routes that would also support existing businesses and future redevelopment	DOT	MTA/NYCT, NYCEDC
	Explore wayfinding options for improved visibility of area destinations, including Snug Harbor and Heritage Park	DOT	Snug Harbor, DPR, NYCEDC
	Provide bicycle lanes from upland neighborhoods to Richmond Terrace and waterfront destinations and open spaces	DOT	DPR
	Limit curb cuts on Richmond Terrace at new development sites in New Brighton to limit traffic congestion and conflicts between pedestrian, bicyclists and drivers	DOT	DCP

Address Environmental Challenges	1. Improve climate resilience in flood-prone areas		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Advance DCP's <i>Resilient Industries</i> strategies for reducing flood risks to industrial uses	DCP	ORR, OEM
	Advance the expansion of the Bluebelt to Snug Harbor to reduce flooding concerns	DEP	DPR, Snug Harbor
	2. Clean up brownfield sites		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Identify contamination issues on brownfield and strategic sites by working with property owners and matching them to funding sources for Environmental Site Assessments to determine if cleanup is necessary	OER	NYCEDC, ORR
	Explore a zoning proposal to promote redevelopment and the construction of new mixed-use resilient buildings on strategic brownfields in New Brighton	DCP	OER, ORR, NYCEDC
	Explore zoning and redevelopment proposals for Jersey Street	DCP	NYCHA, NYCEDC, HPD, OER
	Advance relocation of DSNY Garage at Jersey Street	DSNY	NYCEDC, OER

1 | Project Description and Boundary



Image 1.1 Caddell Dry Dock and Repair

1.1 LEAD PROJECT SPONSORS

The New York State Department of State (DOS) develops and maintains the statewide Brown-field Opportunities Area (BOA) Program in order to help communities affected by the presence of contaminated sites, or the perception thereof, to develop consensus-driven revitalization strategies. The West Brighton Community Local Development Corporation (WBCLDC), representing the eastern half of Staten Island's North Shore, initiated the BOA work program in 2005. Following the successful completion of a Phase 1 BOA Pre-Nomination Report in 2009, WBCLDC secured funding from the DOS to begin work on a Phase 2 Nomination Report in 2011. In 2012, WBCLDC selected and contracted with the New York City Department of City Planning (DCP) to be the lead consul-



tant in community outreach and to complete all phases of the Nomination Report.

1.2 PROJECT OVERVIEW AND DESCRIPTION

The West Brighton BOA encompasses North Shore neighborhoods whose identities were shaped by their relationship to the New York Harbor waterfront and its maritime history. From its early days as a fishing site for local Native American tribes, to the Victorian-era when it welcomed ferries carrying wealthy Manhattanites seeking respite from the summer heat, to finally, its development into a major maritime and industrial center, the waterfront has shaped the local economy and quality of life. However, the departure of maritime uses and the challenge of maintaining waterfront infrastructure have left the community with limited public access to the waterfront and uninviting public areas. In addition, environmental concerns and a changing economic landscape threaten the livelihood of those who live, work and play in West Brighton, and a new community vision for the area is needed. The BOA study represents the next step in a community-driven planning process to re-imagine West Brighton as a waterfront community where thriving and healthy communities coexist harmoniously with a truly 21st century maritime and industrial economy.

The West Brighton BOA encompasses only a two-mile portion of Staten Island's five-mile North Shore waterfront. The North Shore,

stretching from St. George in the east to Howland Hook in the west, and extending inland one mile, is defined by its waterfront. At its eastern edge, the North Shore is bounded by the Narrows, a tidal strait that connects the Upper and Lower New York Bays and separates Staten Island from the borough of Brooklyn. The Narrows form the entry point to the ports of New York and New Jersey and has guaranteed the North Shore a prominent place in the region's strong maritime industry. The bulk of that maritime industry is located along the Kill Van Kull, a tidal strait that connects the Narrows with the vast port infrastructure of Staten Island's West Shore and New Jersey, the largest on the American East Coast. The entire West Brighton BOA waterfront is located on the Kill Van Kull, making this heavily trafficked water-

way the area's defining physiological, maritime and industrial characteristic. To the west of the BOA study area are the North Shore communities of Port Richmond, Arlington and Mariner's Harbor, which are the subject of a separate DOS BOA Study. Both BOA study areas are being coordinated to ensure that common goals can be obtained through consistent recommendations. To the south, the study area sweeps upland toward a long ridgeline that stretches from St. George inland to Todt Hill, the highest point in New York City.

The geographical profile of the BOA study area – sloping upland communities and an extensive shoreline – has made it an important location throughout the history of the region and New York City. Artifacts found on Staten Island sug-

gest that Pre-European communities occupied the North Shore since 10,000 BC and relied heavily upon the abundant wildlife and seafood, particularly shellfish found along the Kill Van Kull shoreline. European explorers and settlers took advantage of the North Shore's water resources by establishing trade outposts in what is now Tompkinsville, one mile southeast of the BOA study area. As European settlement of Staten Island and the surrounding region expanded, farmsteads were attracted to the North Shore by the area's good soil as well as opportunities for regional trade that the Kill Van Kull afforded. This early maritime industry – the transporting of farm goods to the surrounding region – remained through the eighteenth century. However, as New York City grew to be a major economic center in early America, the North Shore, with its sweeping waterfront vistas and proximity to Manhattan, became a desired location for country homes of the city's wealthy classes. In the first two decades of the nineteenth century, a number of large summer homes were built directly on the Kill Van Kull shoreline. Sailors' Snug Harbor, a home for retired sailors that would eventually become the wealthiest charitable organization in the United States, was built one mile west of St. George.

With the advent of the industrial revolution in the United States, however, the North Shore began its transformation into a major industrial and maritime center. The extent of industrial development in the nineteenth century was so robust that West Brighton became known as "Factoryville." Both manufacturing and maritime businesses came to dominate the North Shore waterfront. Along with the prosperity of industrial operations on the North Shore came a railroad, ferry terminals, and other urban



Image 1.2 Industrial East and North Shore, 1930 (From the Collection of the Staten Island Museum)



Image 1.3 US Gypsum, Site of current Atlantic Salt (From the Collection of the Staten Island Museum)

infrastructure to support it. The North Shore Railroad, opened in 1890, carried freight and passengers to and from the area and provided connections to ferry terminals and to rail stations out to Cranford, New Jersey, where connections could be made to the rest of the country. A robust network of ferry terminals dotted the North Shore waterfront, connecting the area's residents with the larger metropolitan region and transforming West Brighton into a thriving community at the heart of the maritime waterfront. Jersey Street and Richmond Terrace also became the desired locations for businesses and retail serving both local neighborhood needs and waterfront workers.

West Brighton, however, was unable to sustain its growth from a trade outpost into an industrial center and experienced a precipitous decline in industries and jobs along the waterfront. The

end of World War II brought the closure of a number of ship building and repair operations along the North Shore that were put to use in service of the American war effort. The largest among these was Bethlehem Steel, which employed hundreds of North Shore residents. Subsequent to the post-war closures, a decades-long contraction of the maritime and industrial economy continued to impact the social and infrastructural fabric of West Brighton. The North Shore Railroad, which had ushered North Shore residents to and from work on the waterfront, ceased passenger service in 1953. U.S. Gypsum, once the largest employer on Staten Island and the anchor of the New Brighton industrial waterfront, closed in 1976. Seven years later, all freight service on the North Shore Railroad was ended.

Compounding the post-war decline in the BOA

study area was the advent of the automobile and the resulting highway infrastructure to support it and the new forms of retail development requiring large tracts of land to accommodate parking lots for this new form of transportation. The construction of the Staten Island Expressway and the Verrazano Bridge in 1964, connecting Brooklyn to Staten Island, effectively shifted the epicenter of Staten Island southward. The ability to deliver goods to inland destinations increased cross-island truck traffic and obviated much of the maritime traffic on the Kill Van Kull. To this day, many of the North Shore's waterfront industrial operations elect to transport their goods by truck rather than boat. Similarly, the automobile increased the accessibility of Staten Island's South Shore neighborhoods, which experienced a growth of affordable, suburban housing after the opening of the Verrazano Bridge. This suburban housing attracted new residents from other boroughs along with residents of Staten Island's North Shore. Targeting these new residents, the Staten Island Mall, which opened in 1973, provided both a large, indoor retail experience with a wide range of large retailers and ample large parking lots which drew many customers away from the North Shore's historic retail streets and the many small, independent retailers.

The loss of several major maritime businesses along the North Shore and the increasing role of the automobile in the local and nationwide economy had a direct effect on the worsening conditions of the North Shore's infrastructure and transportation network. Many of the former sites of the maritime companies that left the North Shore became vacant lots or attracted businesses that did not rely on waterborne transportation. Without a need for maritime infrastructure, these businesses neglected the

North Shore's bulkheads, which have degraded and eroded and today require reconstruction. These non-water dependent uses also serve as a barrier for major maritime support businesses looking to expand.

The incredible shift in the economic fortunes of the North Shore and the associated impacts on the social and physical fabric of its communities presents a challenging set of opportunities for a community-led urban regeneration. The wealth of the study area is in its large number of underutilized parcels, including those that are vacant, abandoned or underbuilt, as well as its proximity to the Kill Van Kull waterfront and the public and private investments being made in nearby St. George. The West Brighton BOA study area covers 370 acres, including roadways. Excluding roadways, the 823 tax lots in the study area comprise 293 acres, large portions of which are brownfields, abandoned, vacant or otherwise underutilized properties.

According to DCP's extensive land use and geographic dataset, nearly half of the 823 tax lots, 383 in total, in the West Brighton BOA meet the criteria to be classified as soft sites, which are defined as partially developed lots with less than 50% of the allowable floor area ratio (FAR) constructed. Of these soft sites, 122 are completely vacant. In addition, the study area's long industrial past has left a large number of potential brownfield sites.

While detailed information on contaminated sites is currently lacking, at least one site, the former U.S. Gypsum site at the eastern end of the BOA, has been referred by the U.S. Environmental Protection Agency for an investigation into asbestos-contaminated vermiculite on the site. U.S. Gypsum closed its New Brighton

location in 1976, at which time the site was subdivided and occupied by a number of firms. All of the former U.S. Gypsum sites are included among the BOA's strategic sites list. In addition to the U.S. Gypsum site, a number of sites throughout the BOA, both on the waterfront and upland, are suspected of being potentially contaminated due to the area's maritime and industrial history.

One site, the new Department of Parks and Recreation (DPR) Heritage Park at the site of the former Blissenbach Marina, provides useful clues as to the potential for contamination in the broader study area. In 2004, the Port Authority of New York and New Jersey purchased the Blissenbach Marina and subsequently transferred the property to DPR. Investigations of

the site revealed that contaminated fill placed on the site during the 1960s and 1970s created unsafe levels of hydrocarbons, PCBs, and leaded fragments of paint chips at the boat yard. In order to meet strict regulations for public use, the site underwent an extensive remediation effort. As part of its Hudson-Raritan Estuary Resources Program, the Port Authority of New York and New Jersey authorized approximately \$6.5 million to acquire the land and fund the remediation and development of the site. According to JM Sarge, Inc., an environmental consulting services firm that assisted the Trust for Public Land and DPR with the remediation of Heritage Park, the contamination of Heritage Park has been capped with several feet of clean soil, and the site is now open to the public. While prior contamination at Heritage Park does not nec-



Image 1.4 Unused and dilapidated building on Atlantic Salt site

essarily indicate contamination in other BOA sites, it is reasonable to cautiously infer that many former and active industrial sites along the waterfront may also exhibit harmful levels of pollutants.

Additionally, the entire North Shore of Staten Island has been identified as an Environmental Justice Showcase Community by the United States Environmental Protection Agency (EPA). The EPA designates Showcase Communities based on the presence of “multiple, disproportionate environmental health burdens; population vulnerability; limits to effective participation in decisions with environmental and health consequences; and opportunities for multiple federal, state and local agency collaboration, with a focus on green development.”

The primary reason for this EPA designation has been a documented increase in the number of children with elevated lead levels in their blood. According to the New York City Department of Health, in 2012, the blood lead levels of 10 ug/dL or higher among children aged 6 months to 6 years (rate per 1,000 tested) in the Port Richmond and St. George–Stapleton neighborhoods were 3.9 and 3.7, respectively, which are higher than the blood lead levels of children in both Staten Island (2.6) and New York City (2.7). It is unknown if any lead contamination sources exist within the West Brighton BOA.

This study provides a thorough historical and existing conditions analysis of the area’s properties to more clearly describe any potential contamination that may exist in the area. The BOA also identifies a set of strategies for the reuse and redevelopment of brownfield, abandoned, and underutilized properties that aligns with the community’s vision and goals for the

neighborhood and can lead to a broader regeneration of the surrounding North Shore communities.

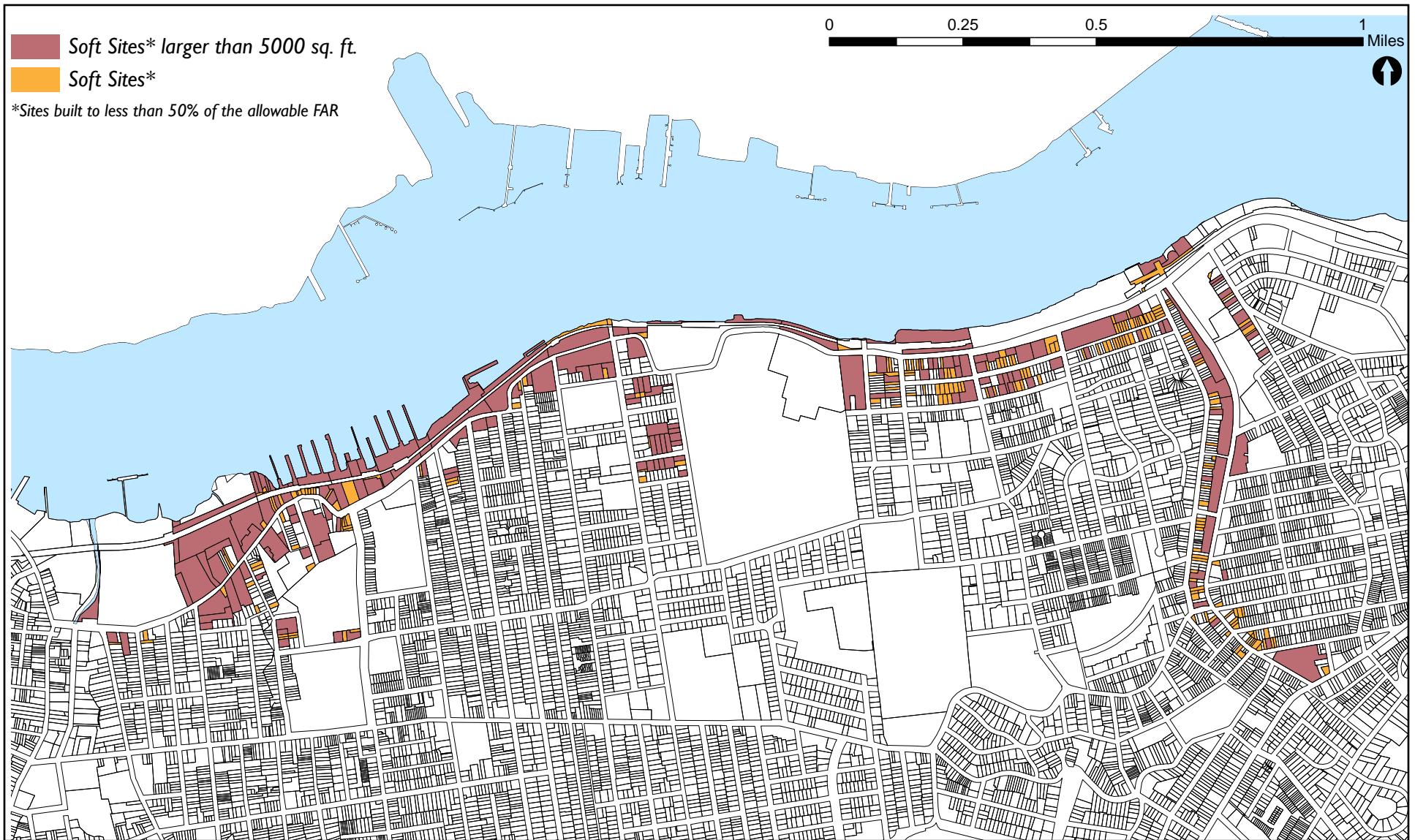
By addressing the contamination on these industrial sites, the West Brighton BOA project will complement the planning framework outlined in the North Shore 2030: Improving and Reconnecting the North Shore’s Unique and Historic Assets (North Shore 2030) report, which was released by DCP and the New York City Economic Development Corporation (NYCEDC) in December of 2011. The purpose of this report is to guide future public and private investment in achieving four main communi-

ty goals: create quality jobs and workplaces; reconnect people with the working waterfront; support and create neighborhood centers; and improve connections and mobility. To achieve these goals, the North Shore community identified the need to remediate brownfields and enforce environmental standards for existing and expanded industry as a high priority for the area. As part of its work plan, the West Brighton BOA conducted extensive community engagement and in-depth existing conditions analysis to create more specific strategic plans that capitalize on the area’s assets and achieves the community’s goals for the area.



Image 1.5 Heritage Park

Map 1.1 West Brighton BOA Soft Sites



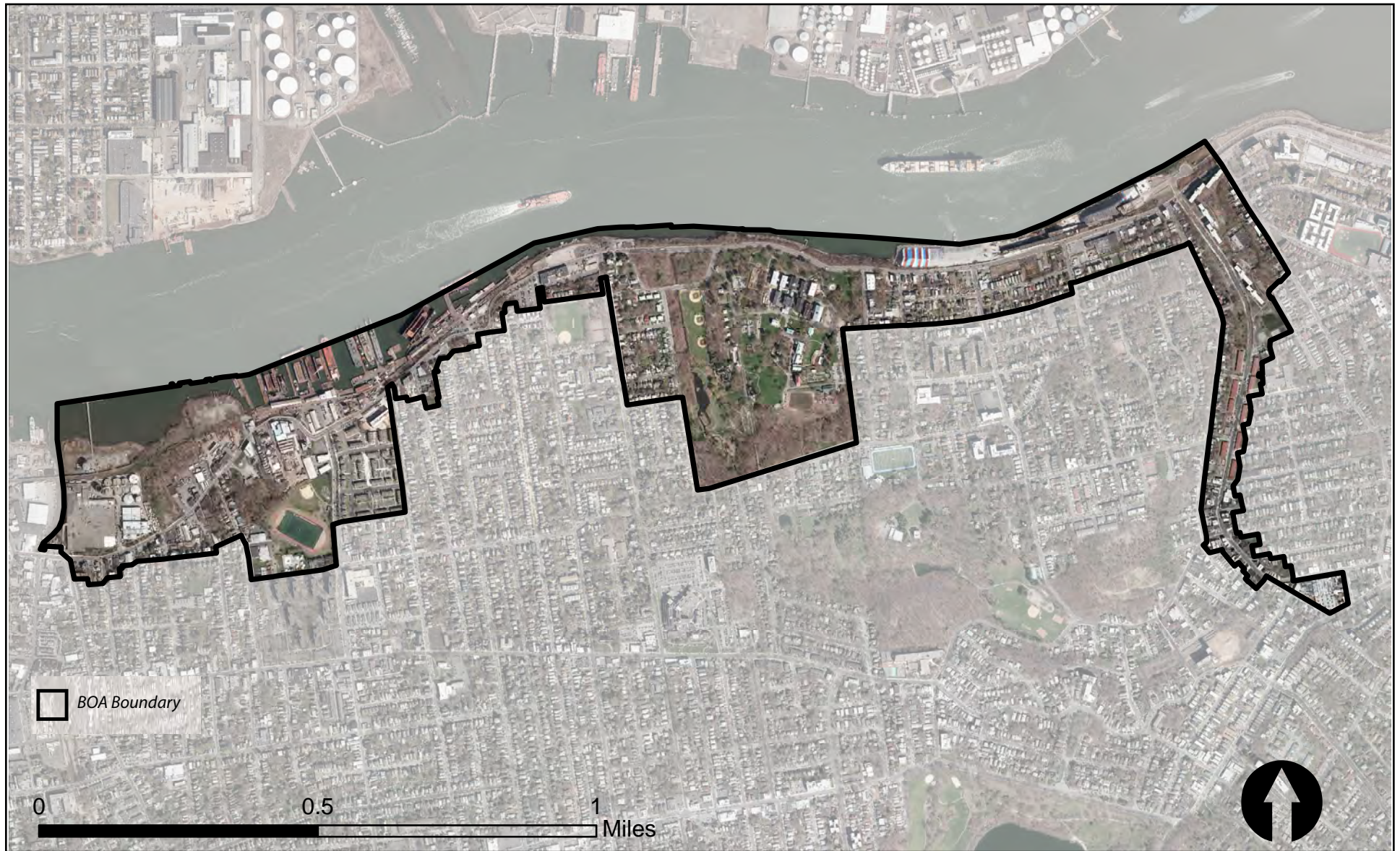
1.3 BROWNFIELD OPPORTUNITY AREA BOUNDARY DESCRIPTION AND JUSTIFICATION

The boundaries of the West Brighton BOA

study area have been drawn to focus on two corridors: the Richmond Terrace-Kill Van Kull waterfront and the Jersey Street corridor. The BOA is bounded on the north by the Kill Van Kull, the west by Rector Street and the east by Westervelt Avenue and Jersey Street. The

irregular southern boundary is drawn to capture strategic properties at an average of one block upland from Richmond Terrace, while the southern boundary along Jersey Street extends to Victory Boulevard (Map 1.2).

Map 1.2 West Brighton BOA Boundaries

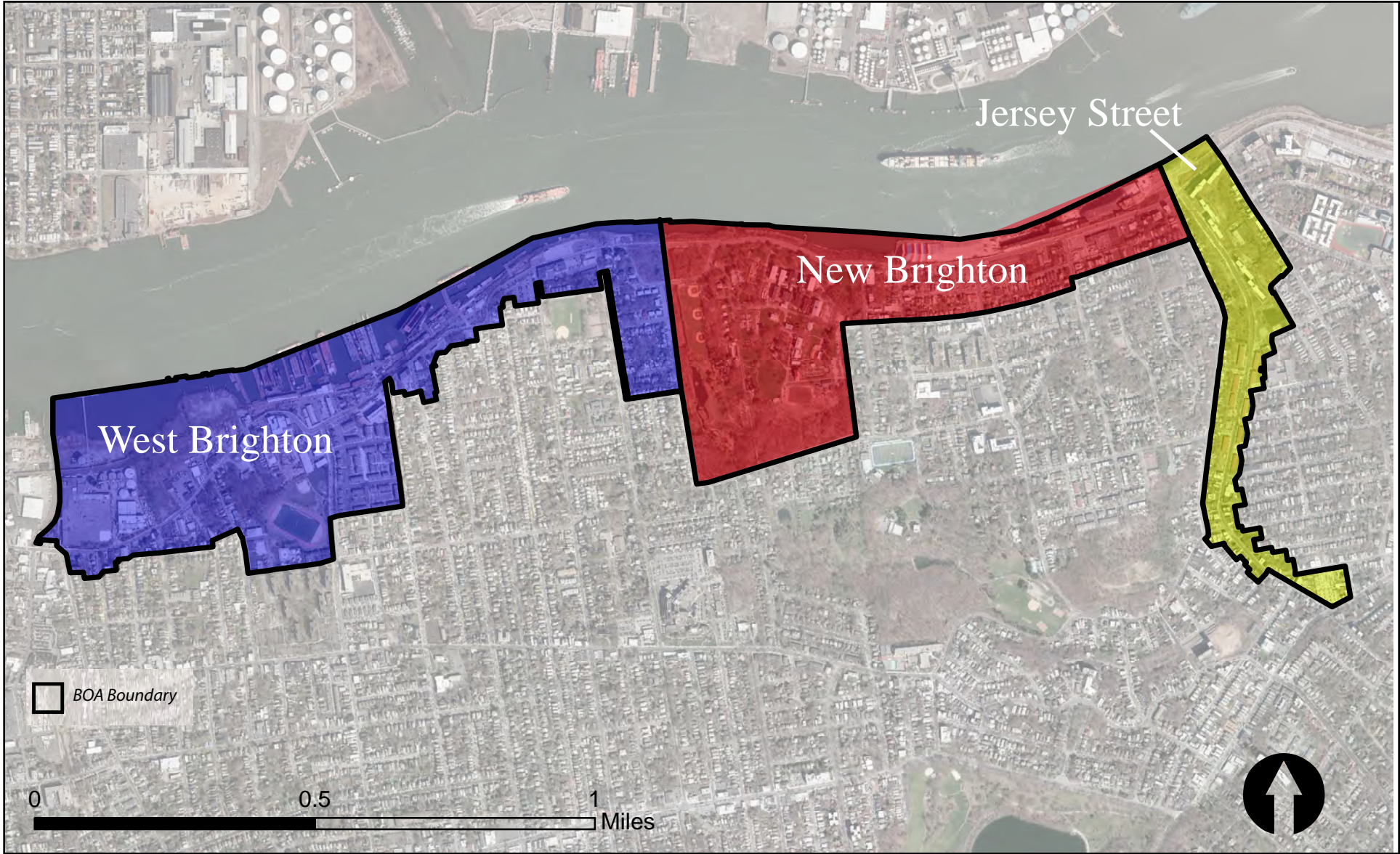


The Kill Van Kull is an appropriate boundary as it is the physiological boundary of Staten Island's North Shore. Rector Street in the west is the eastern boundary of the contiguous Port Richmond BOA study, which is also funded by

NYS DOS and for which common North Shore recommendations are being coordinated. On the eastern side, Westervelt Avenue and Jersey Street represent the boundary between New Brighton and St. George. St. George is the lo-

cation of a number of public and private investments along the waterfront and could support additional redevelopment in the West Brighton BOA study area. The southern boundary is drawn to focus planning attention on those areas

Map 1.3 West Brighton BOA Subareas



adjacent to the historically industrial uses of the North Shore. The extension of the BOA boundary south along Jersey Street to Victory Boulevard reflects the area’s history as a key North Shore commercial corridor that with economic

redevelopment could support reinvestment throughout the West Brighton BOA study area. The West Brighton BOA team also identified three subareas within the study area: West

Brighton, New Brighton, Jersey Street (Map 1.3). Although each subarea shares similar characteristics, community participation identified three unique visions for each subarea, as discussed further in the *Community Vision and*

Goals and Objectives section.

1.4 COMMUNITY VISION AND GOALS AND OBJECTIVES

As discussed in *Section 2: Public Participation and Techniques to Enlist Partners* of the BOA report, the West Brighton BOA planning process incorporated an extensive community outreach process that involved a series of community and design workshops, distributing questionnaires, public meetings, and an online Interactive Community Portal. During this outreach, local stakeholders envisioned a West Brighton BOA where existing underdeveloped or vacant sites provide needed amenities to the residents and businesses and consequentially revitalize the BOA's historic corridors into a vibrant, mixed-use town centers. The community have also underscored the importance of strengthening the BOA's industrial centers, improving access to the area's parks and open spaces, and expanding commercial services along Richmond Terrace.

The West Brighton BOA also builds upon prior North Shore community planning efforts led by the DCP, New York City Economic Development Corporation (NYCEDC), Metropolitan Transportation Authority (MTA) and other agencies. In 2012, the City released the *North Shore 2030* report, which is the product of extensive outreach to local stakeholders to develop unique visions for the three subareas of the West Brighton BOA:

- **New Brighton:** A New Neighborhood Destination Linking St. George and Snug Harbor
- **West Brighton:** A Model of Jobs and

Open Space for Staten Island

- **Jersey Street:** A Revitalized Retail Corridor Serving and Connecting Diverse Communities

North Shore 2030 also helped identify five community-driven strategies toward achieving these visions for the neighborhood (Figure 1.1).

Support and Create Neighborhood Centers

A goal of the community is to focus on a number of large strategic sites that can help revitalize neighborhood centers as a source for much needed businesses in the community, such as grocery stores, restaurants, and clothing stores. The redevelopment of such sites into commercial and mixed land uses could in turn help broaden the employment profile of the study area and accelerate the North Shore's transformation from a primarily industrial area to one with a healthy mix of economic drivers. The BOA will coordinate strategies for redevelopment opportunities and crafting zoning proposals for revitalizing the historic neighborhood centers along Jersey Street and Richmond Terrace.

Create Quality Jobs and Workplaces

A strengthened maritime industrial sector on the North Shore, long a goal of local planning efforts, can become a reality by taking advantage of the area's wealth of waterfront property. By converting the study area's large inventory of underutilized property into new centers of employment, the West Brighton BOA could create access to high-paying, high-skilled maritime jobs in the study area's waterfront sites and enable existing maritime firms along the waterfront to expand their operations. The

West Brighton BOA will identify mechanisms for supporting the existing maritime businesses and advance planning for future transportation improvements that would support business expansion.

Reconnect People with the Working Waterfront

Zoning currently requires opaque fences around manufacturing districts and, as a result, creates barriers that limit the community's physical and visual access to the Kill Van Kull waterfront. Truly one of the great opportunities in the BOA study area is the creation of first class public amenities and recreational opportunities on existing and new waterfront parks that provide views of passing ships and celebrate the working waterfront. The West Brighton BOA will promote and protect existing waterfront views, identify opportunities to create new, publicly accessible waterfront destinations, and improve access to new and existing destinations.

Improve Connections and Mobility

Serving as the main east-west arterial road in the study area, Richmond Terrace is a main focus for transportation improvements in West Brighton. The former North Shore Railroad right-of-way (ROW), now a vacant rail line bisecting several large private properties, with public/private coordination could support both transit and street improvements along the Richmond Terrace corridor. This effort should support the community's long-planned North Shore Greenway – a public bicycle and pedestrian pathway that would span from Howland Hook in the west to St. George and beyond. The West Brighton BOA will support efforts to leverage the asset of the North Shore Railroad

ROW to create a safe and efficient transportation network for public transit riders, motorists, bicyclists, and pedestrians.

Address Environmental Challenges

One legacy of the study area's industrial past is a large amount of brownfield sites. Whether truly contaminated or not, the perception of such is a major hindrance to redevelopment and revitalization in the study area. The study area could benefit from a targeted cleanup of the Kill Van Kull waterfront, with particular focus on the renaturalization of the Snug Harbor waterfront. Upland, an investigation of past land uses will help inform an understanding of the extent of industrial contamination in the study area. Finally, a focus on improved stormwater infrastructure upland will go a long way to preventing now-prevalent street flooding as well protecting the Kill Van Kull from harmful combined sewer outfalls. The West Brighton BOA will help identify such potentially contaminated areas, along with green infrastructure projects that could help prevent future contamination and reduce the area's vulnerability to flooding.

The BOA built upon this foundation to perform more focused outreach to the local stakeholders of the West Brighton BOA study area. This BOA study, with its added emphasis on brownfield sites, will assist in refining the community's vision, laying the groundwork for a feasible redevelopment strategy, and reversing the area's decades-long environmental and economic decline. The community's vision for each subarea is discussed further in *Section Four—Summary Analysis, Findings, and Recommendations of the BOA and Strategic Sites* of this report.

Figure 1.1: West Brighton BOA Goals



2 | Public Participation Plan and Techniques to Enlist Partners

2.1 PUBLIC PARTICIPATION PLAN

The West Brighton BOA public participation plan was based on the principle that developing strong relationships with community stakeholders provides a solid foundation for visionary, yet pragmatic planning recommendations. In order to guarantee that the BOA planning process culminated in community-wide consensus, the Department of City Planning (DCP) and West Brighton Community Local Development Corporation (WBCLDC) developed an outreach strategy that brought residents, business owners, community leaders, and elected officials into the discussion about the area's future. Our multi-pronged public participation strategy consisted of regular and targeted meetings with:

- The BOA Steering Committee
- Stakeholder groups
- Interagency Transportation Workshops
- Residents and local business and property owners

In addition, DCP hosted a West Brighton BOA website that offered the general public an opportunity to view BOA planning work on an ongoing basis and to provide feedback at critical junctures throughout the planning process.

Steering Committee

The role of the BOA Steering Committee was to provide community input, review and comment on presentation materials prior to public meetings and to assist in public outreach in order to

develop consensus regarding the final recommendations. Membership was crafted based on consultation with WBCLDC and was informed by DCP's prior public outreach in support of the *North Shore 2030* study. The Steering Committee consisted of elected officials, representatives from the area's prominent cultural and community institutions, environmental justice advocates, business and property owners, academics, real estate professionals, and representatives from city and state governmental agencies.

In addition to the WBCLDC, the following organizations, businesses and agencies were represented on the Steering Committee:

- Office of Staten Island Borough President James Oddo
- Office of New York City Council Member Deborah Rose (49th District)
- Staten Island Community Board 1
- New York City Office Mayor's Office of Environmental Remediation
- NYC Department of Parks and Recreation
- College of Staten Island
- Northfield Local Development Corporation
- North Shore Waterfront Conservancy
- Friends of the Abandoned Cemeteries of Staten Island

WBCLDC hosted a series of Steering Committee meetings and individual discussions with members throughout the BOA planning process. The BOA Steering Committee met five times through the course of the planning process (Table 1.1). In addition, the Steering Committee

was instrumental in providing DCP and WBCLDC with contacts throughout the community, further establishing a comprehensive outreach foundation.

Stakeholder Outreach and Meetings

Through the BOA planning process, a wide range of stakeholders was identified. Meetings with these groups, which included residents, business owners, property owners, elected officials and city agencies, provided specific, targeted discussions of critical planning issues within the BOA. The effort to engage stakeholders who were not included in the Steering Committee enhanced DCP and WBCLDC's ability to build consensus on a vision for the future of West Brighton.

New Brighton Coalition of Concerned Citizens (NBCCC)

NBCCC is a community organization representing residents and business owners in the Jersey Street area of the BOA. The purpose of the meeting with NBCCC was to introduce the BOA, study findings, and preliminary goals and objectives. This meeting allowed the broader NBCCC member group to provide DCP with insights into planning issues specific to the Jersey Street corridor. Among the issues discussed were the area's struggling commercial market, crime and safety, and access to transit and open space.

New Brighton Property Owners

DCP and WBCLDC held a number of meet-

Table 1.1 Steering Committee Meetings		
Meeting #	Date	Meeting Agenda
Meeting #1	January 2013	Introduced BOA program, reviewed recent planning work in study area, provided background info on brownfields; introduced preliminary goals and objectives.
Meeting #2	February 2013	Reviewed work to date; reviewed content and community feedback from April Open House; reviewed objectives, findings and next steps from late Summer inter-agency workshops on BOA transportation infrastructure (North Shore Railroad Right-of-Way and Richmond Terrace.
Meeting #3	June 2014	Reviewed work to date; introduced and discussed draft strategic sites list, including discussion of criteria for strategic sites; reviewed ongoing work related to North Shore RR ROW and Richmond Terrace improvements; introduced objectives for Fall 2014 Public Visioning Workshop
Meeting #4	October 2014	Introduced and discussed Public Workshop format and topics; discussed public outreach efforts and brainstormed ways for Steering Committee to expand outreach effort.
Meeting #5	March 2016	Presented and discussed the draft recommendations for the West Brighton BOA.

ings and site visits with property and business owners located on Richmond Terrace whose properties were included in the Strategic Sites inventory for the BOA or located within the mapped width of Richmond Terrace. As discussed in *Section 4 - Summary Analysis, Findings, and Recommendations*, the BOA recommends advancing the redevelopment of the New Brighton corridor as a mixed-use residential and commercial center and exploring potential widenings of Richmond Terrace. Meetings with property owners included discussions of the industrial and commercial market in New Brighton, insights from property owners on New Brighton's viability as a mixed-use corridor, and a discussion of appropriate building typologies and street widths for the corridor.

West Brighton Residents

DCP and WBCLDC, through coordination

with Community Board 1, identified a group of residents from the West Brighton neighborhood who were able to provide key insights into planning issues specific to the western end of the BOA. Lacking a formal resident's organization, the West Brighton neighborhood nevertheless contains a number of strategic sites that are targeted in BOA recommendations. The October 2013 meeting with West Brighton residents introduced the group to the BOA and its preliminary goals and objectives. In addition, the meeting provided a forum for residents to provide feedback on the content and direction of the BOA study.

Maritime Association – Tug and Barge Committee

DCP held two targeted meetings with the Tug and Barge Committee, both of which included a focused discussion of the needs of the maritime

industrial community, as well as the Committee's vision for the future of the BOA. Of particular importance to Committee members is the area's transportation infrastructure and how its improvement can help the maritime sector grow.

Transportation Workshops

The North Shore 2030 Report noted that traffic and transit improvements were critical to support existing and future residential development and job creation within the BOA study area. The New York City Metropolitan Transportation Authority's (MTA) Alternative Analysis, released in August 2012, proposed re-using the abandoned North Shore Railroad Right of Way to support a Bus Rapid Transit corridor, which would provide inland and waterfront communities with a faster and easier connection to the Staten Island Ferry Terminal. In addition, Community Board 1 has long advocated for a continuous North Shore Greenway, a pedestrian/bikeway trail between major North Shore destinations that would run throughout the BOA study area along the waterfront and Richmond Terrace.

Achieving these goals and providing opportunities to improve Richmond Terrace, the study area's main east-west road, requires inter-agency coordination with major property owners along the waterfront. In 2014, DCP hosted a series of workshops with a number of agencies and property owners to identify alternative scenarios that would provide a wider/straighter Richmond Terrace, pedestrian and bicycle connections, and protected BRT lanes/station areas that would also allow waterfront businesses to invest in job creation. Three workshops were held, with each focused on a major property

along the waterfront through which the North Shore ROW is located:

- Caddell Dry Dock and Repair – The western third of the BOA, located between Davis Avenue and Van Street.
- Snug Harbor Cultural Center and Botanic Gardens – The central third of the BOA, an under-utilized and poorly maintained public waterfront, within DPR jurisdiction, which is located between Snug Harbor Road and Tysen Street.
- Atlantic Salt, Inc. – The eastern third of the BOA, located between Clinton Avenue and Jersey Street.

Representatives for each of the properties were involved in the workshop, in addition to representatives from the following city and state

agencies and local elected officials:

- NYC Department of Transportation
- Metropolitan Transportation Authority
- NYC Department of Parks and Recreation
- NYC Department of Design and Construction
- NYC Department of Environmental Protection
- NYC Economic Development Corporation
- Borough Hall Land Use Director

Eighteen individuals attended the workshop that focused on the Atlantic Salt property, and nineteen attendees participated in the Caddell Dry Dock and Repair workshop. The workshop for Snug Harbor had a total of 16 participants. DCP started each workshop by briefly dis-

cussing some of the issues and challenges of the focus area. These topics included roadway improvements, flood resiliency, maritime job expansion, land use changes to support retail and services, public transit improvements, and pedestrian and bicycle improvements. Following the brief introduction, the group was divided into smaller working groups to develop conceptual designs for Richmond Terrace improvements on a set of base plans and sections. The attendees were encouraged to leverage the expertise of fellow team members to formulate creative strategies that could be practically implemented and supported by the industrial and residential communities. After working on the design for forty-five minutes, the attendees were instructed to present their findings and perspectives. This presentation led into a “consensus building” discussion where the group has a free-form conversation with the purpose

Image 2.1 Transportation Workshop



Image 2.2 Open House



of coalescing around a set of strategies.

Through these workshops, DCP was able to reach consensus with property owners and city agencies on a number of preferred alignment options for the BOA's future transportation infrastructure. The West Brighton BOA team refined these options to develop a set of four alignment and development scenarios for Richmond Terrace that spans from the Atlantic Salt property to Caddell Dry Dock and Repair's lots in West Brighton. These scenarios will help guide future discussions with property owners located in the North Shore Railroad right-of-way about land swaps to facilitate the implementation of the proposed Bus Rapid Transit system for the North Shore. In turn, the BOA project team used these realignment options to inform the exercises presented to the broader public at the Fall 2014 Visioning Workshop, which is discussed in the following Public Meetings section.

Public Meetings

A series of public meetings were held throughout the BOA planning process. All of these meetings were open to the general public and held at Walker Park, located in the center of the BOA. Each round of public meetings were held over the course of two days - a weekday evening and a Saturday afternoon - to allow maximum flexibility for participants to attend.

The first public meeting, an Open House, was held in April 2013. The purpose of this meeting was to introduce the NYS BOA program to the public and to present a comprehensive analysis of existing conditions in the BOA. The Open House format, in which a series of 20 maps was displayed along the walls, allowed

Image 2.3 West Brighton BOA Visioning Workshop



the public to view and discuss the state of their community. In addition, staff from WBCLDC and DCP were on hand to provide introductory presentations, answer questions from the public and listen to insights and feedback from those in attendance. Topics of analysis covered in the Open House included transportation and water infrastructure, zoning, land use, parks and open space, Hurricane Sandy and flood resilience, commercial services, community facilities, and demographics. The goal of the Open House was to confirm findings from the initial round of analysis and to strengthen consensus within the community around the direction of the BOA

study. In addition to the public, a number of city agencies, particularly the New York City Department of Parks and Recreation (DPR) and NYCEDC, were invited to attend and were on hand to discuss their respective agencies' initiatives within the BOA.

The second public meeting, a Visioning Workshop, was held in November 2014. Organized in the format of an interactive charrette, the Visioning Workshop was intended to build consensus on a number of focused, preliminary planning and urban design recommendations. The workshops focused on redevelopment

scenarios in the New Brighton subarea and provided opportunities to solicit additional input regarding the planning challenges and opportunities found in the Jersey Street and West Brighton subareas. In addition to the interactive material on hand, revised and updated Open House material was displayed.

In order to identify the community's vision for the future of New Brighton, the BOA project team created a number of interactive tools, including a "Build Your Own Richmond Terrace" streetscape model as well as a model of the New Brighton community that allowed for a discussion of appropriate building types and sizes. A critical goal of these exercises was to illustrate the relationship between improved transportation infrastructure and changes in land use, specifically the area's redevelopment as a mixed-use corridor. These activities proved helpful in clarifying community consensus and allowed the project team to advance recommendations for the New Brighton subarea.

In each of the BOA's three other subareas, Jersey Street South, Jersey Street North, and West

Brighton, a series of "Issues and Opportunities" maps were created and presented alongside existing land use and zoning maps. Workshop participants were asked to examine these materials and respond to a number of targeted questions relating to important planning issues specific to each of the areas. Additionally, participants were given the opportunity to provide any general or targeted commentary on the BOA and its subareas. The goal of each of these subarea stations was to strengthen the project team's understanding of these areas as a foundation for planning and design recommendations.

Interactive Community Workshops

In addition to the Visioning Workshops, the BOA team led a series of small, pop-up interactive workshops at public gathering spaces over summer 2015, which allowed the team to bring planning directly to the community and include more West Brighton residents in the planning process. The first workshop took place on June 20, 2015 at Corporal Thompson Park. On June 26, 2015, the BOA team held a second workshop at Markham Gardens, a New York City

Housing Authority (NYCHA) Development, during an annual community festival. The final workshop was held on July 8, 2015 at the West New Brighton Public Library.

The workshop featured the following exercises:

- What are the best assets in West Brighton?
- What physical improvements are needed to reconnect the neighborhood to the waterfront?
- If an improved transit stop is provided at Broadway and Richmond Terrace, what types of jobs, housing or retail should be encouraged in West Brighton?
- Using provided materials and a map, have participants identify West Brighton's assets and recommendations for improving the area, identifying connections between each asset/recommendation with different modes of transportation.

The workshop exercises were designed to gather specific insight to existing land use and infrastructure challenges of the West Brighton



Image 2.4 Interactive Community Workshop



Image 2.5 Interactive Community Workshop

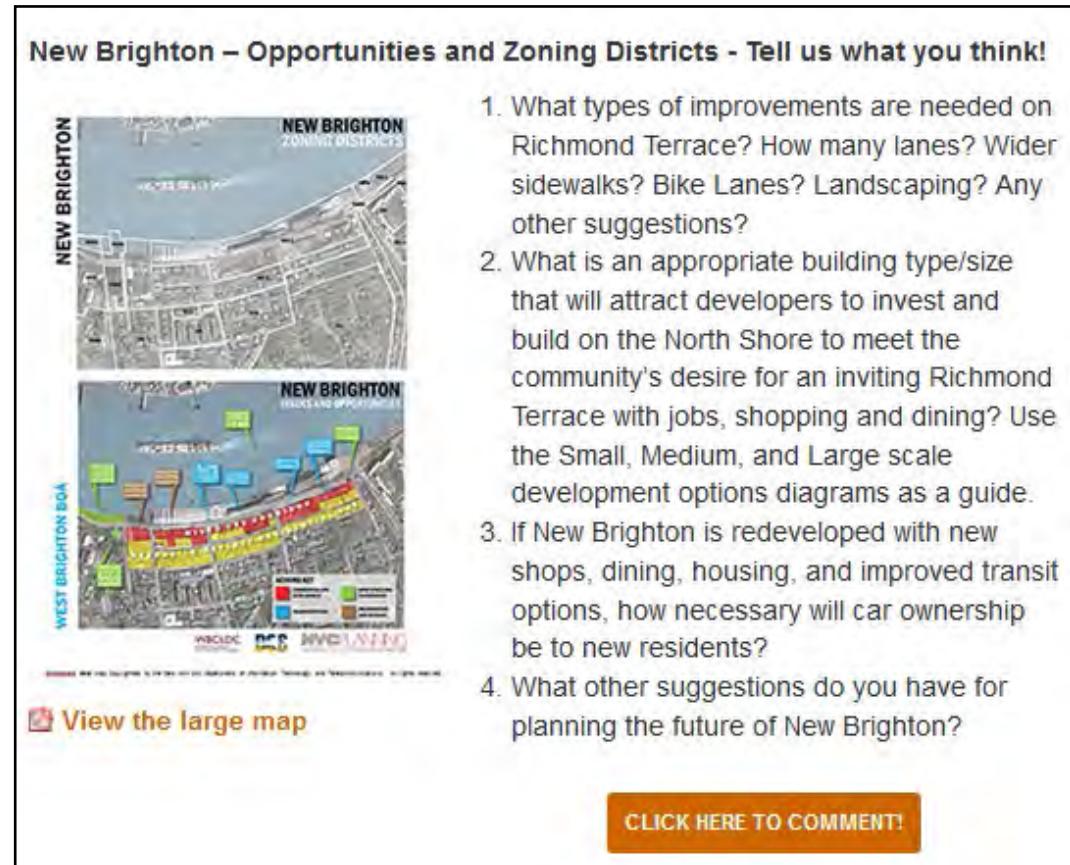
neighborhood and assist in building consensus for potential future rezoning efforts in West Brighton. Participants provided responses to the exercise questions by using supporting material at each station. The materials included aerial, land use, and zoning maps, color stickers, and markers. Members of the BOA team were situated at each station to provide assistance and ensure that participants completed each exercise in fifteen minutes. This table set-up encouraged both independent work and impromptu group discussions between participants.

Interactive Community Portal

For local stakeholders who were unable to attend one of the workshops, DCP launched an established an Interactive Community Portal on its website in April 2015. The link to the BOA website is <http://www1.nyc.gov/site/planning/plans/west-brighton-boa/west-brighton-boa.page>. The portal featured the visioning exercises for the West Brighton, New Brighton, Jersey Street North, and Jersey Street South subareas provided at the workshops. DCP provided the link to the online portal to the BOA's local advisory committee and contact list and encouraged BOA participants to forward the link to their own contacts. DCP also attended meetings for local community groups to distribute printed versions of the visioning exercises.

The visioning exercises on the interactive community portal proved to be an effective method of outreach to the West Brighton BOA community. The BOA team received a total of 72 responses to the questions, which almost doubled amount of participants as the number of attendees to the five workshops that took place in New Brighton and West Brighton workshops (75 participants).

Image 2.6 Interactive Community Portal



Outreach Strategies

Each public meeting was prefaced with an extensive outreach campaign. Public meetings were advertised in the Staten Island Advance, the borough's primary news outlet, and on the Department of City Planning website. In addition, DCP staff attended meetings of Staten Island Community Board One to announce meeting dates, locations and topics. Finally, the Steering Committee assisted the project team with disseminating information about outreach events by distributing flyers, printed in both Spanish and English, throughout the community

and posting the event on social media outlets.

The BOA website, hosted by DCP, was continuously updated to publicize upcoming meetings and provide meeting minutes. An open feedback and comment page was created in early 2013 and has been maintained on the website throughout the planning process to provide an opportunity for community members to ask questions and leave comments.

3 | Analysis of the Brownfield Opportunity Area



Image 3.1 Caddell Dry Dock and Repair

INTRODUCTION

The West Brighton Brownfield Opportunity Area (BOA) is located in the West Brighton and New Brighton neighborhoods, which are situated along the North Shore of Staten Island (Map 3.1), one of the five boroughs of New York City (NYC) (Map 3.2). Located in the southwest corner of New York City, six miles from Manhattan, and one mile from Brooklyn, Staten Island is accessible by ferry to Manhattan and the Verrazano-Narrows Bridge to Brooklyn. Additionally, three bridges, the Bayonne, Goethals, and Outerbridge, connect Staten Island to New Jersey. Separating Staten Island from Brooklyn on its northeastern side is the Narrows, a tidal strait that connects the Upper and Lower New York Bays. To the east and south of Staten Island is Lower New York Bay, and by extension, the Atlantic

Ocean (Map 3.3). To the west, Staten Island is separated from New Jersey and the mainland United States by the Arthur Kill, a tidal strait connecting Raritan Bay to Newark Bay. On its northern edge, Staten Island is bounded by the Kill Van Kull, a tidal strait that connects Newark Bay and Upper New York Bay and separates the island from Bayonne, New Jersey.

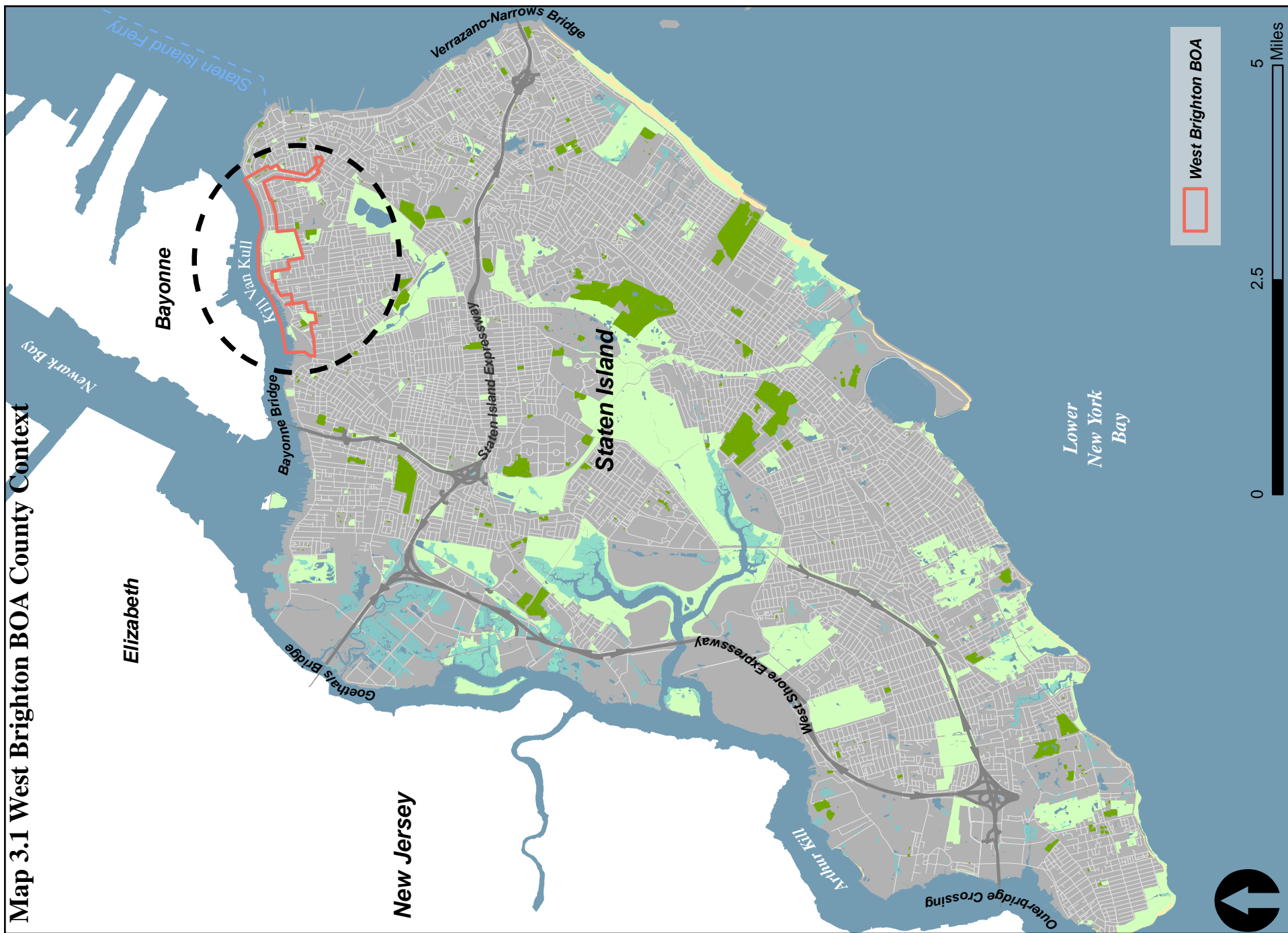
Staten Island comprises the totality of Richmond County and has a total land mass of 59 square miles, making it the third largest of New York City's five boroughs. Despite its relatively large size, Staten Island has the smallest population and lowest density of any borough in New York City by a significant margin. According to the American Community Survey (ACS) 1-year estimates, the population of Staten Island in 2013 was 472,621, which accounts for approximately 5.6 percent of New York City's population (8,405,837

inhabitants). The density of Staten Island was 8,030 inhabitants per square mile in 2013, while New York City had a density of over 27,000 inhabitants per square mile. Staten Island, however, experienced a 5.6 percent growth rate from 2000 to 2010, per U.S. Census Bureau estimates, and is one of the fastest growing boroughs in New York City.

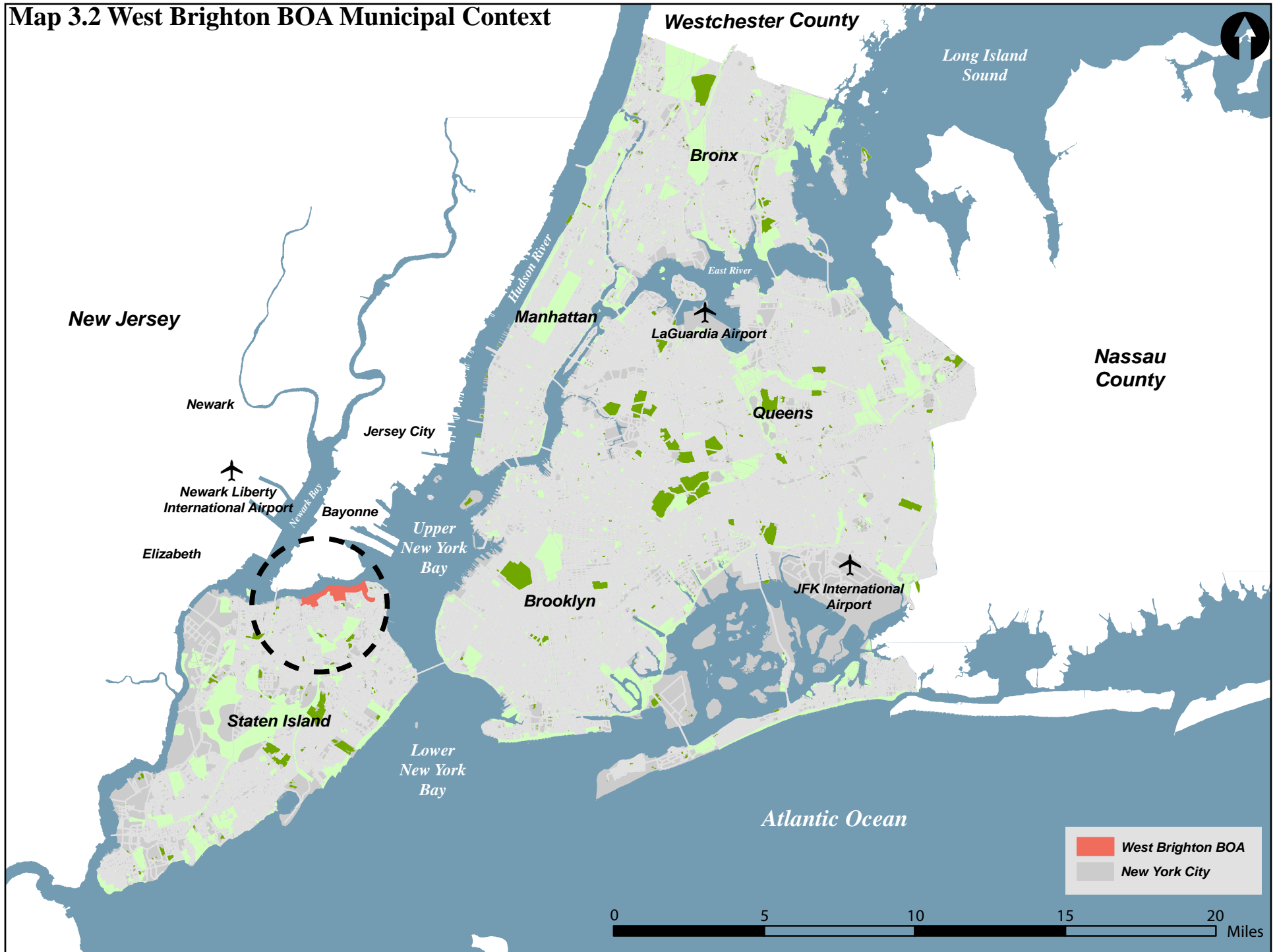
Staten Island is part of the New York metropolitan area, a conglomeration that includes New York City and communities in New Jersey, Pennsylvania and Connecticut. The New York metropolitan area had a total population of 25,508,600 inhabitants in 2012, making it one of the most populous urban areas in the world.

New York City is a national and global center for finance, insurance, health care, real estate, new and traditional media, creative industries, and fashion. In 2010, the city had a gross metropolitan product of \$1.28 trillion, making it the second largest metropolitan economy in the world, behind Tokyo. The close proximity of the West Brighton BOA to the St. George Ferry Terminal and the Verrazano-Narrows Bridge enables the BOA to take advantage of the immense economic activity in Manhattan, the increasingly important economic hub of Brooklyn, and the connections to Newark Airport in New Jersey. In particular, the relative affordability of commercial and office space along the North Shore's waterfront makes the West Brighton BOA an attractive real estate location for businesses that need access to waterways.

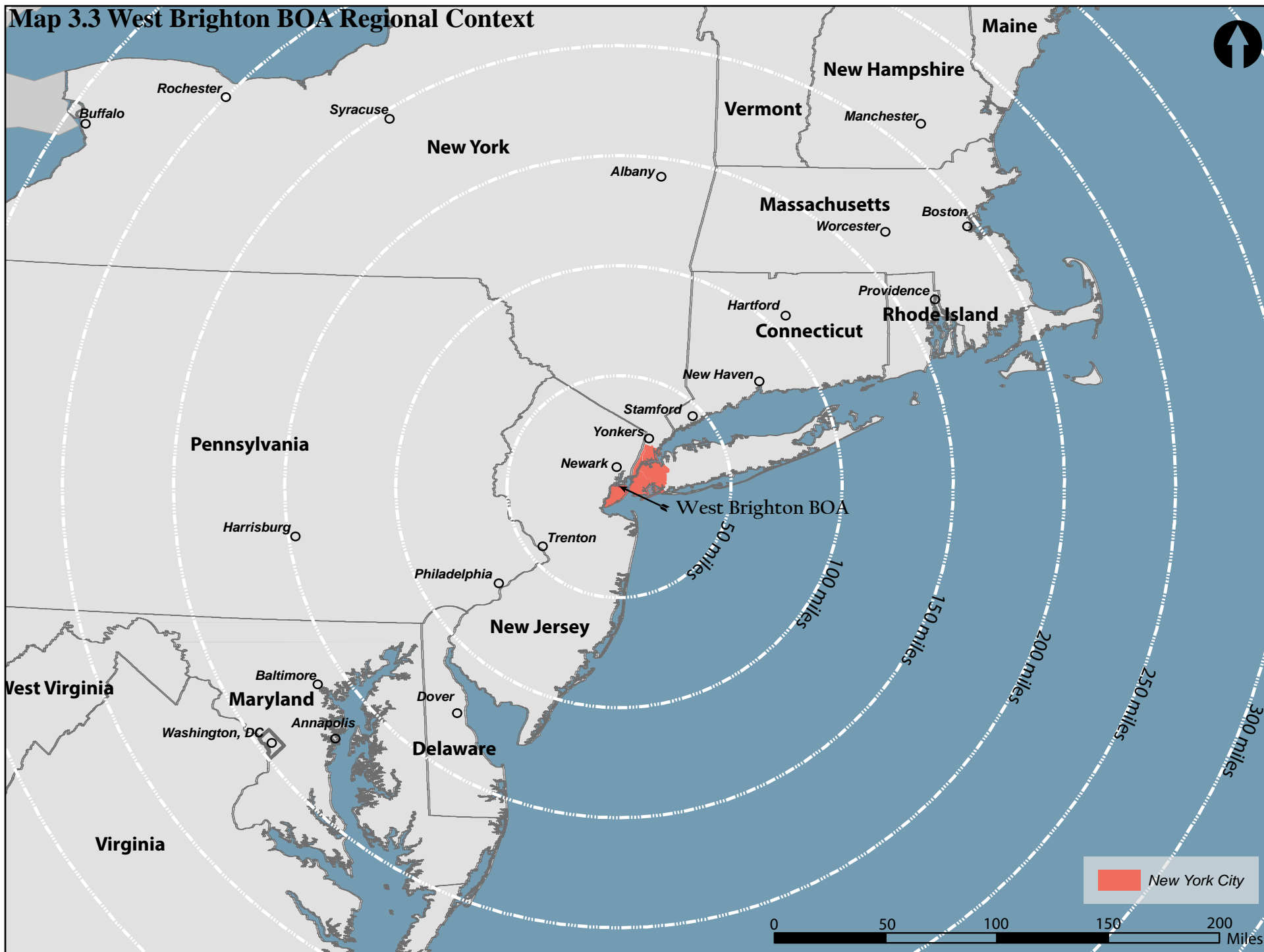
Map 3.1 West Brighton BOA County Context



Map 3.2 West Brighton BOA Municipal Context



Map 3.3 West Brighton BOA Regional Context



Bolstering the city’s economic profile is the Port of New York and New Jersey, the nation’s third largest port and the largest on the Atlantic Coast. According to the Port Authority of New York and New Jersey, the port generates more than \$5 billion in tax revenues for state and local governments, while also creating 280,000 jobs for highly skilled workers in the region. The communities comprising the West Brighton BOA, and throughout the North Shore, have long drawn on the region’s maritime economy for their identity. In particular, the West Brighton BOA has been a center of the maritime support services industry, which includes ship building and repair, as well as towing operations and docking facilities. Recognizing the area’s importance to the region’s maritime economy, the New York City Department of City Planning (DCP) has designated Howland Hook and the waterfront area north of Richmond Terrace from Port Ivory to Snug Harbor as one of New York City’s six Significant Maritime and Industrial Areas (SMIA) in its Comprehensive Waterfront Plan. Building on the area’s strong maritime sector and supporting New York City’s effort

Table 3.1 Private Investment in St. George

Project	Amount of Private Investment*
Observation Wheel Complex**	\$400,000,000
Empire Outlets	\$300,000,000
Lighthouse Point	\$200,000,000
Total	\$900,000,000
* New York Times 2014	
**Complex includes restaurants, theaters, and bike rentals	

at maintaining a healthy shipping industry will be a primary goal of planning efforts within the West Brighton BOA.

The West Brighton BOA’s proximity to New York City’s economic, social, and cultural resources presents a considerable planning opportunity. Previous and ongoing planning initiatives, such as North Shore 2030, have similarly recognized these opportunities and provide useful precedents for this BOA Nomination Report. However, a number of circumstances have arisen in recent years that require a new focus and urgency for West Brighton and other communities along the North Shore. First, recent years have seen a considerable increase in development interest in the North Shore communities of St. George and Stapleton. As of Winter 2015, almost \$1 billion in private investment (Table 3.1) has been proposed to begin the construction of residential, commercial and industrial developments in St. George, which bounds the western portion of the study area.

Second, Port Richmond, the neighborhood located directly west of the West Brighton BOA study area, is the site of a separate and ongoing BOA study, providing opportunities to coordinate recommendations with impacts across the North Shore. Because it is located between St. George and Port Richmond and has Snug Harbor Cultural Center at its core, the West Brighton BOA is poised to take advantage of any favorable development activity in the North Shore of Staten Island. Third, the West Brighton BOA is the first comprehensive planning study to focus on the West Brighton and New Brighton area since Hurricane Sandy, which had a devastating impact on New York City’s coastal communities and

brought an increased focus on resiliency planning in the city. As such, the BOA Nomination Report incorporates a number of general resiliency policy measures and site-specific recommendations for improving the area’s ability to cope with storm events and a changing climate.

3.1 COMMUNITY AND REGIONAL SETTING

Historical Settlements

The Hackensack and Raritan Indian tribes, part of the Lenape or Delaware Nation, were the sole inhabitants of Staten Island until the first European contact in 1524. The Lenape established seasonal camps on the island and were influential in altering the landscape to take advantage of its wealth of upland and aquatic resources. Richmond Terrace, the primary east-west thoroughfare on the North Shore, is derived from a Lenape waterfront footpath. Evidence suggests that the Lenape engineered portions of the waterfront to support their harvesting of oysters, other shellfish and fish from the waters of the Kill Van Kull. There are several Lenape burial grounds on Staten Island, including at the current site of the collection of abandoned cemeteries near Richmond Terrace and Broadway in West Brighton.

By the 1600s, Dutch settlers established communities on the North Shore, in what is now the Port Richmond area of the North Shore, just to the west of the BOA. The establishment of the Dutch Reformed Church on Richmond Terrace and a ferry service from Port Richmond to present-day Bayonne helped generate an expansion of these settlements into the communities now known as Livingston and

Randall Manor, in the western portion of the BOA.

Through the end of the eighteenth century, European immigrants, predominately Dutch, English and French, continued to populate the North Shore of Staten Island. As population of the North Shore grew rapidly, land was cleared for farmland, roads were constructed to connect settlements, and docks were built along the coast line to accommodate maritime trade and fishing. From the beginning of the eighteenth century and into the nineteenth, farming was the largest industry on the island.

At the dawn of the nineteenth century, the North Shore of Staten Island was an important agricultural and maritime center within the New York City region. The oyster harvesting was

the preponderant industry in neighborhoods, such as Mariners Harbor, and attracted many ship captains to the area. As a result, local government, new homes, and churches were created, providing the infrastructure for further industrial growth. The New York Dyeing and Printing Establishment constructed a cloth dyeing factory in 1819 at the location of what is now the intersection of Broadway and Richmond Terrace in the West Brighton BOA. This industrial operation kicked off an intense period of construction and infrastructure-building that established the North Shore's still-existent industrial character.

Concurrent to industrial expansion, the areas now composing the West Brighton BOA became increasingly popular as a destination for wealthy families from Manhattan who sought its

pastoral environment and waterfront views. Sailors' Snug Harbor, an inclusive campus for retired sailors that included a farm, hospital, and recreation facilities, was completed in 1831. During the 1830s, British developer Thomas Davis purchased a large area of land between the Tompkinsville community, to the southeast, and Snug Harbor and established a housing development he would call New Brighton, after the British seaside resort.

In addition to housing, Davis had a number of prominent Greek Revival buildings constructed along Richmond Terrace. Several of these buildings exist today along Richmond Terrace, Carroll Place, and St. Mark's Place.

Attendant to population growth and industrial expansion was the construction of infrastructure on the North Shore to support it. The newly created Staten Island Rapid Transit company opened service on a new horse-led streetcar along Richmond Terrace in the early 1880s. Shortly thereafter, the Baltimore and Ohio (B&O) Railroad purchased this right-of-way and expanded it in both directions, now providing freight and passenger service from a ferry terminal in St. George west to Arlington and into the national rail network in New Jersey. B&O Railroad maintained service on the North Shore line until 1953.

Other historical modes of transportation on the North Shore include trolley lines. First introduced to Staten Island in 1895, electrified trolley cars helped support local real estate interests by providing transportation to newly developed sites. According to *Staten Island and Its People: A History* by Charles Leng and William Davis, the Staten Island Electric Railroad Company operated 26 miles of trolley lines by 1896, including one that ran from St. George to Bodine's Creek via Tompkinsville, Brook Street, Jersey Street, and Richmond Terrace. These trolley lines supported local retail along their routes by providing easy access for customers. By the mid-twentieth century, however, Staten Island's trolley lines, along with many other trolley systems throughout New York City, were replaced with bus lines.

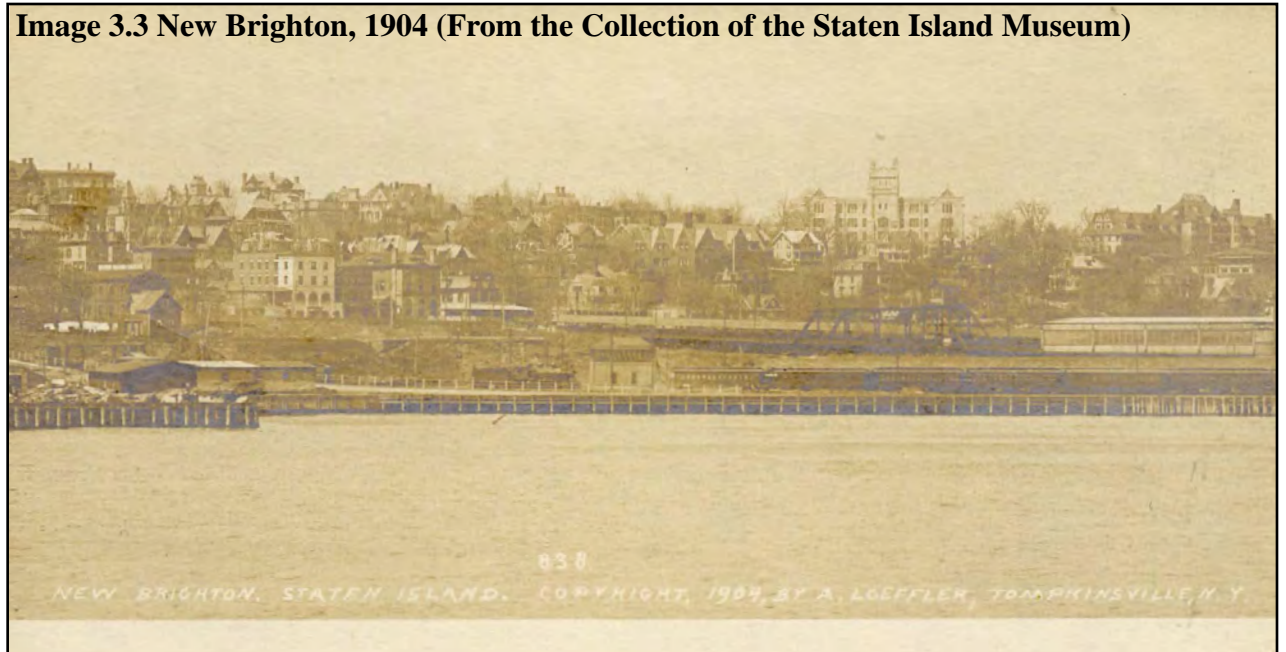
As New Brighton and West Brighton entered the twentieth century, the area was a thriving center

Image 3.2 Snug Harbor from the Kill Van Kull, 1900
(From the Collection of the Staten Island Museum)



of industry and population. In 1916, the Caddell Dry Dock and Repair Company opened their facility on the North Shore in the West Brighton community. In the more than 100 years since its inception, Caddell has become the largest dry dock company in New York City and is one of the most important maritime businesses in Staten Island. In 1926, U.S. Gypsum, a company that built wallboard for the construction of new houses, purchased a large parcel on the North Shore waterfront at the foot of Jersey Street in New Brighton. The company would remain for 50 years one of the most important industrial businesses in Staten Island and their product was used in the construction of most of the island's homes. Because of the North Shore's well-established maritime industry, the area became an important center for naval construction during the two World Wars.

Image 3.3 New Brighton, 1904 (From the Collection of the Staten Island Museum)



The end of World War II ushered in a paradigm shift in American industry and land use patterns that would dramatically alter the fates of Staten

Island's North Shore communities. Wartime shipbuilding and associated operations ceased on the waterfront, causing a domino effect

that would leave swaths of vacant land and numerous struggling maritime businesses. Well-paying industrial jobs began to disappear. By the

Image 3.4 Caddell Dry Dock and Repair



end of the twentieth century the North Shore's maritime industry, though one of the largest in New York City, was hampered by disinvestment, poor infrastructure, and changes in global shipping patterns.

Simultaneous to the post-war maritime decline, the advent of the automobile significantly altered the fortunes of the communities in the West Brighton BOA. As the automobile became increasingly affordable for middle- and lower-income Americans, public transit use declined and city residents began to look farther afield for new, affordable housing. The last SIRT North Shore streetcar ran in 1953, and ferry service from Port Richmond to New Brunswick, New Jersey, and Manhattan ended in 1962. The ultimate blow to the North Shore's primacy in Staten Island was the construction of the Verrazano Bridge in 1964. Prior to the bridge's construction, Staten Island remained without a car or train connection to any other New York City borough, highlighting the importance of West Brighton's proximity to St. George and ferry service to Manhattan. With the opening of the bridge, however, large portions of the East and South Shores became newly accessible. A development boom brought new residents from Brooklyn and attracted many residents from the older communities on the North Shore, West Brighton included. Following patterns established elsewhere in the country, large, auto-oriented shopping centers were constructed, signaling an end to the North Shore's role as the commercial hub of Staten Island. The legacy of decline that began in the mid-twentieth century remains a significant planning issue for communities in the West Brighton BOA.

While the entire North Shore was impacted severely in the last half of the twentieth century,

the West Brighton BOA waterfront fared significantly better than communities farther west. Much of this success can be attributed to the continued presence of Caddell Dry Dock and Repair and Atlantic Salt, along with Snug Harbor and the accessibility of the ferries leaving from St. George. These two maritime-based companies are very successful and represent an opportunity upon which to plan a twenty-first century maritime industrial sector.

Demographics and Socioeconomics

The West Brighton BOA is a socioeconomically diverse community that spans a number of census tracts. In analyzing the study area's population, eight census tracts were selected, seven of which have portions located inside the BOA (Map 3.4). The remaining one tract, 133.01, is located just outside the BOA, but residents of this tract are included in this analysis due to their immediate proximity to the BOA and their use of the study area's infrastructure and services. This report will include comparisons between the demographics and socioeconomics of the BOA study area with New York City, Staten Island, and the North Shore community. In this report, a collection of 22 census tracts roughly located north of Forest Avenue serves as the demographic boundaries for the North Shore. These 22 census tracts in the north geography are 7, 9, 11, 67, 75, 77, 81, 97, 105, 125, 133.01, 133.02, 141, 201, 207, 213, 223, 231, 239, 247, 319.01, and 319.02. All demographic data used in this report is taken from the 2010 United States Census and the 2009-2013 ACS.

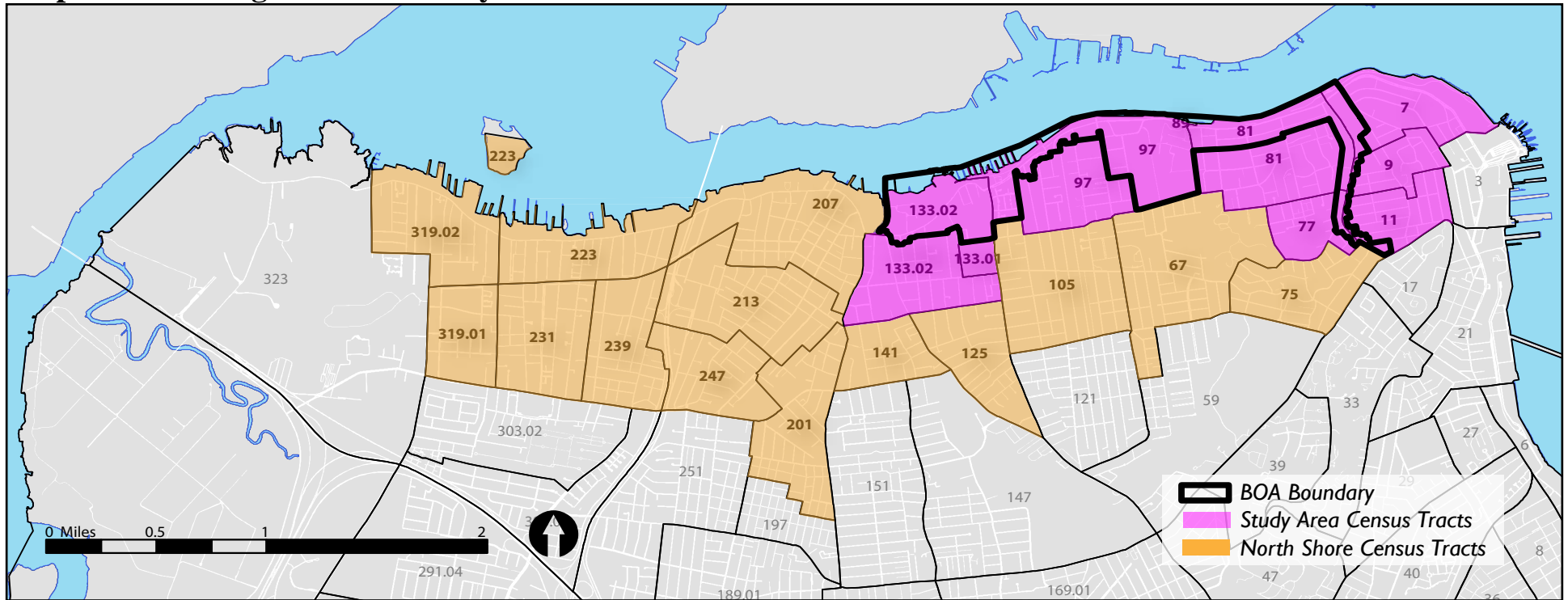
In 2010, the population of the study area was 25,995, a 3.9 percent increase from 2000 (Table 3.1). While this represents a stable population

overall, there is a wide disparity in the growth rate among individual census tracts. Tract 133.02, which is located at the western end of the BOA, experienced an increase of nearly 30 percent from 2000 to 2010 largely because of the opening of Markham Gardens, a 12-acre apartment community with 290 new affordable residential units, in 2008. Conversely, over the same ten year period, the population of Tract 133.01, consisting of the West Brighton NYCHA housing complex, experienced more than a 4 percent decrease in population during the same ten year period. In addition to an aging population, another possible cause for this decrease in this census tract's population is that families living in the public housing complex are having fewer children. According to the 2010 U.S. Census, the age groups with the largest decrease from 2000 to 2010 within Tract 133.01 are under five years and between five and nine years old. Furthermore, from 2000 to 2010, the number of 1-person households on Tract 133.01 increased by over 23% percent, while the number of 3-person, 4-person, 5-person, and 7-person households decreased over the same time span.

Altogether, only half of the eight census tracts within the study area experienced a growth in population from 2000 to 2010. The study area's overall growth rate is relatively small compared to that of the larger North Shore study geography (10.9 percent) as well as that of Staten Island (5.6 percent). In fact, New York City as a whole saw a 2.1 percent increase in population from 2000 to 2010. Staten Island outpaced all other boroughs in the growth rate during that time period.

In contrast to the borough-wide demographics, the West Brighton BOA study area is a more

Map 3.4 West Brighton BOA Study Area Census Tracts



racially diverse community (Figure 3.1). According to the 2010 U.S. Census, the white population made up 64 percent of Staten Island's population, but only 23 percent of the BOA population. The black, non-Hispanic population is the largest race group in the BOA, at 36.1 percent, and Hispanics are overwhelmingly the fastest growing subset of the population. By 2010, the Hispanic population accounted for 33.8 percent of the study area population, a 38.5 percent increase from 2000. Conversely, the white population in the BOA declined by nearly 20 percent from 2000 to 2010. Small but significant Asian (4.1 percent) and mixed (2.7 percent) populations round out the study area's racial makeup. Among the Asian population, Chinese predominate, with nearly 43 percent of the total subset population. Other

significant groups include those from the Indian subcontinent (India, Pakistan, Bangladesh, and Sri Lanka). The BOA and its surrounding communities are home to New York City's largest Sri Lankan population.

The demographic changes in the BOA study area reflect the changing demographics in both Staten Island and New York City. From 2000 to 2010, the Hispanic population in Staten Island increased by over 51 percent. Hispanic is also the fastest growing race group in New York City and grew by 8.1 percent in the same time frame. This growth of the Hispanic populations in both Staten Island and New York City corresponded with a decrease in the white population.

Like most of New York City, the BOA has a

large population of foreign-born individuals when compared to the rest of the United States. Altogether, 16.9 percent of the BOA population is foreign born. The foreign-born share of the population is greatest in tracts 9, 11, 77, and 133.02. Tract 133.01 is the only geography with less than 10 percent of its population being foreign-born. Among the foreign-born population in all census tracts, Mexico is the predominate place of origin.

English is the predominant language for 70 percent of the BOA's population. Twenty percent of the BOA speaks Spanish, and 8 percent of the BOA population speaks Indo-European and Asian languages (Figure 3.2).

In comparison to Staten Island and New

Table 3.1 Population Change from 2000 to 2010: 2000 and 2010 U.S. Census

	2000	2010	Total Change	% Change
BOA-Wide	24,974	25,995	1,021	3.9%
Staten Island	443,728	468,730	25,002	5.6%
NYC	8,008,278	8,175,133	166,855	2.1%

Figure 3.1 Race/Ethnicity: 2009-2013 American Community Survey (ACS)

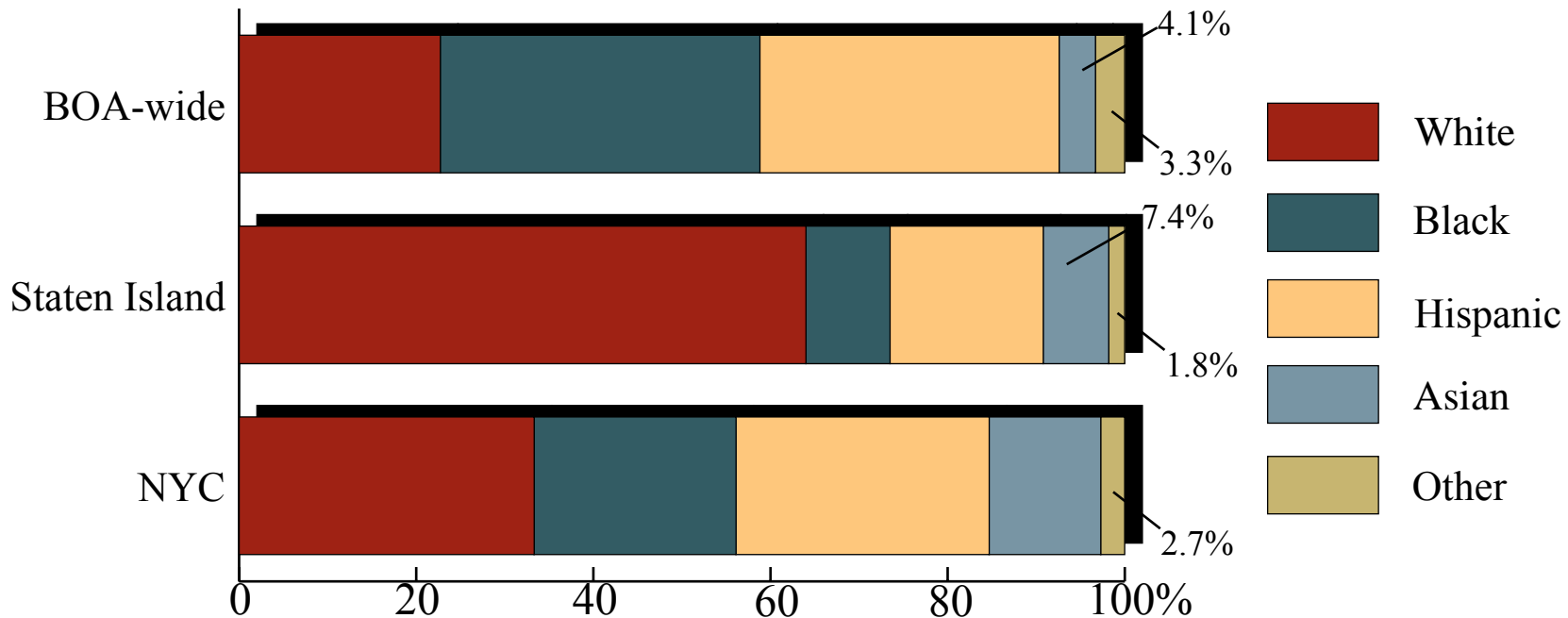


Figure 3.2 Language Spoken at Home: 2009-2013 ACS

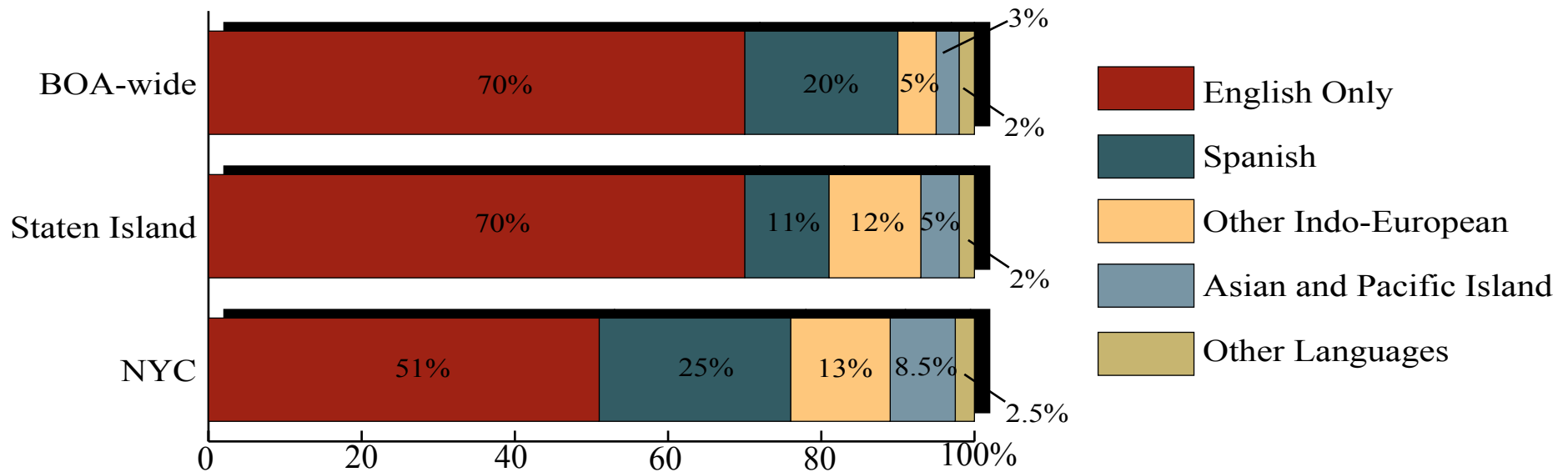
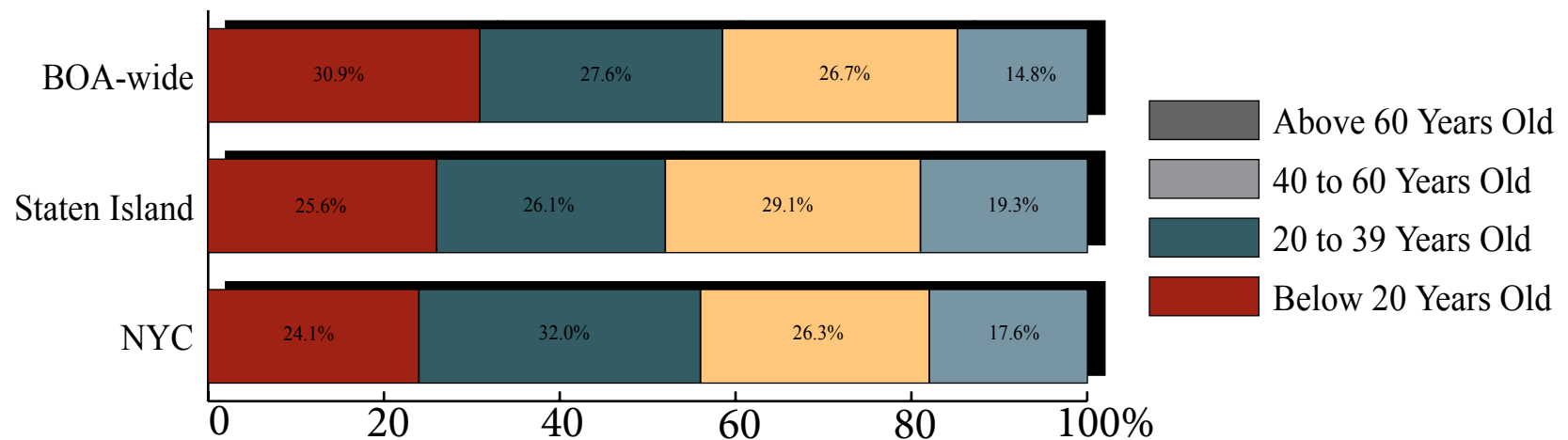


Figure 3.3 Age: (2009-2013 ACS)



York City, the population living in the BOA is relatively young (Figure 3.3). In 2010, the median age of Staten Island and New York City residents were 38.4 and 35.5, respectively. The median age of residents living in the BOA in 2010 was 33.3. Furthermore, nearly 30 percent of the BOA's population is below the age of 20, and almost 60% of the study area's population is below the age of 40. Only 14.3 percent of the BOA is 60 years or older.

Economic and Employment Indicators

The West Brighton BOA is a community with substantial variation in economic and employment indicators. The median household income in some of the study area's census tracts exceeds that of New York City (\$52,259) and Staten Island (\$72,569) while others fall well short (Figure 3.4). Of the two BOA census tracts with higher median incomes than the rest of the city (Tracts 97 and 9), Tract 97 is the wealthiest, with a median income of \$72,813. Tracts 133.02 and 77 have a median income of \$51,923 and \$48,413, respectively, putting these census tracts just below the median for New York City. Each of the remaining four census tracts is considerably poorer than the rest of the city as a whole. Tracts 7 and 11 have a median income in the low-\$40,000 range, while Tract 81 has a median income of \$30,417. The median household income in Tract 133.01 is just \$14,710. Tract 133.01 is considerably poorer than all other census tracts and is one of the city's poorest tracts. In fact, the median income of Tract 133.01 is only \$4,000 greater than the median income of Tract 910 in the Brownsville neighborhood of Brooklyn, which was the poorest census tract in New York City in 2014. The income disparity between the census tracts is mostly likely due to the

concentration of public housing on some census tracts and the historical development patterns and zoning regulations discussed further in the Zoning and Historic or Archaeologically Significant Areas sections of this report.

Because the income statistics from the Census Bureau do not reflect noncash benefits, such as food stamps, health benefits, and subsidized housing, it is important to note these items and their relationship to income. According to the 2009-2013 ACS, the census tracts in the West Brighton BOA study area with the highest percentage of households that received Food Stamp or SNAP benefits in the past 12 months are 77, 81, and 133.01. One reason for the large amount of households with SNAP benefits in these areas is that census tracts 77, 81, and 133.01 have some of the lowest median incomes in the study area; therefore, many households living in these census tracts qualify for Food Stamp benefits. Additionally, census tracts 77, 81, and 133.01 have the lowest number of foreign-born citizens that are not U.S. citizens in the study area. Some eligible, lawfully-present non-citizens are eligible for SNAP benefits, but may need to undergo a waiting period before obtaining SNAP benefits, per the United States Department of Agriculture.

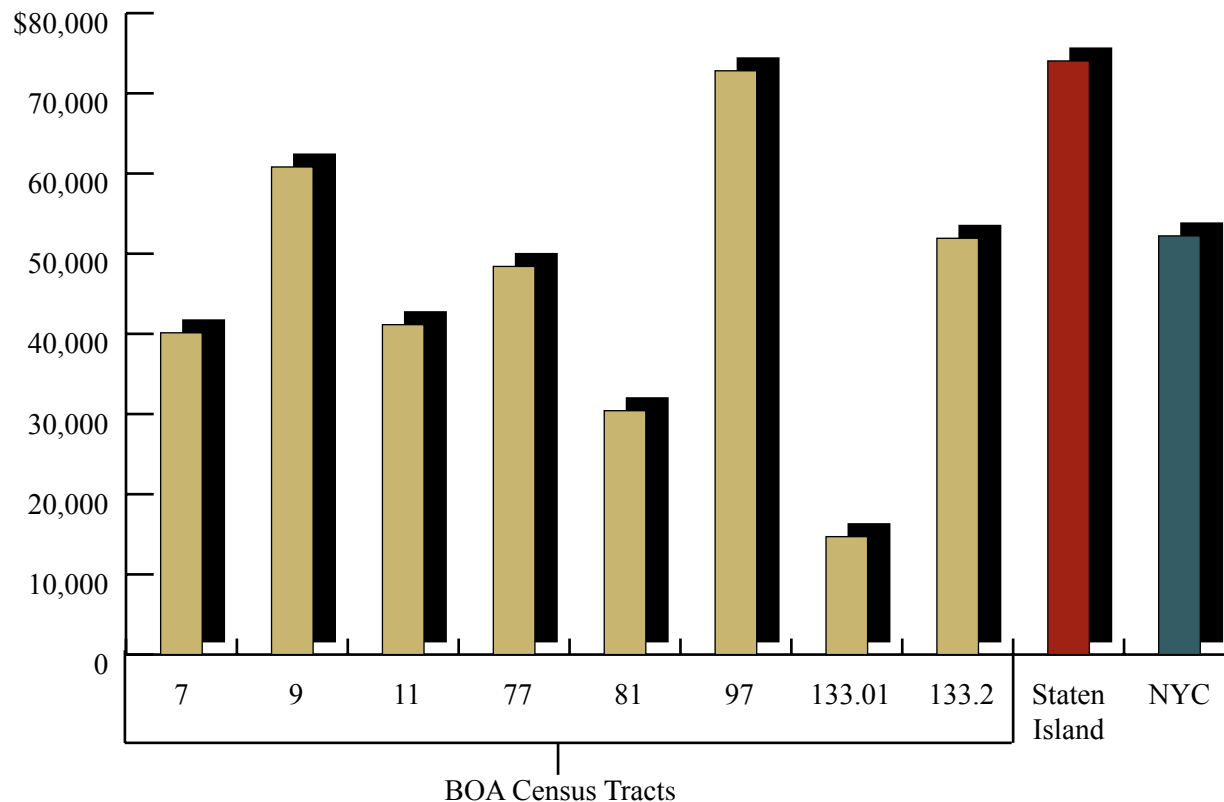
The wide variation of incomes across the West Brighton BOA corresponds with a disparity between the educational attainment levels of the census tracts in the BOA (Figure 3.5). For example, in 2013, about 29 percent of the population living in Tract 133.01, the poorest census tract in the BOA, had at least an associate's degree. In contrast to people living in Tract 133.01, the residents of Tract 97 reported significantly higher incomes and

were more likely to have at least an associate's degree (43 percent). Overall, a large portion of the study area population – 18 percent – lacks a high school diploma. Twenty-seven percent of the adult population are high school graduates, while 28 percent have a bachelor's degree or a graduate/professional degree.

The occupation statistics of West Brighton BOA residents closely resemble citywide trends. The largest portion of the BOA, at 38.9 percent, is composed of workers in management, business, science and the arts, and service workers (23.32 percent), and those in sales and office positions (19.5 percent) account for the next largest shares of both BOA and citywide employment. About 7.4 percent of residents work in the natural resource, construction, and maintenance work industries, while production, transportation, and material moving accounts for the remaining 10.9 percent of the population in the BOA. As would be expected, census tracts with the lowest median income have a predominately service-oriented workforce. Conversely, more than half of the workers living in Tract 97, which has the highest median income in the BOA, are in management, business, science and the arts.

The maritime industry also accounts for many of the jobs in the BOA. The 2012 U.S. Census Bureau's County Business Patterns reports that the BOA contains about seven maritime firms that hire as few as 1 to 4 employees and as many as 100 to 249 employees (Table 3.2). Because the U.S. Census Bureau does not collect County Business Patterns data at a census tract level, the following information for the West Brighton BOA study area represents the number of establishments in the 10310 and 10301 zip codes, which encompass the study

Figure 3.4 Median Income: 2009-2013 ACS



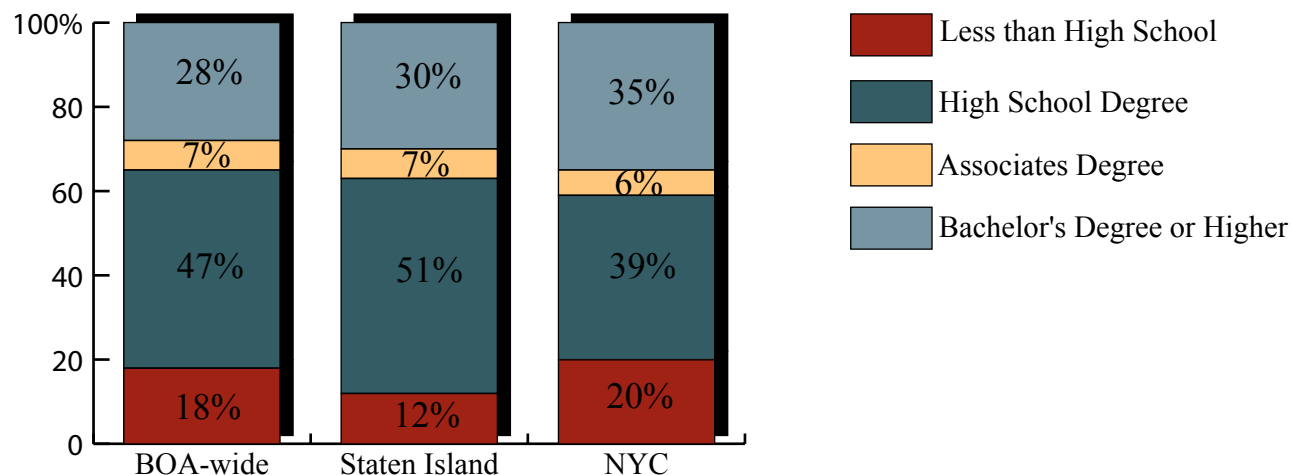
area.

Five-year estimates from the 2013 ACS indicate that unemployment rates in the West Brighton BOA study area, as an average, are slightly higher than city-wide averages and considerably higher than borough-wide averages (Figure 3.6). Unemployment in the BOA is estimated at 12.1 percent, versus 10.6 percent city-wide. Over the same time period, Staten Island's unemployment rate was 7.9 percent. Further analysis indicates that, like with household income, there is vast disparity among individual census tracts in the BOA. Tracts 77 and 7 exhibit the lowest unemployment rates, at 7.7 percent and 8.1 percent, respectively. Two census tracts, 97 and 133.01, had an unemployment rate above the city-wide average, while Tract 133.01 had an unemployment rate of 48.2 percent.

HOUSING TRENDS

According to the 2010 U.S. Census, there are 10,266 housing units in the West Brighton BOA. The percentage of renter-occupied housing units (60 percent) in the BOA is higher than the percentage of owner-occupied housing units (29.8 percent) (Figure 3.7). In contrast to the West Brighton BOA study area, Staten Island has a significantly lower percentage of renter-occupied housing units (35.9 percent) and higher owner-occupied housing units (64.1 percent). Vacancy rates among both owner- and renter-occupied housing vary widely across the BOA. Tract 77 has a homeowner vacancy rate of 11.2 percent, while Tracts 9, 77, 81 and 133.02 exhibit a vacancy rate between 4 and 5 percent. Rental vacancy rates range from 1.5 to over 11 percent in the BOA, with Tract 9 having an 11.7 percent vacancy rate, the highest in the study area. The homeowner and rental vacancy

Figure 3.5 Education : 2009-2013 ACS



rates of Staten Island are 1.4 and 5.6 percent, respectively.

Staten Island is the most suburban of the five New York City boroughs and is predominately composed of detached single-family homes. The North Shore, however, is the oldest and densest part of the island and has a more diverse mix of residence types than Staten Island in general. According to the New York City Department of Finance's (DOF) Assessment Roll of property on Staten Island, about 44 percent of the BOA's housing stock is classified as one-family detached homes. Two-family homes and residential buildings with three or more families make up about 34 percent and 10 percent of the housing stock, respectively.

New York City has some of the highest housing costs in the United States. While the BOA is generally more affordable than other areas of New York City, housing prices for both renters and owners remain high. The 2009-2013 ACS estimates that a majority of owner-occupied homes fall within the \$300,000-\$499,000 range. About 14 percent of homes in the BOA are priced above \$500,000, while roughly 30 percent are below \$300,000. Among renter-occupied homes, more than 50 percent have monthly rents of more than \$1,000, putting the study area on par with Staten Island and the rest of New York City. However, the North Shore and Staten Island generally do not see rents approaching what is found in other boroughs, particularly parts of Brooklyn and Queens, and all of Manhattan.

3.2 INVENTORY AND ANALYSIS

EXISTING LAND USE

The West Brighton BOA is made up of a

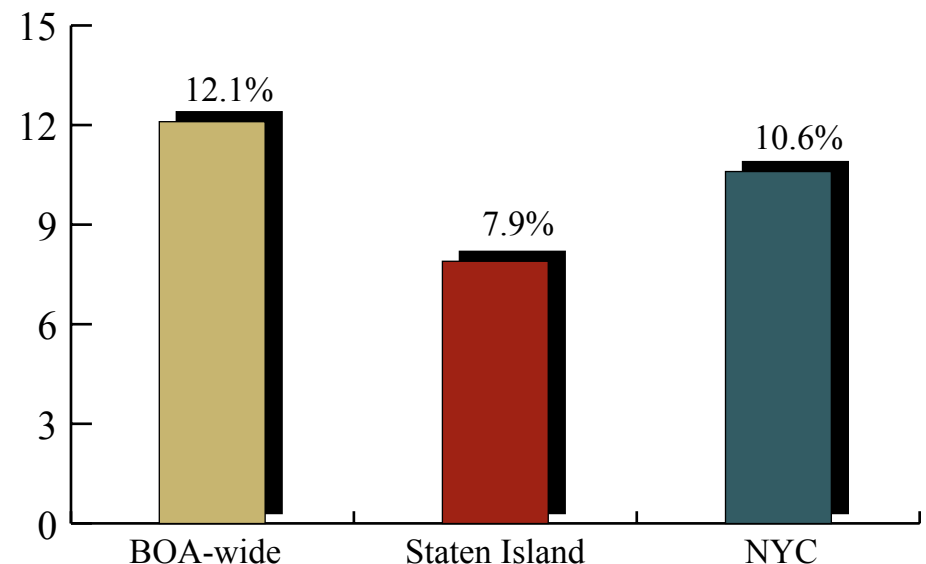
Industry Code	Description	Total Establishments	Nuner of Employees					
			1-4	5-9	10-19	20-49	50-99	100-249
336611	Ship Building and Repair	3	1	0	1	0	0	1
483113	Coastal and Great Lakes Freight Transportation	1	0	0	1	0	0	0
488390	Other Support Activities for Water Transporation	2	1	0	0	1	0	0
488330	Navigational Services to Shipping	1	0	0	0	1	0	0

Source: 2012 U.S. Census Bureau's County Business Patterns for Zip Codes 10310 and 10301

diverse range of land uses. Through its PLUTO database, New York City classifies 11 different land use categories: one- and two-family buildings, multi-family walkup buildings, multi-family elevator buildings, mixed commercial/residential buildings, commercial/office buildings, industrial/manufacturing, transportation/utility, public facilities and institutions, open space, parking facilities, and vacant land. Within the BOA, nearly a quarter of the land area is dedicated to residential uses, with an even split among one-family buildings and multi-family buildings and housing developments. Industrial and manufacturing uses account for 11.4% of uses within the BOA.

However, a broader definition of industrial land use that includes transportation, utility, parking, and vacant (primarily formerly industrial within the BOA) property occupies nearly 38% of land in the BOA. Open space, anchored by the 83-

Figure 3.6 Unemployment Rate: 2009-2013 ACS



acre Snug Harbor Cultural Center and Botanical Garden, represents a third of all land in the BOA. Commercial retail uses, which serve a critical importance to planning for a healthy, economically viable community in the BOA, consist of only 2% of land in the area.

Industrial uses span the bulk of the BOA waterfront and include a number of upland clusters. Historically, these industrial uses were almost all maritime businesses; however, the industrial property in the BOA is now split 44 between a small number of large maritime companies and a large number of small non-maritime uses. Anchoring the industrial waterfront are Atlantic Salt, New York City's largest distributor of road salt; Caddell Dry Dock and Repair, one of the Port's largest and most important ship repair and cleaning operations; and the Port Richmond Water Pollution Control Plant, a public wastewater treatment facility operated by the New York

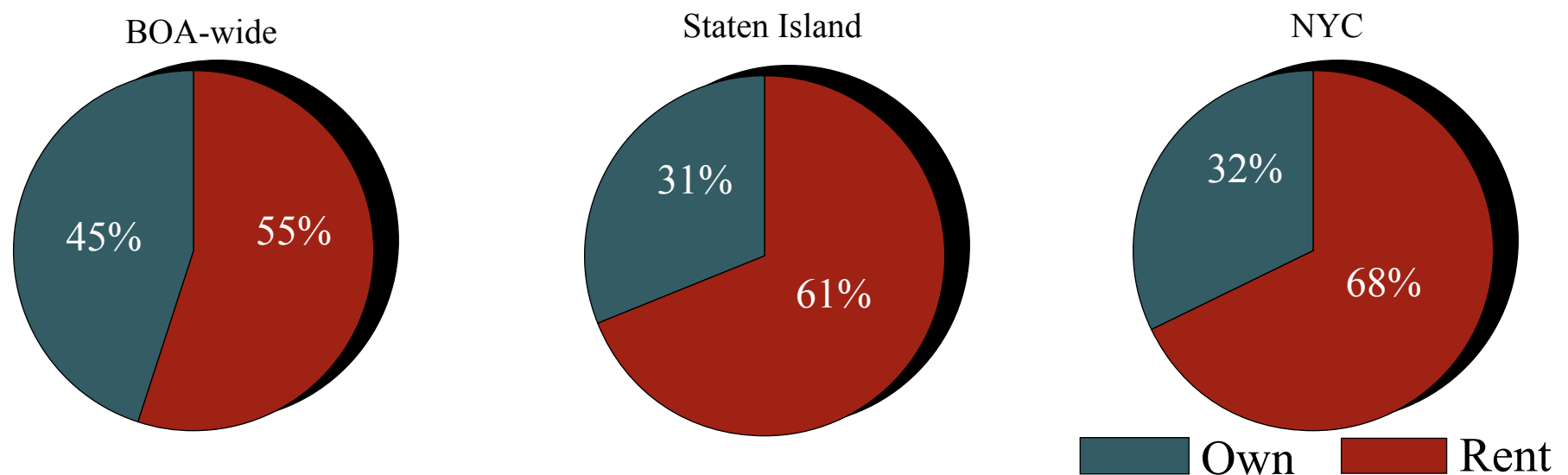
City Department of Environmental Protection (DEP). Occupying the remaining waterfront and upland industrial properties are a mixture of non-maritime uses, including auto-related uses, a Con Edison facility, construction and demolition debris processors, warehousing, recyclers, and artisanal workshops.

The residential character of the West Brighton BOA is composed of a mix of one- and two-family buildings and larger multi-family housing buildings, including a number of large-scale housing developments. The vast majority of the one- and two-family homes in the BOA was built within a five decade period between 1890 and 1940 and was a direct result of critical infrastructure improvements to the North Shore, including the introduction of trolley cars to Staten Island in 1895. A modest number of multi-family buildings, primarily three and four-story apartment buildings were constructed in the early twentieth century, reflecting similar

development patterns in New York City's first order, outer-borough suburbs.

Three large public housing developments built after 1960 and containing more than 100 units apiece represent the remainder of the multi-family residential land uses in the BOA. The first public housing development constructed in the study area was West Brighton I, which was completed in 1962. According to Sanborn maps from 1885, the West Brighton Houses replaced a cluster of residential and commercial buildings and playground that resided just south of the former Barrett, Nephews & Co. Old Staten Island Dyeing Establishment. The second public housing development constructed in the BOA is the Richmond Terrace Houses, which consist of six 8-story buildings and are bordered by Richmond Terrace, Jersey Street, and Crescent Street. The Richmond Terrace Houses opened in 1964 on the former site of the Irving Manufacturing Co. industrial building,

Figure 3.7 Home Ownership



which was used for silk production.

Very little residential development, however, has occurred in the area in recent decades, the exception being the demolition of a former New York City Housing Authority (NYCHA) development located on Richmond Terrace and between North Burgher Avenue and Broadway. The development was built during World War II to provide temporary housing for workers employed under defense contracts at nearby shipyards worker housing. A private-public partnership between NYCHA, the New York City Department of Housing Preservation and Development (HPD), the Arker Companies, the Domain Companies, and Neighborhood Housing Services of Staten Island led the replacement of this facility with a mixed-income Markham Gardens development at Broadway and Richmond Terrace.

As noted previously, only a slight percentage of the BOA is used for commercial purposes. A neighborhood commercial corridor exists on the south end of Jersey Street and is primarily composed of local services such as salons, bars, restaurants, convenience stores and hardware stores. The remainder of the commercial land uses in the BOA are scattered and located primarily along Richmond Terrace and at a small commercial cluster on Westervelt Avenue that serves the surrounding neighborhood. Many of these stores struggle to compete with shopping centers located within Staten Island and the metropolitan area, resulting in a high number of vacant storefronts. Notably, as part of its FRESH Food Stores program, DCP identified more than half of the West Brighton BOA as a high needs area for grocery stores and supermarkets.

Both an asset and a challenge for the BOA

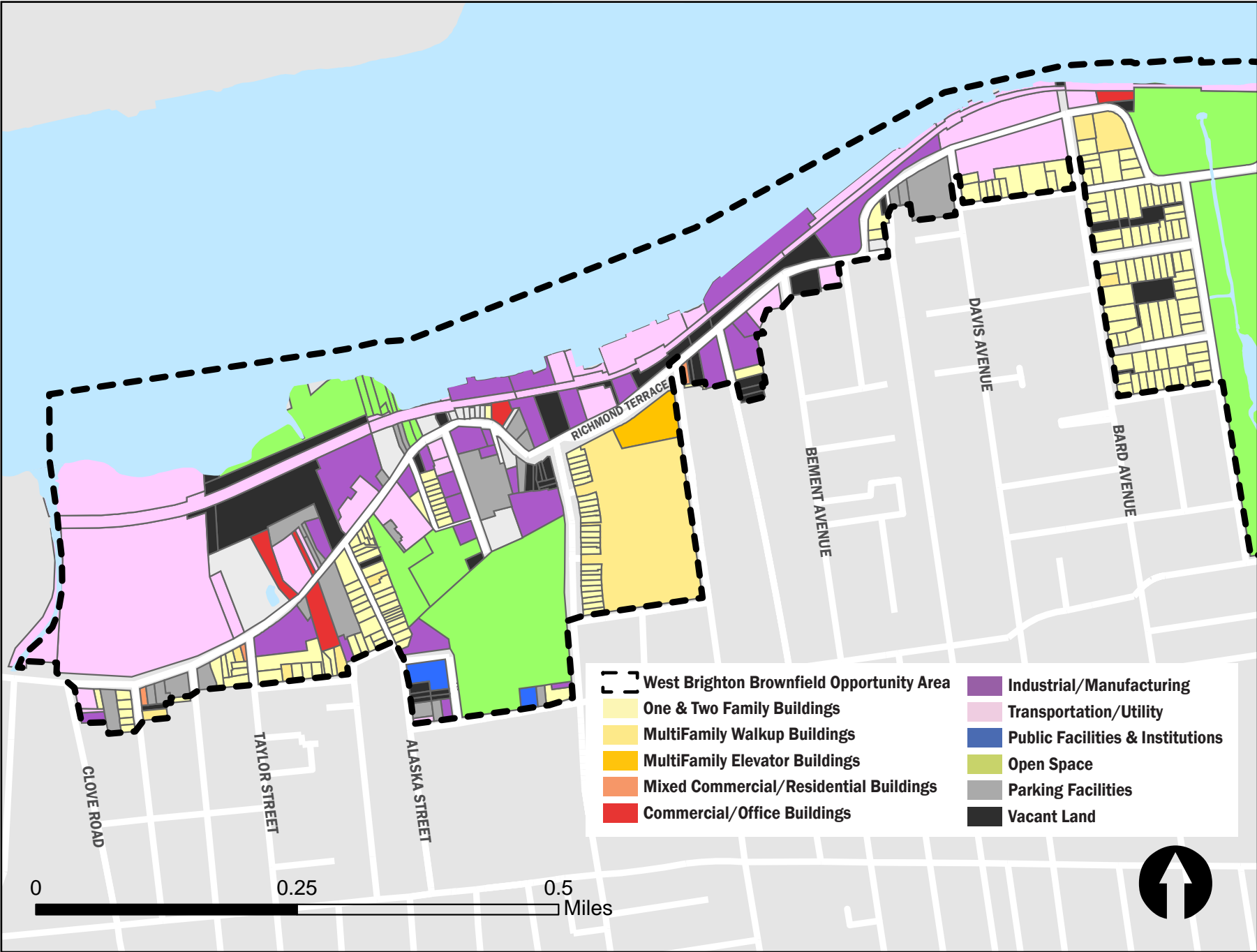


Image 3.5 Caddell Dry Dock and Repair

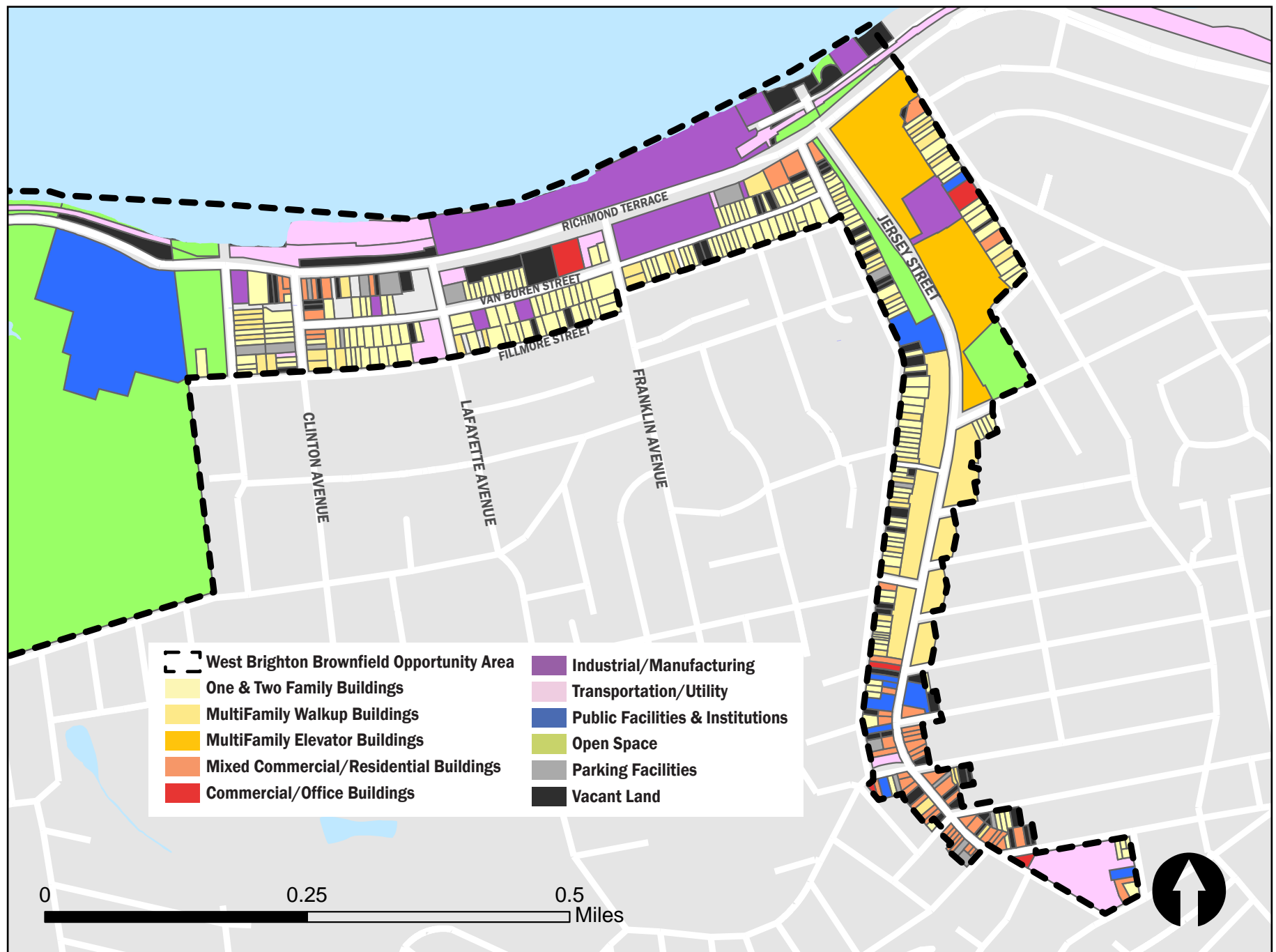
is the role of open space in the area. While a relatively large portion of the BOA – 33 percent – is dedicated to open space, most of the sites along the waterfront remain difficult to access and limited in terms of their programmatic

offerings. Of considerable significance is Snug Harbor Cultural Center and Botanical Garden and Heritage Park. Snug Harbor is a regional destination and serves as one of Staten Island's premier cultural and tourist attractions, but

Map 3.5 Land Use - West Brighton Subarea



Map 3.6 Land Use - New Brighton and Jersey Street Subareas





offers limited recreational facilities. Similarly, Heritage Park, a former brownfield site that opened to the public in 2014 after extensive remediation, does not offer any recreational sites. The only two open spaces in the BOA that offer recreational activities are Walker Park and Corporal Thompson. Walker Park contains playground facilities, basketball courts, tennis courts, and a baseball field along with serving as the home ground for the Staten Island Cricket Club, one of the oldest continuous cricket clubs in the United States. The facilities of Corporal Thompson Park include a soccer field, baseball field, and playground.

Of the remaining land uses in the BOA, it is important to note that nine percent of all property in the BOA is undeveloped vacant land. These vacant properties include a mix of formerly residential, commercial and industrial uses. About 47 percent of these vacant lots reside in manufacturing zoning districts, while 17 percent of vacant lots in the BOA are located along the waterfront. A significant objective of the BOA will be to repurpose this large inventory of vacant properties.

Land Use Controls

Within the West Brighton BOA there are fourteen unique zoning districts, including residential, commercial, manufacturing, and park lands. Nearly 40 percent of the BOA is mapped in a manufacturing district, including the vast majority of waterfront properties. Additionally, two significant clusters of manufacturing districts are located in upland communities. Thirty-two percent of the BOA is mapped as park land. The prevalence of manufacturing and park land in the area suggests, as has been recommended in previous planning studies for the North Shore, that the BOA can become a model for the healthy, sustainable and economically viable coexistence of recreation and maritime uses along the waterfront. The remaining 30 percent of the BOA is zoned for residential use, with six percent of that portion also mapped as a commercial overlay.

Residential Zoning Districts

The residential areas of the West Brighton BOA consist of seven unique zoning districts: R2, R3-1, R3-2, R3A, R3X, R4, and R5 zoning districts.

R2 districts are designed to accommodate low density developments comprised of single family homes on modest lots with a minimum area of 3,800 square feet. With two parking spaces required per each dwelling unit, R2 districts are some of New York City's least dense districts. One R2 district that starts at Amelia Court and continues south until roughly Forest Avenue encompasses two blocks in the BOA bounded by Kissel Avenue on the east and Bard Avenue on the west. One additional tax lot located immediately east of Snug Harbor is also located within a R2 zoning district that continues as far south as Henderson Avenue and Prospect Avenue.

R3-1 districts are low density districts that permit one- and two-family semi-detached and detached homes. Within the BOA, there is one



small R3-1 zoning district that is located along the waterfront and bounded by Bard Avenue, Richmond Terrace, Snug Harbor, and the Kill Van Kull. Another R3-1 zoning district found in the BOA is located south of Richmond Terrace and between Bement Avenue and the terminuses of Howard Court and Harrison Place. This R3-1 district continues south until roughly the intersection of Bement and Henderson Avenue. Only seven lots in the BOA fall within these R3-1 zoning districts.

R3-2 districts are general residence districts that allow a variety of housing types, including low-rise attached houses, small multi-family apartment houses, and detached and semi-detached one- and two-family residences. It is the lowest density zoning district in New York City in which multiple dwellings are permitted. R3-2 districts are mapped along Richmond Terrace in the western third of the BOA and include the Markham Gardens residential development, the largest housing development in the BOA built in the last forty years.

R3A districts are contextual districts characteristic of many of New York City's older neighborhoods. Characterized by modest single- and two-family detached residences on narrow zoning lots, this district is mapped in the West Brighton neighborhood in the western portion of the BOA and between North Burgher Avenue and Bement Avenue.

R3X districts are low density contextual districts permitting one- and two-family detached homes on lots wider than those permitted in the R3A district. In terms of the number of tax lots, the R3X district is the most prevalent in the BOA and is mapped on York Avenue in the east and in the area surrounding the intersection of Bard Avenue and Richmond

Terrace at the BOA's center.

R4 districts permit all types of housing at a density that is relatively high on the North Shore. The maximum permitted floor area ratio (FAR) in R4 zoning districts is .75, but can be increased by up to 20 percent for attic allowance because all R4 zoning districts in Staten Island are located within a Lower Density Growth Management Area. The maximum building height in R4 zoning districts is 35 feet. Only one tax lot, the New York City Housing Authority's Richmond Terrace development, is mapped R4.

R5 is the highest-density zoning district found in the West Brighton BOA and permits a maximum of 1.25 FAR. R5 zoning districts generally produce three- and four-story attached houses and apartment buildings that provide a transition between lower- and higher-density neighborhoods. R5 zoning districts among the most widely mapped in the lower density areas of Brooklyn, Queens, and the Bronx, but are mapped only intermittently on Staten Island. The largest R5 district on Staten Island includes the BOA's Jersey Street corridor.

Commercial Zoning Districts

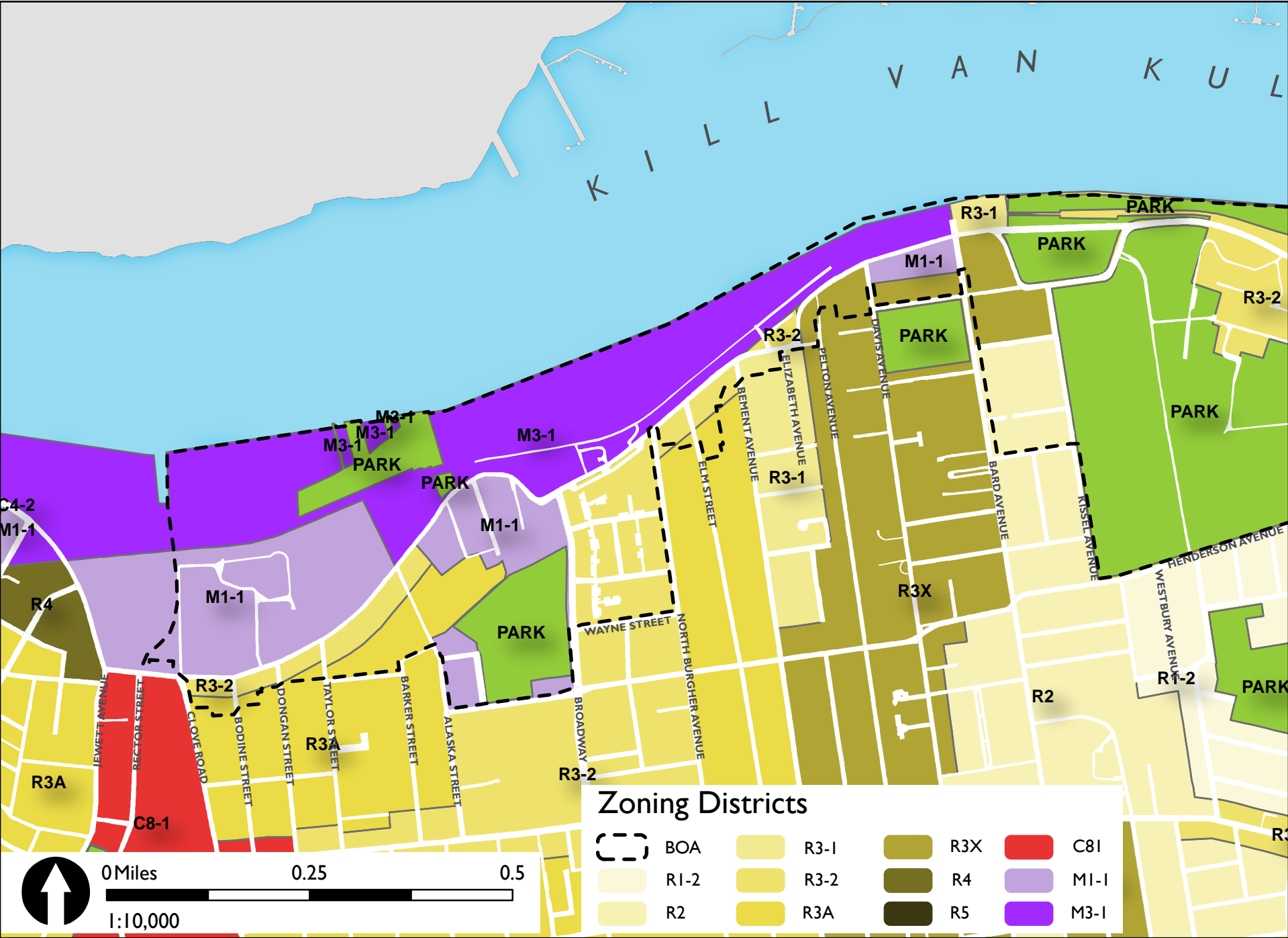
Only a small percentage (6%) of the West Brighton BOA is zoned for commercial uses. These areas are identified as commercial overlays, areas mapped within residential districts to serve local retail needs. Both C1 and C2 commercial overlays permit uses such as grocery stores, dry cleaners, and restaurants. C2 districts permit a slightly broader range of uses, including funeral parlors and repair services. Commercial uses in mixed use buildings are limited to one floor, while commercial buildings are limited to two floors

of commercial uses. In Staten Island's Lower Density Growth Management Areas, ground floor retail is required in commercial overlays. This requirement was adopted in 2004 to address the construction of attached residential buildings in commercial areas and a subsequent lost opportunity for local retail to serve the surrounding community.

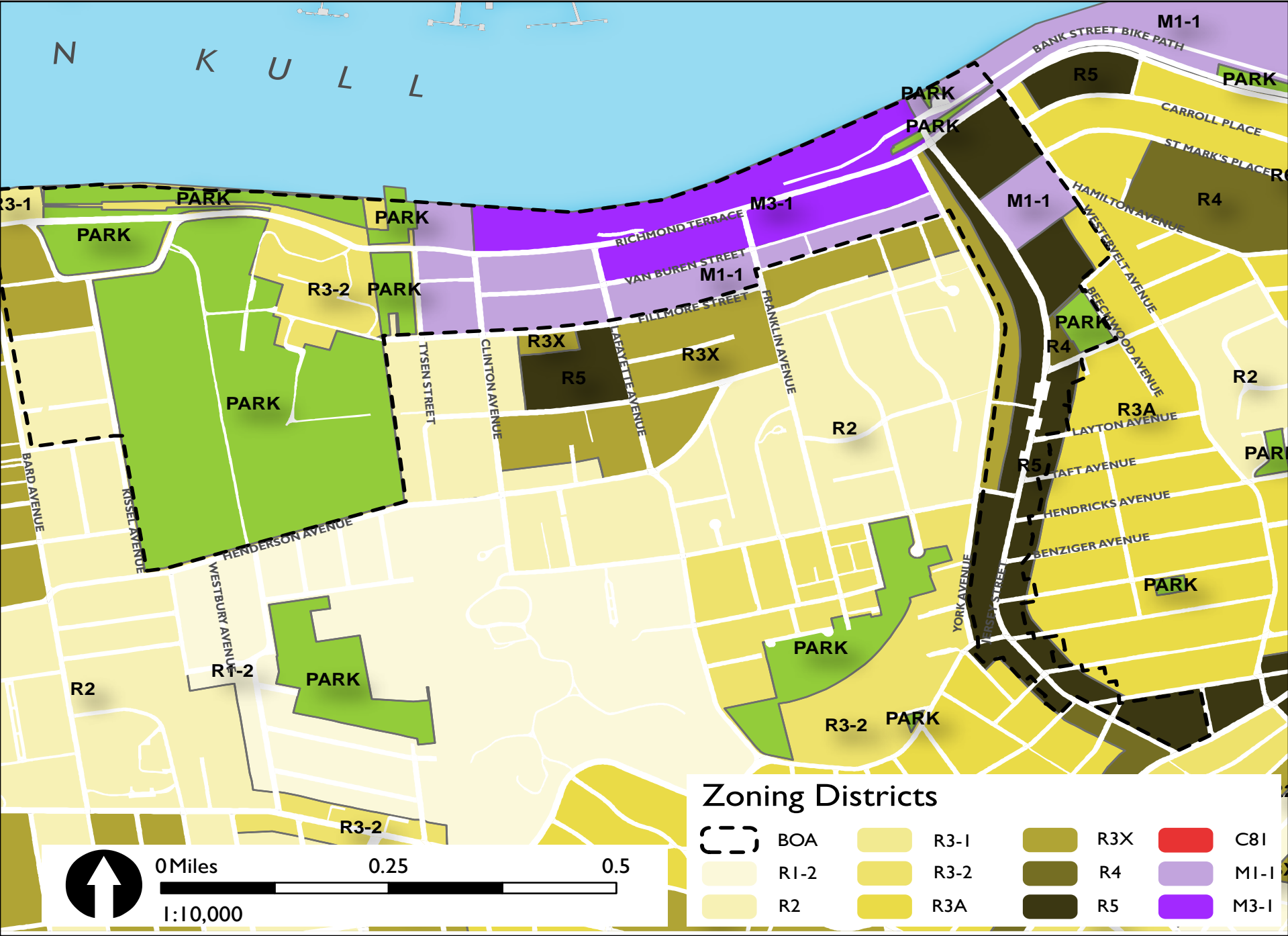
A significant portion of the commercial zoning districts in the West Brighton BOA study area are mapped along Jersey Street. A portion of Jersey Street located between Winter Avenue and Victory Boulevard is mapped as an R5 residential district with a C2-2 overlay, which transitions into an R5 and C1-2 for only one block between Benziger and Winter Avenues. These two overlay districts on Jersey Street are an important commercial resource for the high-need neighborhoods in their vicinity. According to DCP's PLUTO database, a large portion of the lots located within the commercial overlay district have a land use classification of mixed residential and commercial (39 percent), while 22 percent of the lots consist of one and two family homes. Eighteen percent of the lots in the commercial overlay districts is vacant.

The off-street parking requirements of the existing zoning in the West Brighton BOA, however, present challenges to encouraging commercial development on Jersey Street. The lots fronting Jersey Street are small, which makes it difficult for new construction to meet the high parking requirements of C1-2 and C2-2 districts. A waiver for off-street parking spaces is available for commercial developments that require less than 15 parking spaces and for lots that are 4,000 square feet or less, located in C1 and C2 districts mapped within R5 zoning districts, and have existed both on January

Map 3.7 Zoning Districts - West Brighton Subarea



Map 3.8 Zoning Districts - New Brighton and Jersey Street Subareas



18, 2011 and on the date of the application for a building permit. However, according to DCP PLUTO data, the average size of the tax lots fronting Jersey Street and within the commercial overlays is approximately 5,136 square feet, so many sites are ineligible for this waiver of commercial parking requirements. Additionally, existing zoning on Jersey Street also requires off-street parking spaces for residential units within mixed-use buildings that cannot be waived. While parking waivers for small mixed-use buildings are available in higher density districts, such as a C4-2 zoning district, located within low density growth management areas, these waivers are not available in lower density commercial overlay districts (C1 and C2). The waiver is only permitted in areas mapped in low density growth areas and C4-2/R6 zoning districts. Therefore, commercial and mixed-use developments along Jersey Street face high parking requirements that stymie commercial development along Jersey Street.

Non-zoning related issues, such as crime and the perception of crime, also create barriers to the growth of businesses and new commercial developments on Jersey Street. In 2014, the New York Police Department (NYPD) reported 29 crimes along the entire stretch of Jersey Street. The NYPD defines the density of crimes by the number crimes at each intersection or street segment per the total residential population within the precinct boundaries. According to the NYPD and the New York City Crime Map, Jersey Street has moderate level of crime per 1,000 residents in comparison to other neighborhoods in New York City. Most of these crimes occurred in the mixed commercial and residential area between Layton Avenue and Victory Boulevard. Concentrations of crime

can affect businesses by discouraging shoppers from visiting or returning to area or through the loss of stolen or damaged property.

Another non-zoning related issue that deters commercial growth on Jersey Street is the automobile -centric culture on Staten Island. Many Staten Islanders find it more convenient to shop at locations where ample off-street parking is provided. Furthermore, the limited retail options in the BOA forces residents to drive to use their cars for most shopping trips. As a result, property owners are pressured to provide off-street parking spaces in order to compete with the automobile-oriented commercial developments in other parts of Staten Island.

The remaining commercial zoning districts in the study area include a small C2-2 district between Bement Avenue and North Burgher Avenue in the Livingston neighborhood and a C2-2 overlay mapped within an R3-2 district immediately south of Richmond Terrace in the West Brighton neighborhood and roughly between Tompkins Court and Clove Road. Despite being mapped within a commercial district, these areas contain very few commercial uses and are characterized by industrial uses and vacant land.

Manufacturing Zoning Districts

As noted previously, manufacturing zoning districts account for nearly 40 percent of the West Brighton BOA's land area. M1-1 and M3-1 districts comprise the totality of these manufacturing lands. M1 districts typically include light industrial uses, such as small manufacturers, repair shops, and wholesale service and storage facilities. Nearly all new industrial uses are allowed in M1 districts if

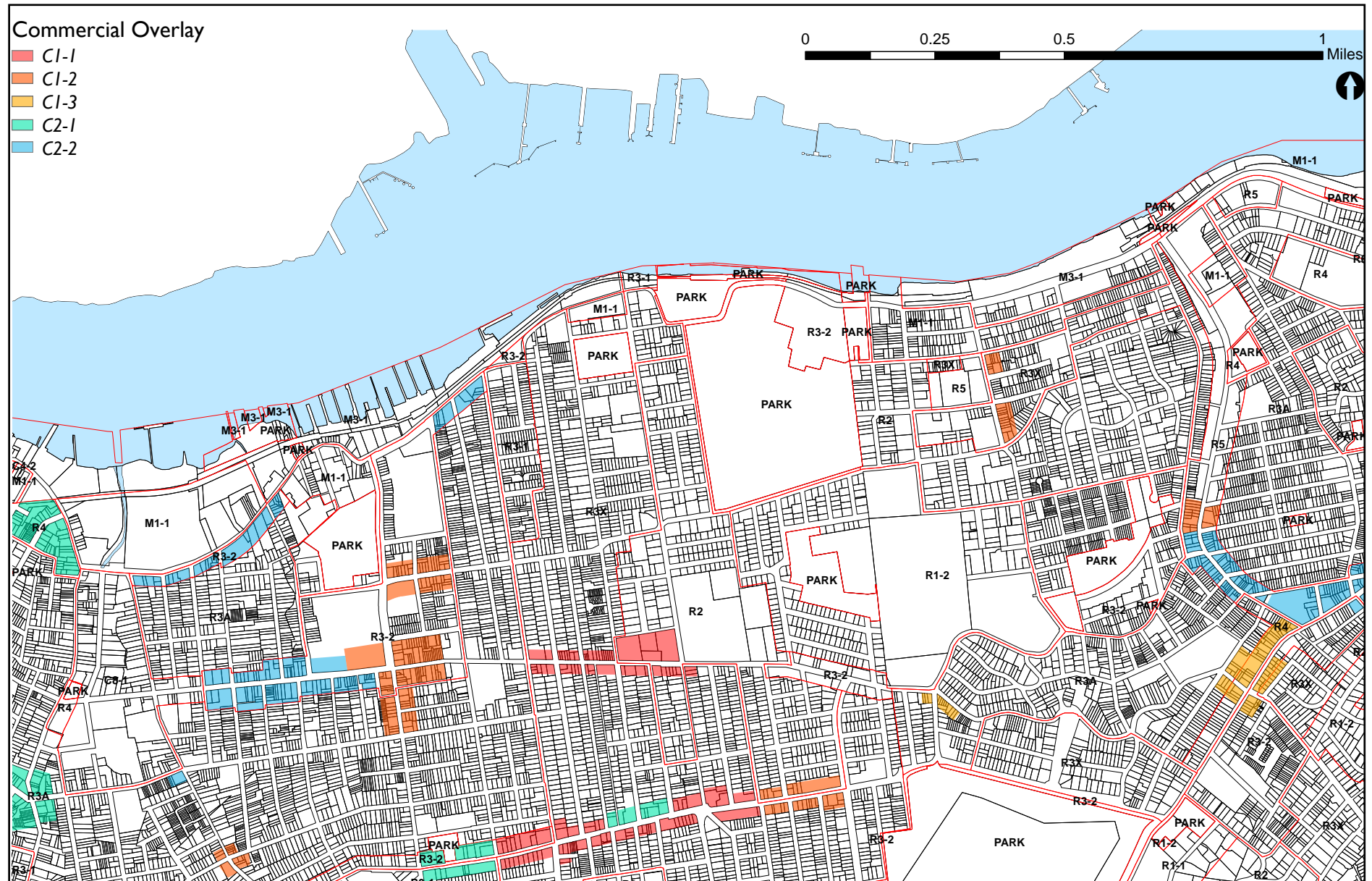
they meet M1 performance standards, which include minimum or maximum allowable limits on noise, vibration, smoke, odor, and other effects of industrial uses set forth in the New York City Zoning Resolution. Offices, hotels, most retail uses and a limited range of community facilities are permitted in M1 districts. In contrast to M1 districts, M3-1 districts permit more noxious uses that are subject to less stringent performance requirements.

Within the BOA, M1-1 districts are mapped extensively and anchor its eastern and western edges. The area north of Richmond Terrace that follows Staten Island's coastline is mapped as a M3-1 zoning district. Despite being zoned for manufacturing uses, the area in the New Brighton subarea, between Westervelt Avenue and Snug Harbor, is comprised mostly of residential land uses. Rezoning of these lots to a more appropriate residential zoning district will preclude the establishment of any future manufacturing uses on lots adjacent to these existing residential uses. The western M1-1 district is mapped in the West Brighton neighborhood, on both waterfront and upland tax lots. A small, one-lot M1-1 district is mapped at the center of the BOA, on Richmond Terrace between Bard Avenue and Davis Avenue.

Lower Density Growth Management Area

Mapped in 2004, a Lower Density Growth Management Area (LDGMA) is a designated area that preserves the lower density character of neighborhoods facing rapid growth. LDGMAs generally have limited mass transit and high auto ownership. New developments in LDGMAs must provide more off-street parking, larger yards and more open space

Map 3.9 West Brighton BOA Commerical Zoning Districts



than would otherwise be required in the mapped zoning districts. All residential zoning districts in Staten Island and the BOA up to R5 are designated as LDGMAs. Therefore,

the only residential zoning district in the BOA that is not mapped within LDGMA is the R5 zoning district mapped along Jersey Street. Additionally, LDGMA designation

requires ground floor retail in mixed use buildings within areas that are also covered by commercial overlays in Staten Island.

Waterfront Revitalization Program

The North Shore Priority Maritime Activity Zone (PMAZ) stretches from Howland Hook in the west to New Brighton on the shoreline, with breaks at several non-bulkheaded areas such as Snug Harbor, Faber Park, Richmond Terrace Wetlands, and Mariners Marsh. All privately-owned waterfront property in the West Brighton BOA is designated as a PMAZ. Established in 2012, PMAZs are special area designations that assist the City's Waterfront Revitalization Program (WRP). The WRP is the New York City's principal coastal zone regulatory review and management tool. It establishes the City's policies for development and use of the waterfront and provides the framework for evaluating the consistency of local, state, and federal discretionary actions in the designated coastal zone. Areas with a concentration of water-dependent activity or sites that are key nodes in the waterborne transportation network, and which have the infrastructure to support these uses, have been designated as PMAZs. These shorelines are used for vessel docking, berthing, or tie-ups and the shoreline infrastructure, such as bulkheads, docks, piers, and fendering, is designed to support such uses. For purposes of maintaining New York City's waterborne transportation network, actions that affect the design of shoreline structures, in-water structures, and other pieces of infrastructure within the PMAZs should prioritize designs that accommodate water-dependent uses.

Hillsides Preservation District

A significant portion, including the entire Jersey Street, Westervelt Avenue, and Snug Harbor areas, of the West Brighton BOA are included in the Special Hillsides Preservation District,

which was established in 1987. The Hillsides Preservation District guides development in the steep slope areas of Staten Island's Serpentine Ridge, an area of approximately 1,900 acres in the northeastern part of the borough. The purpose of the district is to reduce hillside erosion, landslides and excessive storm water runoff by preserving the area's hilly terrain, trees, and vegetation. The primary means of regulating development in the district is to control the amount of the lot that can be covered by a building. As the development site becomes steeper, permitted lot coverage decreases (although the permissible floor area remains the same). This may result in a taller buildings, but the structures would have less of an impact on the area's steep slopes and natural features. There are special regulations for the removal of trees, grading of land, and construction of driveways and private roads in the Special Hillsides Preservation District.

Land Ownership

The West Brighton BOA has a total area of 370 acres (16,097,733 sq. ft.), 96 percent of which is on land; the remaining four percent are located in the waters of the Kill Van Kull. Road surfaces account for 16.5 percent (2,670,799 sq. ft.) of the BOA's total area. The remaining 293 acres (12,779,218 sq. ft.) is split somewhat evenly between publicly-owned land (47%) and privately-owned land (53%).

Privately-owned lands range in size from just a few hundred square feet to lots of more than 400,000 square feet. Additionally, multiple landowners own agglomerations of large tax lots. Generally, the largest privately-owned lands in the BOA are on the waterfront, here defined as those properties north of Richmond Terrace.

The area's largest landowner, Caddell Dry Dock and Repair, owns over 24 acres (1,064,530 sq. ft.). Caddell operates piers that process ship cleanings and repairs, in addition to storage, office, personnel, and parking space. Atlantic Salt, another prominent waterfront property owner, manages property on the West Brighton waterfront that total more than 500,000 sq. ft. in area. A number of other waterfront and upland properties exceed 50,000 square feet in land area. The largest non-industrial landowner is Markham Gardens L.P., a New York Limited Partnership, and Markham Gardens Tenants Housing Development Fund Company, Inc., a not-for profit corporation, that own and manage a large housing development at the intersection of Broadway and Richmond Terrace.

A collection of New York City agencies account for the vast majority of publicly-owned land in the West Brighton BOA (Map 3.10). NYCHA owns two tax lots at its Richmond Terrace Houses complex that total 378,963 sq. ft. The Department of Sanitation owns a large tax lot of 107,336 sq. ft. on Jersey Street that it uses as a garage. The public agency with the largest amount of property in the West Brighton BOA is the Department of Parks and Recreation (DPR). Anchored by its holdings at Snug Harbor, DPR owns 3,708,993 sq. ft. in the study area. The Department of Cultural Affairs, which supervises the nonprofit Snug Harbor Cultural Center and Botanical Gardens, owns a large parcel within that campus that totals 424,478 sq. ft. The North Shore Railroad Right-of-Way (ROW), owned by the Department of Small Business Services (SBS) and operated by the New York City Economic Development Corporation (NYCEDC), ranges from 20 to 70 feet wide and comprises 10 tax lots that total 383,618 sq. ft. Portions of the ROW

bisect privately owned property. DEP owns 942,586 sq. ft. on four tax lots in the BOA, the vast majority of which is the site of its Port Richmond Wastewater Treatment Facility.

Transportation

As an urban and industrial waterfront community, the West Brighton BOA has a complex, multi-modal transportation network consisting of navigable waterway and roadway infrastructure.

Rail

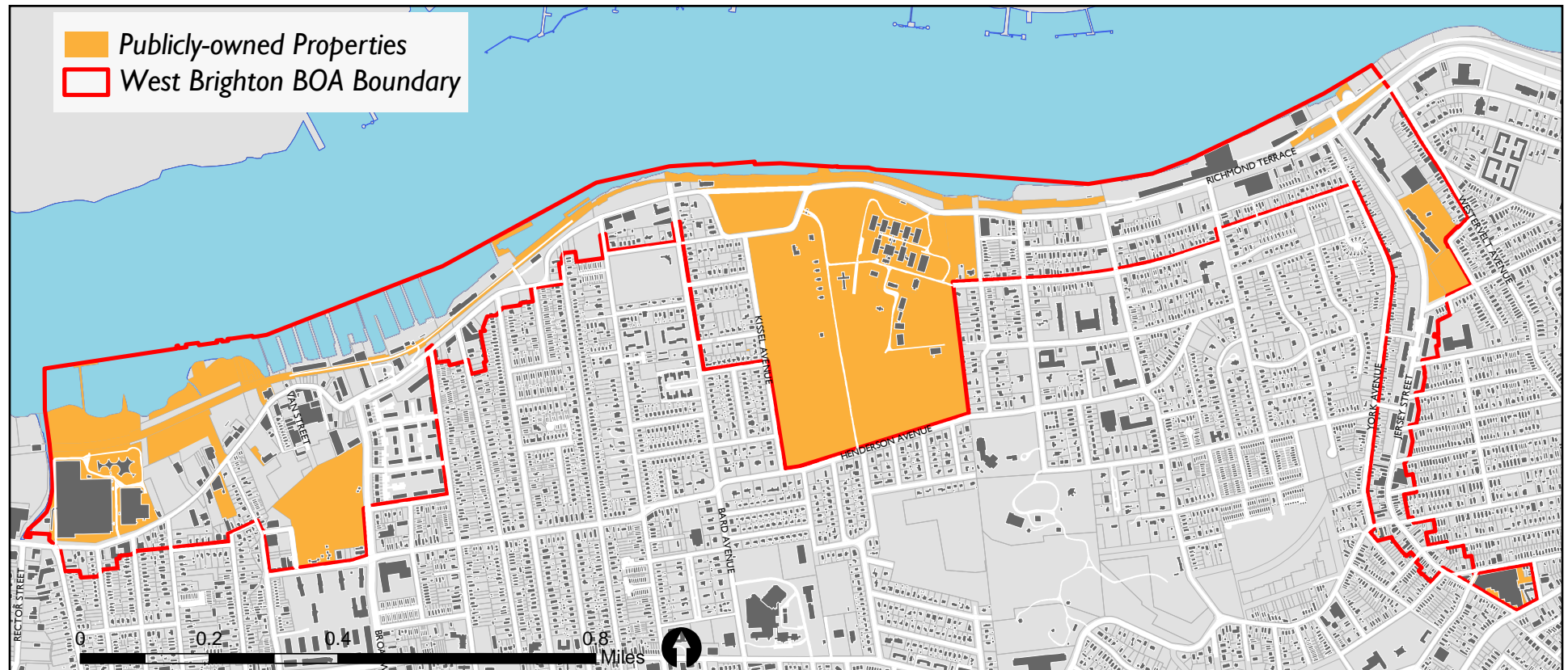
The West Brighton BOA does not contain any

operating railways. However, the abandoned North Shore Railroad Right-of-Way (ROW) traverses the BOA as it connects St. George to Arlington on the western end of the North Shore. While railroad mogul Cornelius Vanderbilt helped start the Staten Island Railway in the early nineteenth century, it was the Baltimore and Ohio Railroad (B&O) that constructed the North Shore line, which opened in 1886. According to the New York City Landmarks Preservation Commission (LPC), the ROW serviced the area's thriving industrial business community and its residents. The rail line extended west to Cranford Junction in New Jersey, providing access to passengers and the

transport of goods to the rest of the country.

Passenger service operated on the North Shore Railway from the railway's inception to 1953, at which point the ridership had fallen dramatically as access to automobiles and buses increased and the area's industrial workforce was reduced as part of the post-war economic industrial decline. Following the discontinuation of passenger service, the North Shore Railway continued to provide service for freight until 1989. Four years later, the NYCEDC acquired most of the properties that make up the right-of-way and its track infrastructure. While the vast majority of

Map 3.10 Publicly-owned Properties



the ROW's length remains abandoned, the far western portion was reopened to freight traffic in 2007, providing access from the New York Container Terminal at Howland Hook to the national railroad network via the newly-renovated Arthur Kill Lift Bridge. Today the line east of Arlington, including the entire stretch through the BOA, remains inactive.

The right-of-way's infrastructure varies in its orientation, alignment, and existing condition, owing mainly to the area's topography and relationship to the waterfront. It is composed of at-grade tracks, viaducts and below-grade tracks and includes several land holdings formerly

used as rail yards and passenger stations. According to Metropolitan Transportation Authority (MTA) site inspections, much of the ROW's infrastructure, including the viaducts and station platforms, is in good condition. Portions of the ROW, however, have been degraded or cleared of track, especially the section of the ROW that traverses the West Brighton BOA (Map 3.11).

Although it once provided businesses along the waterfront with a way to transport goods and services, the ROW currently bisects private waterfront properties and create barriers to future job creation. Both firms have expressed

interest in expanding operations and creating jobs, but have been prevented from doing so due to the uncertainty about the future of the ROW. While NYCEDC has agreements with Caddell Dry Dock and Repair and Atlantic Salt for the maintenance of the ROW and for the provision of material storage in its path, the firms are prohibited from erecting permanent structures on the ROW. Continued uncertainty surrounding the ROW is seen as a potential threat to maritime expansion on the waterfront, with both Caddell and Atlantic Salt advocating for its removal or realignment.

While accommodating community-supported

Map 3.11 North Shore Right-of-Way



maritime businesses is a primary goal for the West Brighton BOA, improving transit is as well. The MTA, along with New York City Transit (NYCT), completed an Alternative Analysis in 2012 detailing a set of alternative transit strategies for the ROW to create a future transit line along the North Shore. Citing significant travel time improvements – up to a 50 percent reduction in some areas of the North Shore – MTA/NYCT concluded that the ROW is best suited for use as a bus rapid transit (BRT) corridor. While there are still advocates for a light rail service along the ROW, the BRT proposal has garnered political and community support, but remains without a funding source. Significantly, however, the initial MTA plan did nothing to address the design issues of the abandoned ROW and the proposal would considerably impede operations on these important maritime sites. Furthermore, the effects of Hurricane Sandy on the North Shore and the rest of Staten Island’s coast highlighted the need for increased resiliency in the island’s transportation network and created serious concerns as to the location of the BRT route in a federally recognized flood zone.

Recognizing all of these concerns, and as part of the West Brighton BOA work program, the DCP coordinated a series of workshops in Summer 2013 with the MTA, a number of city agencies, and major property owners, all of whom expressed an interest in seeing the right-of-way relocated to spur job creation and provide transit services. A solution emerged in which the ROW could be shifted southward to run adjacent and parallel to Richmond Terrace from Broadway into St. George (see Appendix C). Each of the major property owners, Caddell, Snug Harbor and Atlantic Salt, have shown support for the plan, which

would, through a series of land swaps, remove the ROW from the middle to the edge of their properties. Additionally, the workshop proposed a BRT realignment to improve the resilience of the transit line at its most flood-vulnerable locations. MTA/NYCT, with the support of the New York City Department of Transportation (NYCDOT), DCP, and elected officials on Staten Island, continues to advocate for the BRT proposal and its funding. In addition to the MTA securing the funding and railroad approvals, the city would need to initiate a series of land swaps and potential ULURP actions to identify a new ROW location. While funding would be necessary to initiate an EIS and construction, completion of the land swaps is critical toward ensuring the best job creation and facilitating road improvements to Richmond Terrace in advance of the expanded mass transit network.

Navigable Waterways

The West Brighton BOA’s waterfront location has long made it the center of a thriving maritime industry. The Kill Van Kull, the tidal strait that separates Staten Island from Bayonne, New Jersey, is the primary conduit for all shipping activity entering and exiting the major port facilities Port Newark, New Jersey, and Howland Hook on Staten Island’s North Shore. The Kill Van Kull has an average width of 1,000 feet and, following the completion of a U.S. Army Corps of Engineers dredging project in 2011, a depth of 50 feet within its shipping channel.

Currently, the Kill Van Kull is heavily trafficked by a variety of seafaring vessels, the most numerous of which are tugboats and various types of barges. The New York and New Jersey Port Authority’s ongoing “Raise the

Roadway” project will also facilitate the travel of taller ships through the Kill Van Kull. In response to an expansion of the Panama Canal to permit the passage of larger, cleaner, and more-efficient ships, the Port Authority has initiated construction to raise the Bayonne Bridge’s roadbed from 151 to 215 feet. This engineering feat will keep the bridge open to vehicular traffic with only minimized weekend closures. The Port Authority expects to remove the old roadbed by Fall 2015, thereby allowing the Kill Van Kull to become fully navigable by the tallest boats operating in today’s global shipping trade.

According to the *Maritime Support Services Location Study* produced by NYCEDC and the Brooklyn Navy Yard Development Corporation in 2007, the North Shore contains a total of 62 operating pier sides available for berthing ships and a wharf at the Howland Hook Marine Terminal, totaling 19,842 linear feet of pier space. With 18 pier sides totaling 4,276 feet, Caddell Dry Dock and Repair is the dominant firm on the North Shore. In addition to Caddell, Atlantic Salt Inc. and the City of New York’s Port Richmond Wastewater Pollution Control Plant are the two other properties with waterfront berthing space.

Per DCP’s North Shore 2030 study, the Kill Van Kull waterfront is home to the largest concentration of tugboats, dry docks, and barges in New York Harbor. Caddell Dry Dock and Repair, which is one of the region’s largest boat repair and cleaning operations, attracts a large number of vessels to the West Brighton BOA, including tug boats, ferries, barges and large container ships. Atlantic Salt Inc., the largest salt distributor in the region, and located at the eastern end of the West Brighton BOA, recently

completed an upgrade of its waterfront berthing space and now can accommodate large dry bulk shipping vessels at its Richmond Terrace facility. Together, these two firms account for a significant portion of traffic on the Kill Van Kull.

The four remaining waterfront properties contribute only minimally to maritime traffic. Three of the four, Snug Harbor, Heritage Park, and the Port Richmond Wastewater Pollution Control Plant, are city-owned. Snug Harbor maintains a small docking facility which is used for seasonal, infrequent ferries to and from events at the Snug Harbor campus, but is not currently operational due to damage from Hurricane Sandy. According to the New York State Department of Environmental Conservation (DEC), the Port Richmond Wastewater Pollution Control Plant does not have dewatering facilities and, thus, needs to use its own berth facilities to transport sludge by ship. The sole remaining privately-owned waterfront property is at the foot of Bard Avenue and is owned by Con Edison. The site has an unimproved bulkhead and is not currently used for any maritime activity.

Maintenance of maritime transport infrastructure, including docks, piers, and bulkheads, is costly and requires coordination with local, state and federal regulatory agencies. Active maritime companies like Caddell and Atlantic Salt have invested millions of dollars in upgrading and maintaining sufficient infrastructure, yet gaps in the shoreline's bulkheads remain and some piers are in need of repair. In addition to supporting the maritime economy, a well-maintained bulkhead serves as an important erosion and flood mitigation measure. A significant aim of the West Brighton

BOA recommendations will be to continue to support a strong maritime economy by encouraging the expansion of maritime jobs and business and securing regulatory and financial tools to upgrade the infrastructure along the Kill Van Kull while also creating a safe, publicly accessible waterfront open space on the North Shore.

Roadways

The West Brighton BOA has a road network that owes its structure to a combination of topography, Native American footpaths, and a nineteenth-century orthogonal grid. Richmond Terrace is the primary east-west road in the BOA, while Henderson Avenue, Castleton Avenue, and Forest Avenue are important corridors just outside of the BOA study area. The area consists of a series of north-south residential avenues that connect upland east-west corridors and terminate at Richmond Terrace. Jewett Avenue, Broadway, Bard Avenue and Jersey Street are the main north-south corridors within the BOA. A number of roads in the BOA, especially those running north-south, are one-way streets. Many of the BOA's upland roads include on-street parking on at least one side.

Richmond Terrace is the principal road on Staten Island's North Shore and, following the path of a precedent Native American travel corridor, parallels the waterfront throughout the BOA. Richmond Terrace is heavily trafficked by industrial trucking, residential and commercial auto traffic and public buses and offers a low level of service throughout its course. Providing one lane in each direction and making abrupt directional changes at various locations, Richmond Terrace is frequently congested during morning and evening

commuting times. Compounding the road's congestion problems is the prevalence of a city bus system that relies on Richmond Terrace for moving passengers to and from the ferry and rail transit hubs at St. George. In addition to a poor level of service for cars, trucks, and buses, Richmond Terrace lacks sufficient pedestrian and bicycle infrastructure. Numerous and lengthy stretches of Richmond Terrace lack sidewalks altogether, and, where they do exist, are generally in need of widening and/or repair. An on-street striped bicycle lane connects St. George to New Brighton, but ends abruptly at Lafayette Avenue, failing to provide cyclists with a safe connection to Snug Harbor and beyond. Additionally, cars are frequently parked in the bike lane, further degrading the cycling infrastructure in the BOA.

Because of its importance to mobility on the North Shore, Richmond Terrace was mapped at a width of 100 feet in 1907. However, due to historic development patterns, the acquisition of existing businesses and buildings located within the 100 foot width was never completed (Images 3.8 and 3.9). Portions of Richmond Terrace in between Jersey and Lafayette Streets were acquired in the 1960s, but Richmond Terrace was never built to its full mapped width and today remains a road with a width ranging between 35 and 60 feet. The goal of recent and current planning initiatives, including the West Brighton BOA, is to widen and improve Richmond Terrace in conjunction with the Bus Rapid Transit and greenway proposals.

Forming the eastern spine of the West Brighton BOA, Jersey Street is the area's second primary thoroughfare. Winding between hills and providing a connection between Richmond Terrace and Victory Boulevard, Jersey Street

is a significant residential and commercial corridor within the BOA. Populated by a range of housing types, including single-family homes, apartments above commercial establishments, low-density urban renewal-era apartments and large public housing towers, Jersey Street is a diverse community. The street provides one travel lane in each direction and includes parking on both sides for the majority of its course. Sidewalks on Jersey Street are well-maintained, though bicycle infrastructure is non-existent. Two public bus routes traverse Jersey Street, connecting its residents to St. George.

Truck Routes

NYCDOT defines and maintains a system of truck routes in order to insure that non-industrial communities are not unduly affected by the trafficking of industrial goods and waste. Inter-borough truck trips are regulated by Through Truck Routes, which are intended to keep trucks off of local roadways when traveling between boroughs. Trucks are instructed to remain on Local Truck Routes for trips that remain within a borough or require entering or exiting a Through Truck Route toward the final destination. Trucks are only allowed on non-designated truck routes when making the initial or final movements of their trip. Truck operators, however, must be able to provide a bill of landing or similar documentation that shows the points of origin and destination of the trip to law enforcement or other authorized persons.

Due to the prevalence of industrial business operations on the North Shore, the BOA contains five distinct Local Truck Routes, all of which lead to the Staten Island Expressway, the only Through Truck Route on Staten Island.

Those five Local Truck Routes are Richmond Terrace, Jewett Avenue, Clove Road, Broadway, and Jersey Street, all of which provide only

one lane of traffic in each direction and serve as bus routes. Additionally, Castleton Avenue, just south of the BOA boundary, is also a Local

Image 3.8 Mapped Width of Richmond Terrace at Jersey Street Intersection

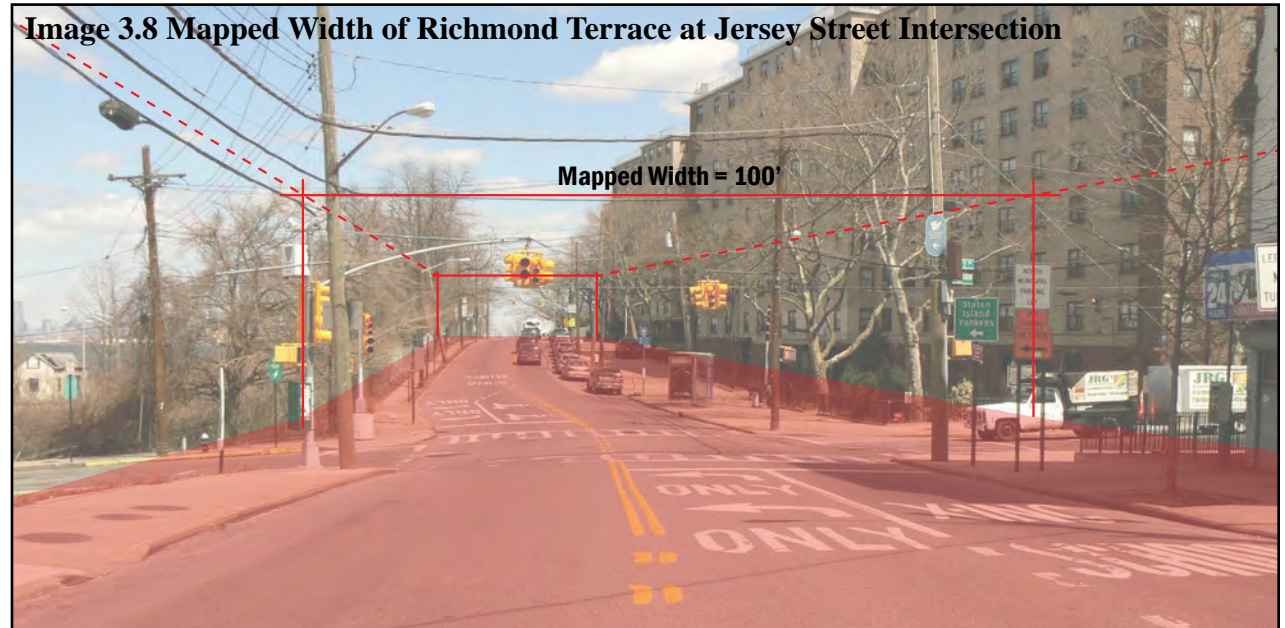
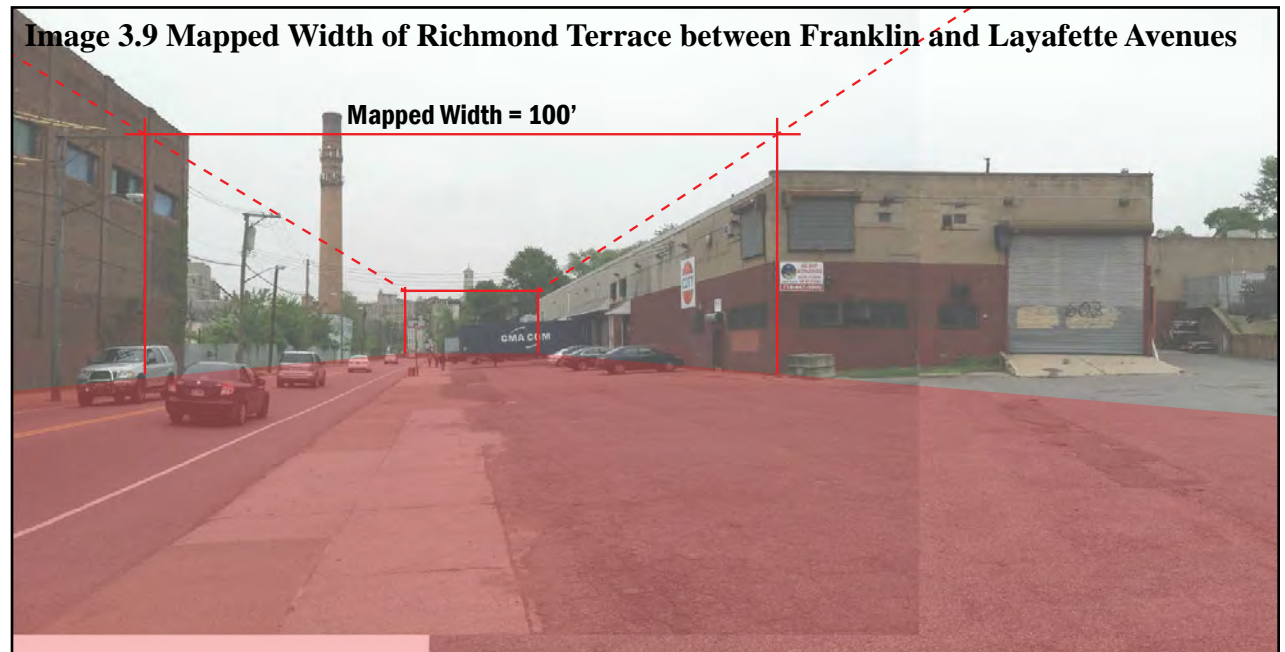


Image 3.9 Mapped Width of Richmond Terrace between Franklin and Lafayette Avenues



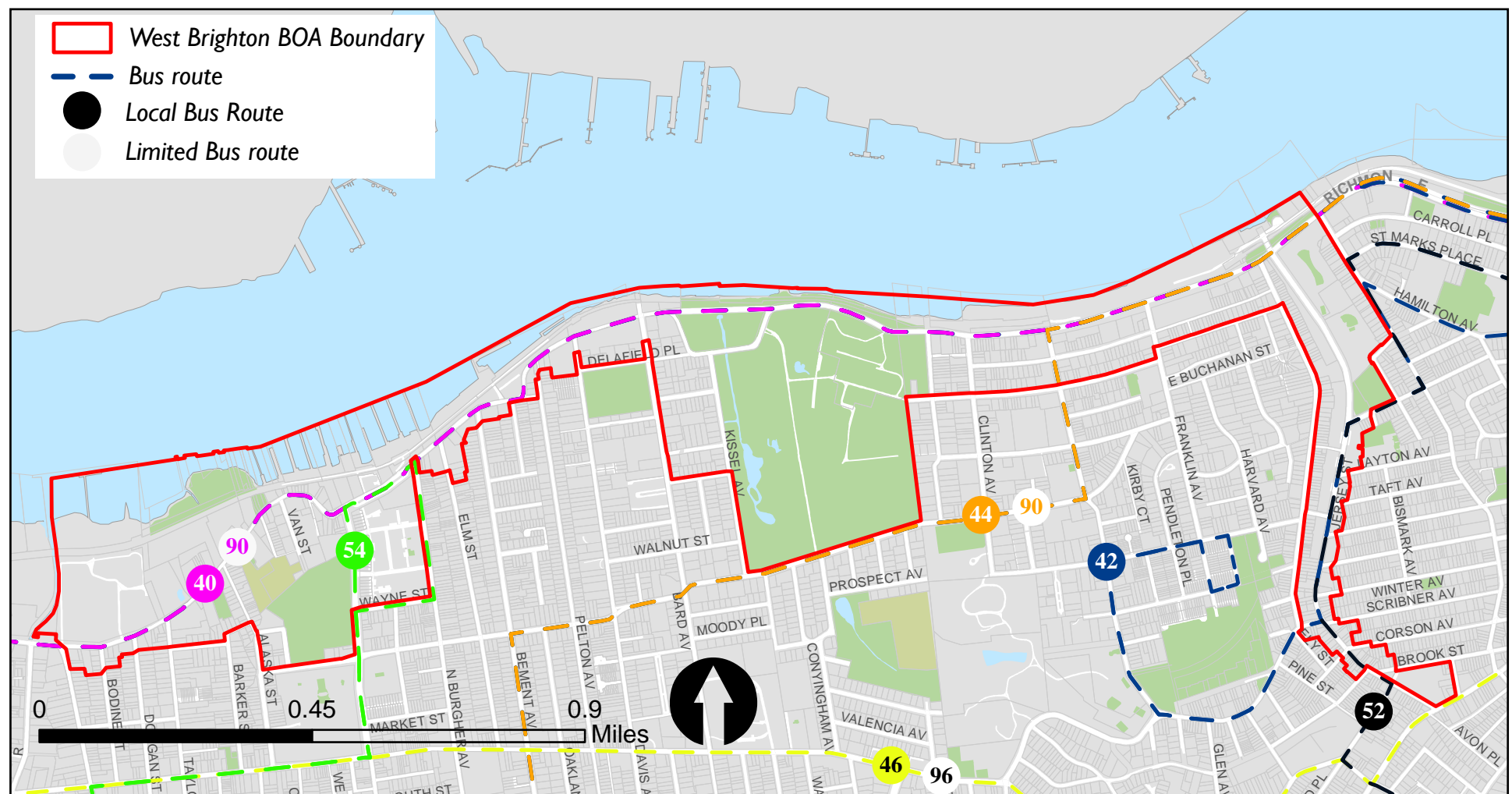
Truck Route. These routes help support all of the industrial operations in the West Brighton BOA, but present issues to the surrounding residential communities. In its 2007 Truck Route Management and Community Impact Reduction Study, NYCDOT found that residents of the North Shore frequently complain about truck drivers using residential streets as a “jump lane” or shortcuts to avoid traffic and buses on the designated truck routes.

Public Transportation

The communities of the West Brighton BOA are generally well served by public transportation. The MTA and NYCT operate an extensive network of local and limited stop bus routes on the North Shore, including West Brighton. The BOA is served by five bus routes, with an additional two located just south of the study area at Castleton Avenue. Each of these bus

routes connects passengers to the St. George Ferry Terminal and four out of the five bus routes reach St. George via Richmond Terrace. Commuting by bus is a highly prevalent form of transportation for residents of the West Brighton BOA and its surrounding communities, with 44 percent of workers relying on this form of transportation. Most residents living in the study area, however, commute to work via car (46 percent). Additionally, about 5 percent of

Map 3.12 Public Transit



residents walk to work and 1 percent use other modes of transportation.

The S40 bus operates daily, at all hours, between Goethals Road North on the West Shore of Staten Island, and the St. George Ferry Terminal. The S90 bus operates on the same route as the S40 but operates on a limited-stop basis during weekday rush hours only and is intended to provide faster service to commuters and to decrease impacts to traffic congestion (Map 3.13). The S40 and S90 buses traverse the BOA on Richmond Terrace, providing direct access to St. George for those living and working near the waterfront. The S90, like the S94 and S96 mentioned below, operate only during weekday rush hours. The S44 and S94 buses operate between the Staten Island Mall and the St. George Ferry Terminal. From St. George, these buses travel on Richmond Terrace until turning south at Lafayette Avenue in New Brighton and continuing inland, carrying passengers to Livingston, West Brighton and beyond. The S42 bus is a short-distance route connecting passengers in the New Brighton-Jersey Street-St. George communities to the ferry terminal at St. George. The S42 bus is a critical link for residents within the BOA who live on Westervelt Avenue and Jersey Street. Bus facilities located near the West Brighton BOA include the NYCT's Castleton Avenue Bus Depot, which is situated just southwest of the BOA area.

Despite high bus ridership rates and the prevalence of bus routes in the BOA, improvements to the area's public transportation are a critical need. Bus travel speeds on the North Shore are relatively slow and the five-mile trip from St. George to the West Shore can take nearly 40 minutes during peak hours.

Indeed, workers on the North Shore have some of the longest commute times in the nation. The lack of multiple lanes in all of the major east-west roadways slows traffic and bus movements, which have limited operational flexibility because of the discontinuous road network and its many difficult curves. Additionally, the relatively narrow curb-to-curb road widths make it difficult to insert exclusive bus lanes without removing curbside parking. Removing such parking in areas with residential and small scale retail uses (that may not have off-street parking) is difficult.

Despite widespread concerns about the efficacy of the area's public transportation system, bus ridership rates have been rising in recent years and are expected to continue doing so. Recognizing the need for improved transit in the area, MTA/NYCT in 2012 issued a proposal, detailed above, for a Bus Rapid Transit (BRT) network on the abandoned North Shore Railroad Right-of-Way. The proposal, outlined in the NYCT North Shore Alternatives Analysis report, and refined in a series of City Planning-initiated workshops, would reduce travel times for North Shore commuters by half.

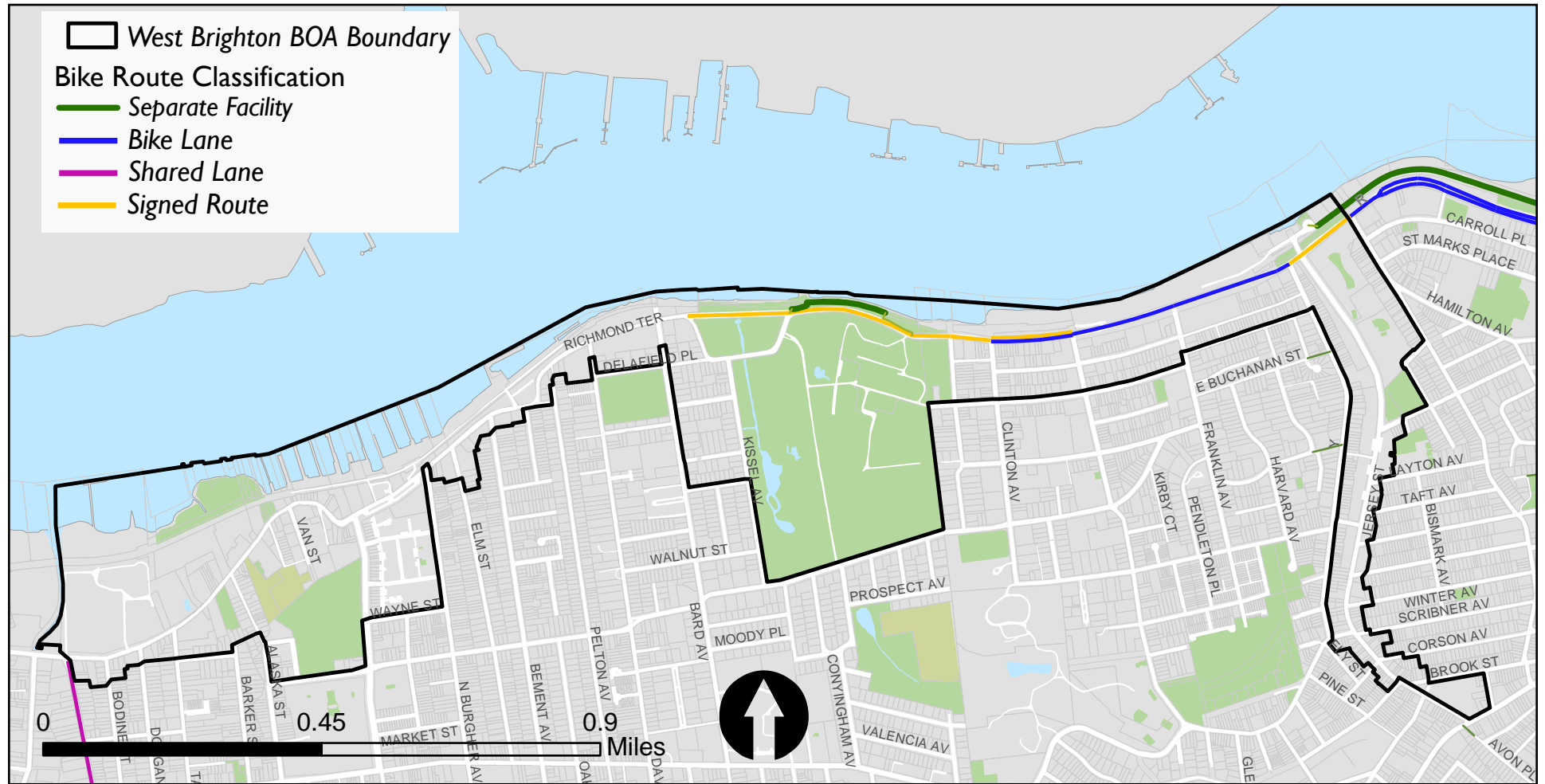
Pedestrian and Bicycle Facilities

As mentioned above in the Roadways section, pedestrian and bicycle facilities in the West Brighton BOA are lacking and offer a low level of service for these users. Missing or poorly maintained sidewalks on Richmond Terrace make it difficult for residents to walk to and wait at bus stops. The remainder of the BOA generally possesses sufficient sidewalks to support local pedestrian traffic. A pedestrian pathway along the Snug Harbor waterfront offers public waterfront access. However, a lack of maintenance and visibility to and

from Richmond Terrace inhibits significant pedestrian activity. Snug Harbor and the new Heritage Park offer passive pedestrian trails that are well used by the public.

The West Brighton BOA study area does not offer much bicycle infrastructure for residents and travelers visiting the North Shore's regional attractions. The upland residential blocks and the primary north-south thoroughfares in the North Shore also lack any bicycle facilities. The only bicycle facilities of any kind in the West Brighton BOA are a shared bicycle and vehicle lane on Clove Road and two curbside bike lanes on Richmond Terrace on opposite sides of the roadbed (Map 3.14). The eastbound lane on Richmond Terrace starts at Lafayette Street, briefly turns left onto Jersey Street, and proceeds down the North Shore Waterfront Esplanade before terminating at St. George Ferry Terminal. The westbound bike lane follows a similar route, but terminates at Clinton Avenue. According to the NYCDOT Bike Path Map, the westbound lane and the eastbound lane ends/starts as a shared bike lane at Snug Harbor Road with a sign informing drivers to "Share the Road" with cyclists. Along with heavy vehicular traffic, the lack of continuous bicycle facilities results in low bicycling activity on Richmond Terrace. Nevertheless, due to a lack of viable alternatives, a small number of bicycle commuters use Richmond Terrace to access the Ferry and rail terminals at St. George. Some streets also exhibit relatively low congestion and traffic speed, making cycling a safer, viable option for recreation. Increasing bicycle connections from the St. George Ferry Terminal and an expansion of CitiBike could help make regional destinations on the North Shore, such as Snug Harbor, more accessible to both

Map 3.13 Bicycle Network



residents and tourists.

Parks and Open Space

In relation to parks and open space, the West Brighton BOA is characterized by a contradictory set of circumstances. In terms of square footage of parks and open space within the community, the BOA is well served. However, access to these parks has long been considered insufficient and was expressed as a

critical need in the North Shore 2030 report.

Snug Harbor

The largest public open space on the North Shore is the Snug Harbor Cultural Center and Botanical Garden. Snug Harbor is the premier cultural institution on Staten Island and is one of the most historic sites in New York City. According to its website, Snug Harbor was established in 1801 as a retirement

community for former sailors and was at the turn of the 20th century the wealthiest charitable institution in the United States. However, as the shipping industry declined and social welfare programs provided alternative recourse for retired sailors, Snug Harbor itself began a fall into obsolescence. Financial problems forced the demolition in 1951 of an important collection of buildings on the Snug Harbor campus. Fearing complete loss of the patrimony of the site, and

encouraged by community activists, the LPC in 1965 designated six of the site's remaining structures as landmarks, the first of their kind in the city. Fourteen years after being designated as a landmark site, Snug Harbor's entire campus, including its historic buildings, were acquired by the city with the objective to transform the property into a regional arts center. The mission has since been expanded to include botanical gardens, passive open space, and a number of cultural institutions. Among the attractions at Snug Harbor are a number of botanical gardens, the Staten Island Children's Museum, the Noble Maritime

Collection, the Staten Island Museum, Art Lab, Staten Island Arts, the Newhouse Center for Contemporary Art, and the Snug Harbor Artist Residency Program. Snug Harbor is also an affiliate of the Smithsonian Institute.

Snug Harbor offers users a passive park experience with meadows, trails, and gardens. Additionally, a waterfront pathway offers rare unobstructed views to the Kill Van Kull. However, damage from Hurricane Sandy, ongoing erosion, disinvestment, and poor maintenance have left the Snug Harbor waterfront a little-used space. The western

portion of Snug Harbor contains three active baseball fields belonging to the Snug Harbor Little League.

Currently in the process of refining its Master Plan, Snug Harbor is recognized as a critically underutilized resource in the BOA. A significant aim of the BOA recommendations is to improve access to the site via all forms of transportation, incorporate the Staten Island Bluebelt program funded by the DEP to control stormwater along Snug Harbor's western stream and south neighborhood, and redesign its waterfront as an attractive

Map 3.14 Parks and Open Space



waterfront open space.

Heritage Park

At the western end of the study area is Heritage Park, located at the site of the Blissenbach Marina, which was once a private marina. A former owner of Blissenbach Marina expanded the operations of the marina in the 1980s by filling in parts of the Kill Van Kull in the 1980s. The site is adjacent to industrial uses on all three land sides.

In 2004, the site was acquired by the Port Authority of New York and New Jersey and the Trust for Public Land and subsequently transferred to the New York City Department

of Parks and Recreation (DPR). The conversion of the marina to a public park was part of the Harbor Estuary Program, an effort to preserve the natural resources of the New York metropolitan area with funding put aside by the Port Authority of New York and New Jersey. Along with improving the site's environmentally sensitive areas, the construction of Heritage Park provides much needed visual and physical waterfront access to North Shore residents. The park is devoted entirely to passive recreation.

Common to many of the BOA's parks and open spaces, improving access to Heritage Park is a focus of the BOA planning process. The entrance to the park is located

on Richmond Terrace at one of the road's notorious curves and lacks any signals or other traffic control measures necessary for safe pedestrian crossing. Additionally, connections to other nearby parks, such as Corporal Thompson Park, and the surrounding neighborhood remain incomplete.

Corporal Thompson Park

Serving as one of the few active recreation parks on the North Shore, Corporal Thompson Park is a well-used athletic facility in the West Brighton neighborhood. Corporal Thompson Park contains a running track, baseball field, a multi-purpose field, an outdoor swimming pool, and playgrounds. The park is an important resource for the surrounding community, particularly the West Brighton Plaza NYCHA development. It is also located adjacent and downhill from an active industrial use transporting construction debris that is located in an M1-1 district.

Mahoney Playground

Attached to the south end of the Richmond Terrace Houses NYCHA development is Mahoney Playground, a vital and well-used recreation space for the Jersey Street community. The park contains basketball courts, handball courts, spray showers, and a playground.

Walker Park

Located south of the West Brighton BOA boundary near the intersection of Bard Avenue and Richmond Terrace and one block west of Snug Harbor is Walker Park. The site of the longest-running, continually operating cricket club in the United States, as well as the site



of one of the first lawn tennis matches in the nation's history, Walker Park is an important resource for the BOA community. The park offers a cricket and baseball field, tennis courts, and a community center that hosts various community events throughout the year.

Cemeteries

While there are no active cemeteries in the BOA, a significant collection of abandoned and historic cemeteries is located along Richmond Terrace and in between Heritage Park and Corporal Thompson Park in the West Brighton neighborhood. According to the Friends of the Abandoned Cemeteries of Staten Island, a local advocacy group on Staten Island, each of these five distinct cemeteries existed before the twentieth century and can be accessed today via Richmond Terrace, Tompkins Court, and Van Street. Long before the arrival of white settlers, the area's Native American communities used this 250 square foot site on a hill overlooking the Kill Van Kull as a burial ground. Soon after settlement of the area in the eighteenth century, Trinity Cemetery, the first of four additional cemeteries on the site, was established. Three others, Staten Island Cemetery (1847), Fountain Cemetery (1863), and Van Street Cemetery (1889) complete the site. The cemeteries were eventually abandoned and left with no caretaker for decades until Friends of the Abandoned Cemeteries of Staten Island took responsibility of the aforementioned sites and began an extensive and ongoing maintenance regime. Thanks to generous community support, the abandoned cemeteries in West Brighton are slowly being restored. With additional investments and improvements, the site

could provide potential connections between Corporal Thomson Park and Heritage Park and educational opportunities to share the North Shore's history.

Natural Resources and Environmental Features

The West Brighton BOA is located within an environment rich with unique natural resources. It exists within the North Atlantic Coast Ecoregion. The natural, pre-development state of the area was characterized by grasslands, shrublands, vast pine barrens, coastal plain ponds and dunes, and extensive salt marshes, mudflats, and wetlands. The underlying geological landform typologies of the bulk of the West Brighton BOA are Glacial Till Plain and bedrock-controlled hills and ridges.

Topography

Staten Island's topographic relief is relatively stark in comparison to New York City's other four boroughs (Map 3.16). Staten Island contains several ridges that run north to south through the borough. Serving as the spine of Staten Island, the Serpentinite bedrock, as described below, underlies the significant ridge line that runs southwest from St. George and includes Todt Hill, the highest point in New York City and the highest point on the eastern seaboard south of Cape Cod. The landscaped formed by the Serpentinite bedrock largely influences the character of corridors, such as Jersey Street, which is located between two ridges and strongly contrasts with steep, neighboring streets. West of this ridgeline, the West Brighton BOA slopes in a generally northerly direction toward Kill Van Kull. Within the BOA itself, the upland portions of

Jersey Street and New Brighton are the highest points, while the lowest points occur along the shoreline of the Kill Van Kull.

Bedrock and Surficial Geology

The unique underlying consolidated and unconsolidated bedrock of the North Shore reflects Staten Island's position at the convergence of a number of important geological eras. The oldest bedrock strata of the West Brighton BOA is the Serpentinite unit, which was formed approximately 430 million years ago. The Serpentinite unit forms the basis of Staten Island's relatively rugged topography, including the North Shore's hilly terrain. Overlaying the Serpentinite, in an irregular manner throughout the North Shore, is bedrock from the Triassic Stockton, Lockatong and Passaic formations; and the Jurassic Palisades formation. Unconsolidated deposits in the West Brighton BOA include Outwash and Ground Moraine from the Upper Pleistocene deposits of Wisconsinian glacial drift.

Soils

A detailed soil survey for Richmond County has not been completed. However, the United States Department of Agriculture, the New York City Soil and Water Conservation District, and the Cornell University Agricultural Experiment Station have jointly produced the New York City Reconnaissance Soil Survey. This survey is intended to address the unique characteristics of urban soils as well as the specialized need of urban customers. This document also serves as the primary source for all soil information for West Brighton BOA.

The BOA exhibits five unique urban soil complexes, all of which can be classified as urban soils. Generally, impervious surfaces, including asphalt, concrete, buildings, and other impervious structures, cover at a minimum of 50% of all surfaces in the West Brighton BOA. In certain sub-areas of the BOA, the extent of surface impermeability nearly reaches 100%.

The five categories of urban soils present within the West Brighton BOA are:

- **Pavement and buildings, Foresthills-Wethersfield complex, 0-8 percent slopes:** Nearly level to gently sloping areas of urbanized till plains that have been cut and filled for residential use; a mixture of anthropogenic and red till soils, with 50-80 percent of the surface covered by impervious pavement and buildings. This soil is the predominant type throughout Staten Island's North Shore and represents the bulk of the soil found in the West Brighton BOA.
- **Pavement and buildings, Canarsie-Greenbelt Complex, 15-50 percent slopes:** Moderately steep to very steep urbanized areas on till plains and hills that have been partially cut and filled, mostly for residential use; a mixture of anthropogenic soils that vary in depth of fill, with up to 80 percent impervious pavement and buildings covering the surface.
- **Pavement and buildings, wet substratum-Laguardia-Ebbets complex, 0-8 percent slopes:** Nearly level to gently sloping urbanized areas filled with a mixture of natural

soil materials and construction debris over swamp, tidal marsh, or water; a mixture of anthropogenic soils which vary in coarse fragment content, with 50-80 percent of the surface covered by impervious pavement and buildings. This soil type exists exclusively on the waterfront side of Richmond Terrace and is primarily of man-made origin.

- **Unadilla-Riverhead-Pavement and buildings complex, 0 to 8 percent slopes:** Nearly level to gently sloping areas of outwash plains that are partially developed for parks, hospitals, and cultural facilities; a mixture of silty and loamy outwash soils, with more than 15 percent impervious pavement and buildings covering the surface. This soil type is found exclusively in the northern two-thirds of Snug Harbor.
- **Wethersfield-Ludlow_Wilbraham complex, 0 to 8 percent slopes:** Nearly level to gently sloping areas of till plains, relatively undisturbed and mostly wooded; a mixture of well drained, moderately well drained, and poorly drained soils developed in red till. This soil type is found exclusively in the southern quarter of Snug Harbor.

Given the diverse mixture of soil types and in the absence of a completed soil survey, any future development actions should require a thorough investigation of soil and subsurface conditions.

Vegetation

The West Brighton BOA, like all urban areas within New York City, has been subjected to

a widespread invasion of non-native species. Both upland and waterfront areas within the BOA exhibit minimal to non-existent native habitat patches with very little inter-patch connectivity.

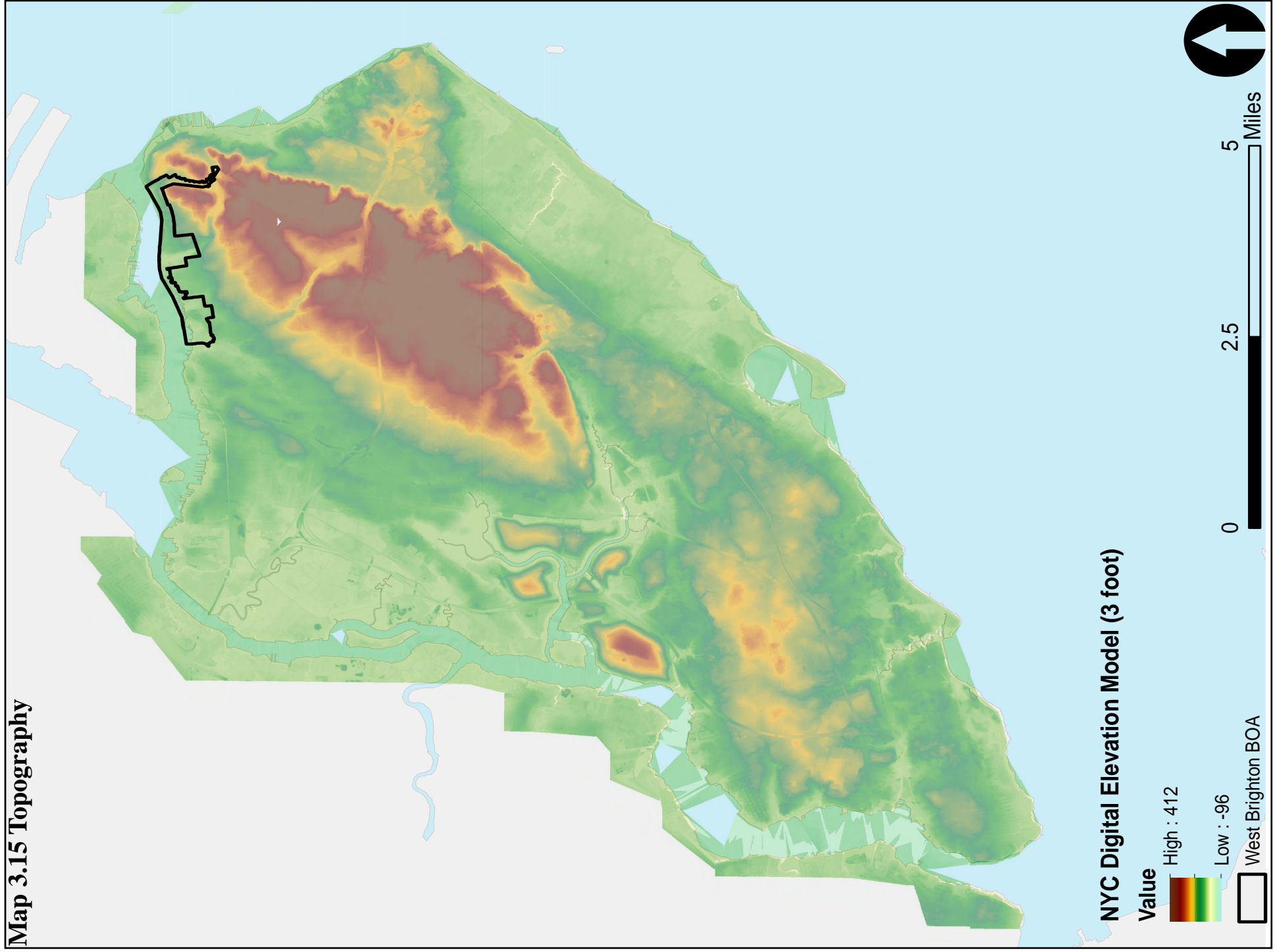
Wetlands

Prior to the development of Staten Island by Europeans and their descendants, the Native Americans who lived in what is now the West Brighton BOA helped to maintain a native wetland habitat that included marsh, swamp, and mudflat habitat throughout the island's Kill Van Kull shoreline. However, centuries of urbanization, industrial use, and storm water and sewage outfalls have considerably degraded the wetland habitats of the North Shore of Staten Island. Today, only minimal tidal wetland habitats, with a combined area of 5.19 acres, remain along the North Shore, with none of them being within the West Brighton BOA. Roughly 8.67 acres of freshwater wetlands, which are not federally designated, exist within Snug Harbor (Map 3.16). Because they include a pond and stream that flows into the Kill Van Kull, the tidal and freshwater wetlands that do remain at Snug Harbor are massively compromised by continued anthropogenic forces, primarily industrial interference, sewage contamination, and urban stormwater runoff from both Staten Island and areas along the Lower Passaic River.

Waterways

The West Brighton BOA is defined by its location along the North Shore of Staten Island and the Kill Van Kull. The DEC establishes use classifications and water quality standards for all water bodies in the state. According to the DEC's classification, the Kill Van Kull is

Map 3.15 Topography



generally defined as a saline surface water and is a Class SD, Standards SD watercourse. The waters of the Kill Van Kull may be suitable for fish, shellfish, and wildlife survival. Beyond the potential survival of aquatic species, however, natural or man-made conditions preclude fish propagation and primary and secondary contact recreation. In addition to regulating the best usage of the waterways in the state, DEC sets standards for two major indicators of water quality: fecal coliform and dissolved oxygen. Class SD waterways have no standard for fecal coliform and have a standard of never less than 3.0mg/L of dissolved oxygen.

The DEC provides a guide for fishing access throughout Staten Island, including areas along the Kill Van Kull. The two fishing sites located in the West Brighton BOA study area are St. George Station/Bank Street and Snug Harbor. The New York State Department of Health, however, warns fishermen to not eat certain types of fish from the Kill Van Kull, such as Channel Catfish and Blue Crabs. The

contamination of fish in the Kill Van Kull is largely a product of years of industrial discharge from industries located on the North Shore and in upstream locations, such as the Lower Passaic River, which was listed as an EPA Superfund site in 1984.

Besides the Kill Van Kull, the only other classified waterway in the West Brighton BOA is Bodine Creek, a small tributary that retains its headwaters source in upland West Brighton and its mouth at the Kill Van Kull but is otherwise buried within stormwater pipes throughout its course. The headwaters portion of Bodine Creek, not within the West Brighton BOA, is a Class B, Standards B waterway. The best usage of Class B waters are primary and secondary contact recreation and fishing. According to DEC, this freshwater portion of Bodine Creek should be suitable for fish, shellfish and wildlife propagation and survival. The mouth of Bodine Creek, which forms the western border of the West Brighton BOA, is a Class SD, Standards SD waterway, meaning that it is a tidal saline surface water body.

This portion of Bodine Creek may be suitable for fish, shellfish, and wildlife survival, but cannot support propagation of said species. Furthermore, Bodine Creek's saline surface waters are not permitted for primary or secondary contact recreation and are the site of a combined sewer overflow outfall.

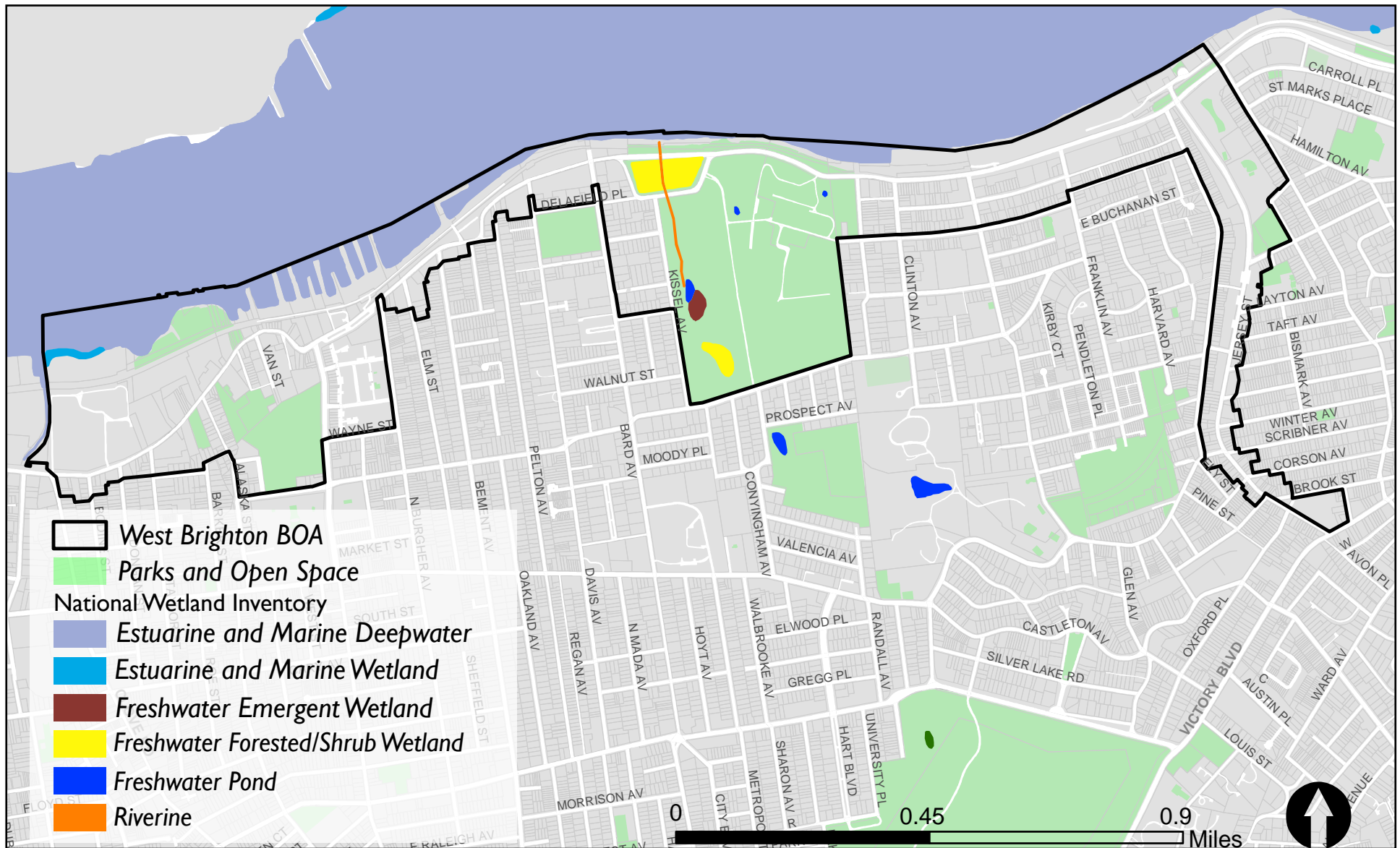
Groundwater

The West Brighton BOA's industrial history indicates that there is potential for groundwater contamination in the area. According to the U.S. Geological Survey, inorganic contaminants, such as lead, can enter groundwater sources through runoff from industrial waste, gasoline, coal storage and operations. One effect of the contamination on these sites is the high number of lead poisoning cases on the North Shore. In fact, the EPA designated the North Shore of Staten Island an Environmental Justice Showcase Community in 2009. Increases in the number of children found to have elevated levels of lead in their blood and the significant poor and minority populations on the North Shore prompted the EPA to include the area on a list of ten communities nationwide that received this designation. The program allocated \$100,000 to the North Shore to help develop a community-based health strategy for the area. To date the funding has helped form the North Shore Community Coalition for Environmental Justice (NSCCEJ), a local coalition made up of community advocates, to guide the work and a regional task force to investigate and respond to potential environmental concerns on the North Shore. The program has also investigated and resolved concerns associated with 21 possibly contaminated sites identified by the community. According to the EPA's



Image 3.11 Pond at Snug Harbor

Map 3.16 Wetlands



Environmental Justice website, the remainder of the program entails developing and implementing a community outreach campaign and a community-based runoff.

Residents and businesses in the West Brighton

BOA do not rely on groundwater for drinking water. According to the United States Environmental Protection Agency (EPA), the West Brighton BOA is not located on a Sole Source Aquifer, which is an underground layer

of water-bearing rock that supplies at least 50 percent of the drinking water consumed in the overlying area. Furthermore, no such aquifers exist in Staten Island. Additionally, in 2014, DEP reported that Staten Island does not have

any wells in operation.

The City of New York supplies the drinking water for the West Brighton BOA. According to the DEP's New York City 2014 Drinking Water Supply and Quality Report, the New York City Water Supply System provides approximately one billion gallons of safe drinking water daily to more than eight million residents of New York City. The City of New York is currently in the process of constructing the Staten Island Siphon Project, a \$250 million project to replace nearly 100-year-old water connections that run from Brooklyn to Staten Island. The proposed siphon would provide 5 million gallons per day (mgd) of daily water supply and an average of 50 mgd during emergency situations.

DEP also carefully monitors New York City's water supply for lead through its active corrosion control program, which works toward reducing lead absorption from service lines and internal plumbing. DEP also conducts at-the-tap lead monitoring at select households throughout New York City, per Federal requirements. In 2014, the results of this monitoring indicated that the 90th percentile did not exceed 15 micrograms per liter, the established standard or Action Level for lead.

Fish and Wildlife Habitats

Staten Island's North Shore is a highly urbanized area with a long industrial history. Decades of industrial use, stormwater and sewage outfalls, and continued dredging have diminished significantly the habitat value of the West Brighton BOA for fish and wildlife. As a result, oyster cultivation, a prosperous industry on the North Shore in the nineteenth

century, is no longer a viable industry on the North Shore. Despite the industrial history of the North Shore, a small number of critical habitat zones do exist within and around the BOA, particularly the remnant wetlands along the North Shore and, especially, Shooter's Island, which is located between New Jersey and Staten Island in the Kill Van Kull in the western portion of the Port Richmond BOA.

The highest quality aquatic habitats can be found in the remnant wetlands of the North Shore and around Shooter's Island, which has been designated a Significant Coastal Fish and Wildlife Habitat (SCFWH) by the New York State Department of State, Division of Coastal Resources. Any development or action that could affect the habitat quality of a SCFWH is subject to an impact assessment. Specifically, "land and water uses or development shall not be undertaken if such actions would destroy the habitat or significantly impair the viability of a habitat." With respect to Shooter's Island, the habitat is of critical value and importance because it is an undisturbed upland habitat that is rare in coastal portions of the New York City metropolitan area. The primary significance of the island is its role as a nesting area for a number of colonial waterbirds, especially herons, but also including cattle egrets, snowy egrets, great egrets, flossy ibis, yellow-crowned night heron, green-backed heron, little blue heron, black-crowned night heron, and double-crested cormorant. Careful analysis of the nesting habits of species found on Shooter's Island has determined that there is a relative shortage of such locations within the region and that any development that harmed or destroyed the habitat has the potential to diminish and endanger the continued existence of any associated species within the New York

City metropolitan area. Because of areas, such as Shooter's Island, the Kill Van Kull remains a critical habitat within the Hudson-Raritan Estuary and a large number of aquatic species traverse the waterfront of the West Brighton BOA throughout the year.

Similar to the aquatic portions of the West Brighton BOA, the upland areas of the BOA have seen their value as wildlife habitat diminished as a result of urban and industrial uses. Snug Harbor provides sufficient habitat size to support land and aquatic diversity. However, more research is needed to accurately describe the area's habitat value. Any extant species elsewhere in the BOA must be highly adaptive to any environment contamination and invasion by non-native vegetation and wildlife. Any future actions related to the cleanup of sites within the West Brighton BOA should take into consideration their impact on fish and wildlife habitats.

Flood Resiliency

The impact of Hurricane Sandy on the east coast resulted in a series of modifications to Federal and local laws that have significant implications on the existing buildings and future construction in the West Brighton BOA. The new federal flood maps added approximately 36,000 buildings to New York City's 100-year floodplain (a 101% increase from the previous maps), and changes to City codes strengthened requirements for new and substantially improved buildings located in the floodplain. Additionally, legislative changes to the National Flood Insurance Program (NFIP) require owners to pay higher flood insurance premiums for buildings that predate the flood maps.

Because of its location along the Kill Van Kull waterfront, portions of the West Brighton BOA is subject to increased coastal flood risks. About 17 percent, or 134 of the buildings, in the West Brighton BOA fall within one of the Federal Emergency Management Agency's (FEMA) proposed flood zones (Maps 3.17 and 3.18). Approximately 84 of these buildings are located within the 100-year floodplain, while 50 buildings fall within the 500-year floodplain. The buildings located within the flood zones include several residential homes between Bard Avenue and Kissel Avenue and immediately to the west of Snug Harbor and buildings belonging to maritime and industrial firms, such as Atlantic Salt and Caddell Dry Dock and Repair, situated along the Kill Van Kull waterfront.

The effect of Hurricane Sandy on the West Brighton BOA further illustrates the vulnerability of the BOA's building stock to flooding. After making landfall on the east coast on October 29, 2012, Hurricane Sandy caused significant flood damage to the North Shore's infrastructure. According to a survey of Hurricane Sandy's flooding by the New York Times, several areas in the BOA experienced high levels of flooding. In the western area of the BOA, Hurricane Sandy's storm surge reached three to six feet around Rector Street and affected many industrial buildings. Residents of neighborhoods adjacent to Snug Harbor, such as Livingston, experienced flood damage to their homes and cars as a result of Sandy's tidal surge. Hurricane Sandy also resulted in the temporary closure of several businesses along Richmond Terrace, including Gerardi's Farmer's Market. The Staten Island Ferry, which suffered flooding-related damage to the electrical equipment in the terminal, did

not resume ferry service for almost four days after the storm made landfall.

Hurricane Sandy's damage to New York created an impetus for enhancing the ability of neighborhoods, such as West Brighton, to withstand and recover quickly from future storms. DCP's Retrofit Buildings for Flood Risk report offers a unique tool for property owners to enhance the resiliency of the structures on their property. The report provides property owners with a comprehensive analysis and illustrative examples of retrofit options for buildings in the New York City floodplain. The report also helps property owners with identifying the flood risk and flood elevation of their property, reviewing relevant regulations, and applying effective retrofitting and design strategies to their property.

The design of future redevelopment projects in the West Brighton BOA will also need to account for the area's vulnerability to flooding. For example, a significant portion of the North Shore Railroad right-of-way is located with a floodplain. Incorporating resiliency measures into future engineering designs of the MTA's proposed BRT system will be critical in reducing the vulnerability of the North Shore's transportation infrastructure to flooding events.

Additionally, the expansion of the DEP's Staten Island Bluebelt to Snug Harbor can help improve the resiliency low-lying areas of the West Brighton BOA to flooding. The Bluebelt program ensures the preservation of streams, ponds, and other wetland areas that serve as flood control measures and protect adjacent and downstream property owners from flood damage. The Bluebelt system in Snug Harbor is currently in the design process. A goal of the BOA is to ensure that infrastructure in

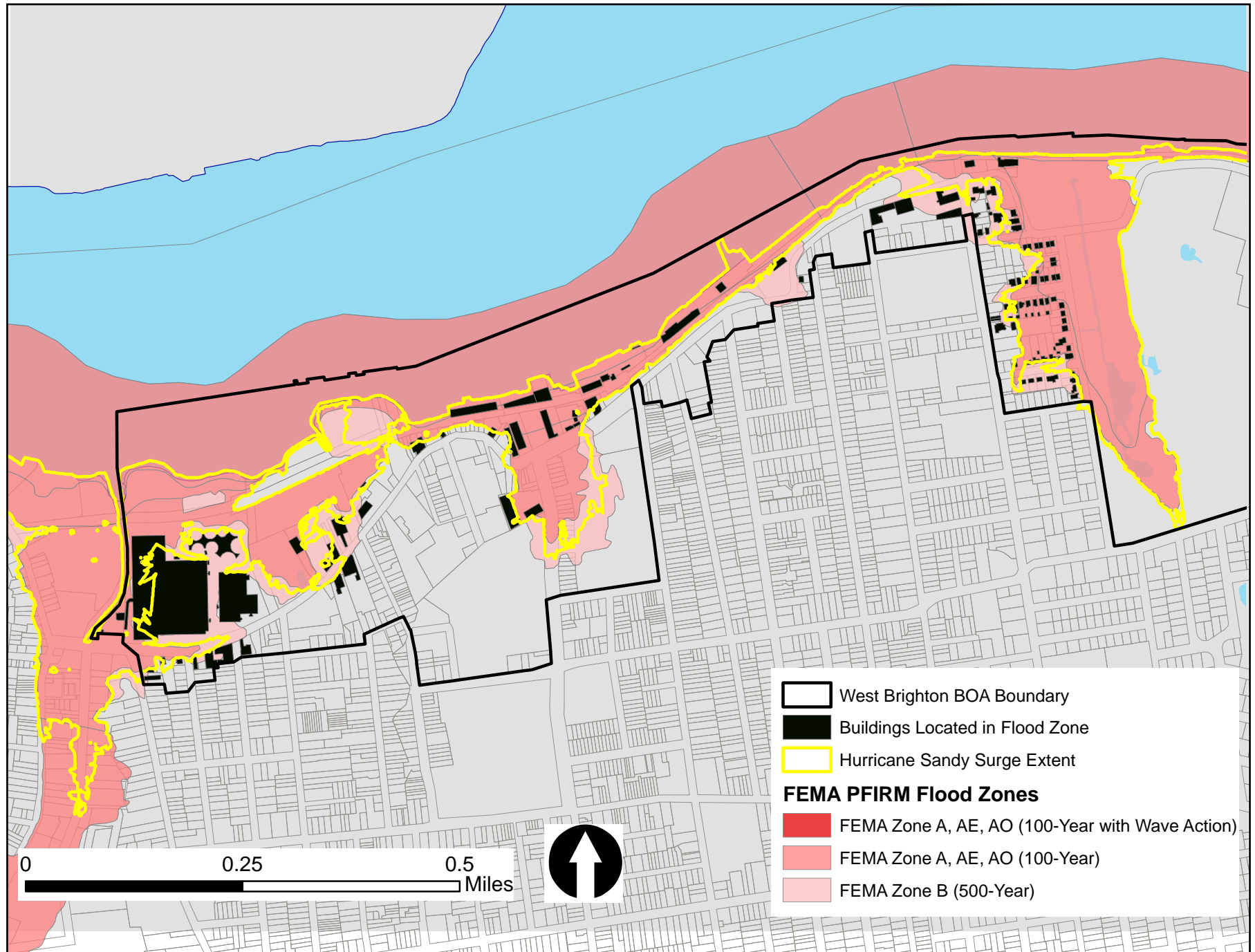
West Brighton incorporate these measures and become more resilient to future storms and climate events.

Building Inventory

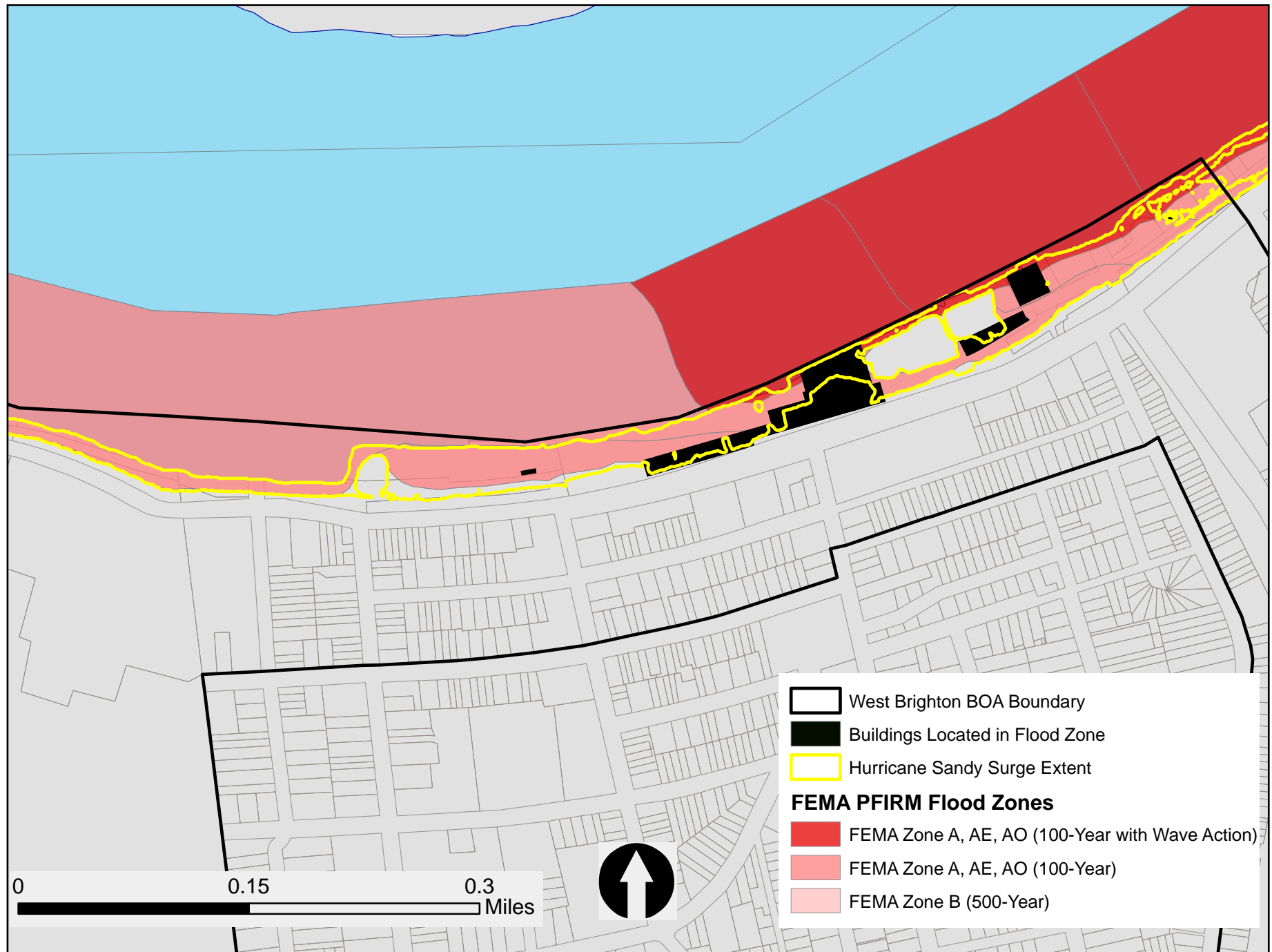
The West Brighton BOA study area contains 853 buildings devoted to a wide range of uses and classes. Nearly 72 percent of all buildings in the BOA were built before 1946. One-hundred and fifteen, or 14 percent of all buildings, were built before 1901, while 494, or 58 percent, were built in the period from 1901 to 1945. A rapid decline in construction of new buildings in the BOA took place in the post-war era as the area's industrial economy experienced a gradual decline and the residential areas reached full build-out. Only 102 buildings, or nearly 12 percent of all BOA buildings, were built in the post-war era (1946 to 1983), while 112 buildings (13%) have been built in the years since. Significantly, 1983 is the year that flood insurance became required for all buildings within the 100-year FEMA flood zone. While the vast majority of buildings within the study area are relatively old, few buildings retain most of their original fabric and many have been altered significantly over the years. Despite any degradation of the buildings' original construction, the historic character of West Brighton's building stock is considered an asset.

The BOA is characterized by low- and mid-rise development with a very small number of buildings reaching above 4 stories. Seventy-six percent of all buildings in the BOA are one- and two-stories in height, while 21 percent are between three and four stories. Ten buildings within the BOA are taller than 4 stories and are located either at the Richmond Terrace Houses NYCHA development or at the Atlantic Salt

Map 3.17 FEMA Flood Zone and Sandy Inundation - West Brighton Subarea



Map 3.18 FEMA Flood Zone and Sandy Inundation - New Brighton and Jersey Street Subareas



property on the Kill Van Kull between Jersey Street and Snug Harbor.

The allocation of building area to land use category reflects the BOAs character as a residential and industrial community. According to DCP's PLUTO dataset, the largest amount of building floor area, 1,713,030 square feet, in the BOA is devoted to residential use. Almost equaling that number is the 1,511,868 square feet of building area devoted to industrial use. Only 228,082 square feet of building area in the BOA is devoted to commercial or mixed residential and commercial uses. Finally, 455,649 square feet of building area in the BOA is dedicated to public facility and institutional uses.

There are a handful of large buildings within the BOA. The Jersey Street NYCHA complex has six buildings totaling more than 440,000 square feet, all devoted to residential use. Atlantic Salt maintains three large, primarily vacant buildings on site with a total area that surpasses 106,000 square feet. The Port Richmond Wastewater Treatment Facility in the western end of the BOA, contains six buildings with a large, but undisclosed floor area. Finally, the Department of Sanitation (DSNY) Garage on Jersey Street is a 72,281 square foot building with a large footprint that occupies a full city block. Each of these large buildings plays a significant role in the revitalization of the BOA.

Historic or Archaeologically Significant Areas

The West Brighton BOA is a historically rich community with some of the oldest neighborhoods in New York City. Within the BOA are a number of distinct communities, each of which has an identifiable history that

contributes significantly to planning efforts. Recognizing this strong heritage, DCP and NYCEDC identified the area's historic neighborhood centers and street grid as assets upon which to base revitalization strategies in their North Shore 2030 study. Following up on and expanding upon this goal, the West Brighton BOA proposes a strategy that will build upon and strengthen the area's historic character.

Historic Places and Character

The long history of communities within the West Brighton BOA has bestowed upon it a considerable patrimony of historic architecture and landscapes. However, the degree to which these resources have been protected varies widely and urgent care is needed to protect the most vulnerable among them.

The most significant historic resource in the

Table 3.4 Classification of West Brighton BOA Building Inventory

Building Class	Number of Buildings	Percentage of Total Buildings	Built Area (sq. ft.)	Percentage of Total Built Area
Commercial	7	0.85%	24,133	1.58%
Community Facility	26	3.14%	96,354	6.31%
Garage or Automobile Use	44	5.32%	150,899	9.88%
Industrial	25	3.02%	132,593	8.68%
Municipal Facility	2	0.24%	76,101	4.98%
Offices	2	0.24%	4,584	0.30%
Outdoor Recreation	33	3.99%	71,123	4.66%
Religious Institution	10	1.21%	30,602	2.00%
Residential	630	76.18%	602,935	39.47%
<i>Multi-Family Apartments</i>	<i>100</i>	<i>15.87%</i>	<i>73,398</i>	<i>12.17%</i>
<i>One- and Two-Family</i>	<i>464</i>	<i>73.65%</i>	<i>444,663</i>	<i>73.75%</i>
<i>Residential with Retail Below</i>	<i>66</i>	<i>10.48%</i>	<i>84,874</i>	<i>14.08%</i>
Transportation	11	1.33%	1,215	0.08%
Utilities	10	1.21%	35,616	2.33%
Vacant	7	0.85%	3,084	0.20%
Warehouse	31	3.14%	298,345	19.53%
Total	827	-	1,527,585	-

West Brighton BOA is Snug Harbor. Now a revered cultural center and botanic garden, Snug Harbor is recognized as a U.S. National Historic Landmark District and is on the National Register of Historic Places. In 1965, the newly formed New York City Landmarks Preservation Commission (LPC) designated six of the site's buildings as landmarks. Altogether, there are eight New York City Landmarks at Snug Harbor: the Gatehouse, Chapel, Buildings A-E, and the Iron fence that spans the campus' length along Richmond Terrace. Snug Harbor is an 83-acre campus that includes 26 historic buildings, nine distinctive botanical gardens, a two-acre urban farm, walking paths, and ten acres of wetlands. Among the cultural resources at Snug Harbor is the Greek Revival Music Hall, the second-oldest such building in New York City. Today, in addition to the public gardens, Snug Harbor houses a number of institutions, including Art Lab, Staten Island Arts, Newhouse Center for Contemporary Art, Noble Maritime Collection, Staten Island Museum, Snug Harbor Artist Residency Program (SHARP), Staten Island Children's Museum and the Staten Island Conservatory of Music. Snug Harbor is an affiliate of the Smithsonian Institute. Because of the cultural and historical significance of the site, Snug Harbor has become a regional destination. Improving access to this open space and cultural resource from St. George and the surrounding neighborhoods is an important part of the vision for the West Brighton BOA.

A small portion of the West Brighton BOA also falls within the St. Mark's Historic District, which is designated by the LPC. This district is mostly outside of the BOA in the St. George neighborhood, but the western end of the district includes the residences and shops

on Westervelt Avenue at the BOA's eastern boundary.

In addition to the eight Individual Landmarks at Snug Harbor, LPC recognizes three additional such sites in the BOA: the Kreuzer-Pelton House located at 1262 Richmond Terrace near the terminus of Pelton Avenue, the Dr. Samuel MacKenzie Elliot House located at 69 Delafield Place, and the Neville House at 806 Richmond Terrace between Tysen Street and Clinton Avenue. In addition, there are a number of LPC-designated structures just outside of the BOA boundaries in the New Brighton neighborhood. The Kreuzer-Pelton House is a residential structure built in phases that was originally established by Dutch colonists in 1722. Significant additions were completed in 1770 and 1836. The Elliott House, built around 1840, is a surviving example of Gothic Revival architecture and is today used as a residence. The Neville House is one of a handful of pre-Revolutionary War buildings still in existence in New York City. The house was built in 1770 of red sandstone blocks and is today used as a residence. Although some are in disrepair, the historic homes symbolize the historical land use patterns of the waterfront industries and the upland residential neighborhoods. The preservation of the low-density detached homes south of Richmond Terrace is an important goal for the BOA.

A number of other historic resources are located within the West Brighton BOA and serve a commensurate importance to the community's vision for the neighborhood. The industrial buildings and campuses at Atlantic Salt and Caddell Dry Dock and Repair, having existed for more than 100 uninterrupted years, are significant historic resources. Preserving these

historical structures will help maintain the character of the neighborhood, while achieving a BOA goal of creating quality jobs and workplaces. Also, a collection of abandoned cemeteries, detailed above in the Open Space section, are located on Richmond Terrace between Tompkins Court and Alaska Street. These cemeteries are the final resting place for a number of prominent Staten Island citizens and are located on the site of a Lenape burial ground. With continuing community support for their restoration, these cemeteries could eventually become a more integral connection in the BOA's open space network. Last, Walker Park, just west of Snug Harbor, is the home of the long-running Staten Island Cricket Club and some of the earliest tennis matches played in the United States.

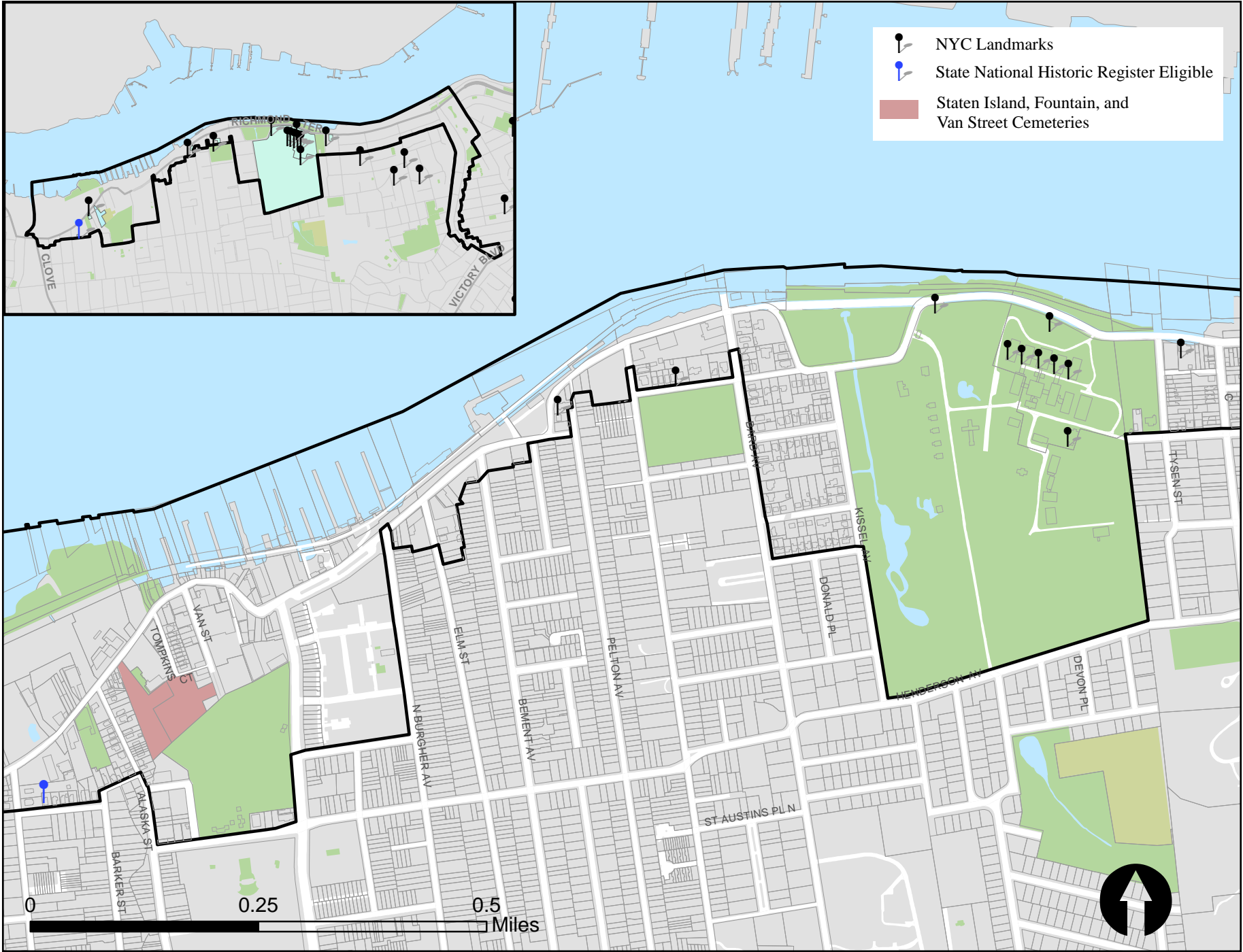
Infrastructure

School Capacity

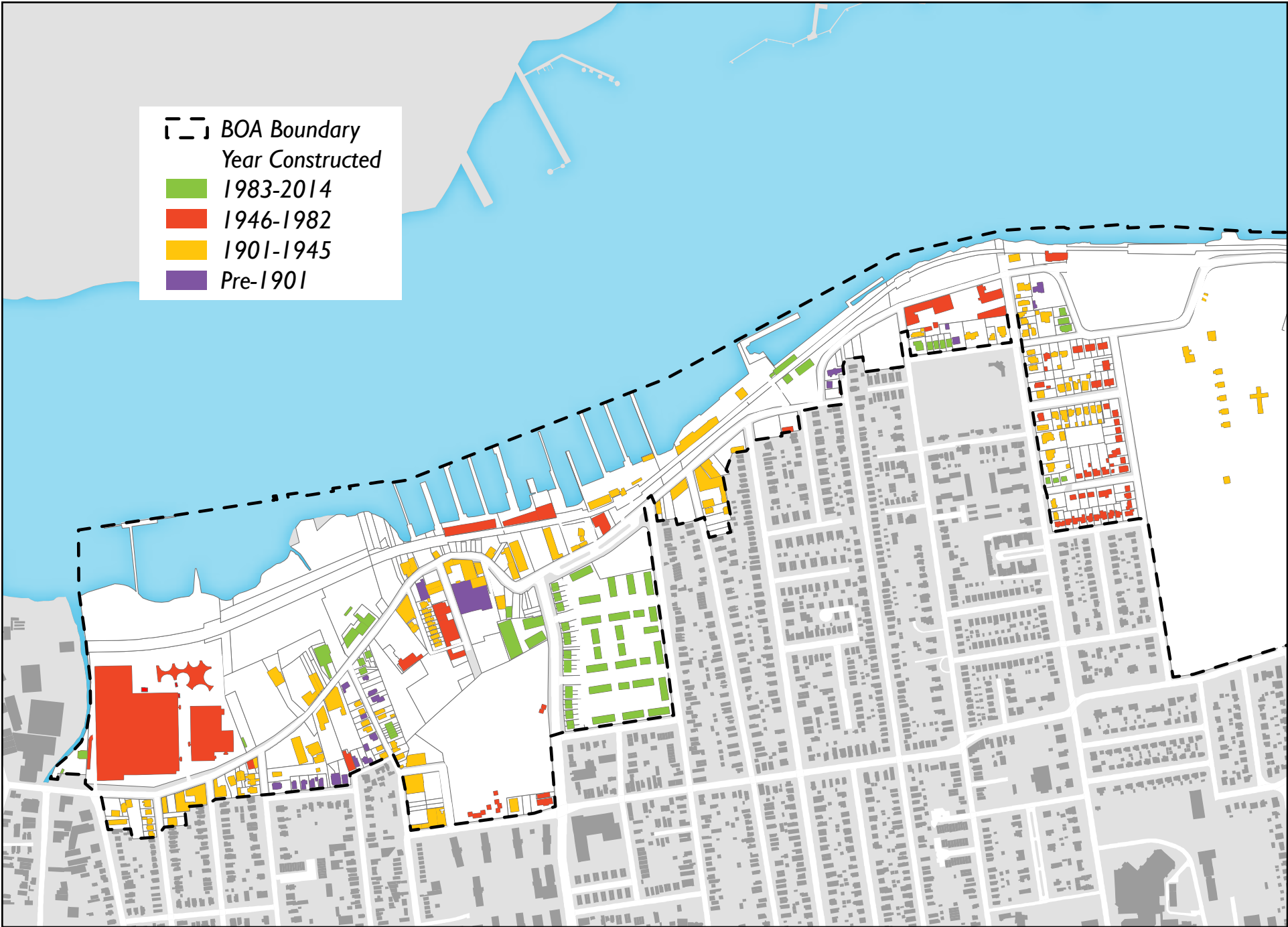
District 31 serves as Staten Island's school district and is the only school district in New York City to cover an entire borough. District 31 consists of 28 public school campuses for elementary, middle and high schools. There are also two additional public charter schools and 16 private schools.

According to the New York City Department of Education's *Statistical Summaries and the New York City School Construction Authority's Enrollment Capacity and Utilization Report*, District 31 is slightly under capacity, which means that if the SCA aggregates the total number of children from all grade levels, District 31 would have the capacity to meet the target classroom sizes. During the 2013 to 2014 school year, enrollment in Staten Island was 62,015, and the target capacity was 63,856.

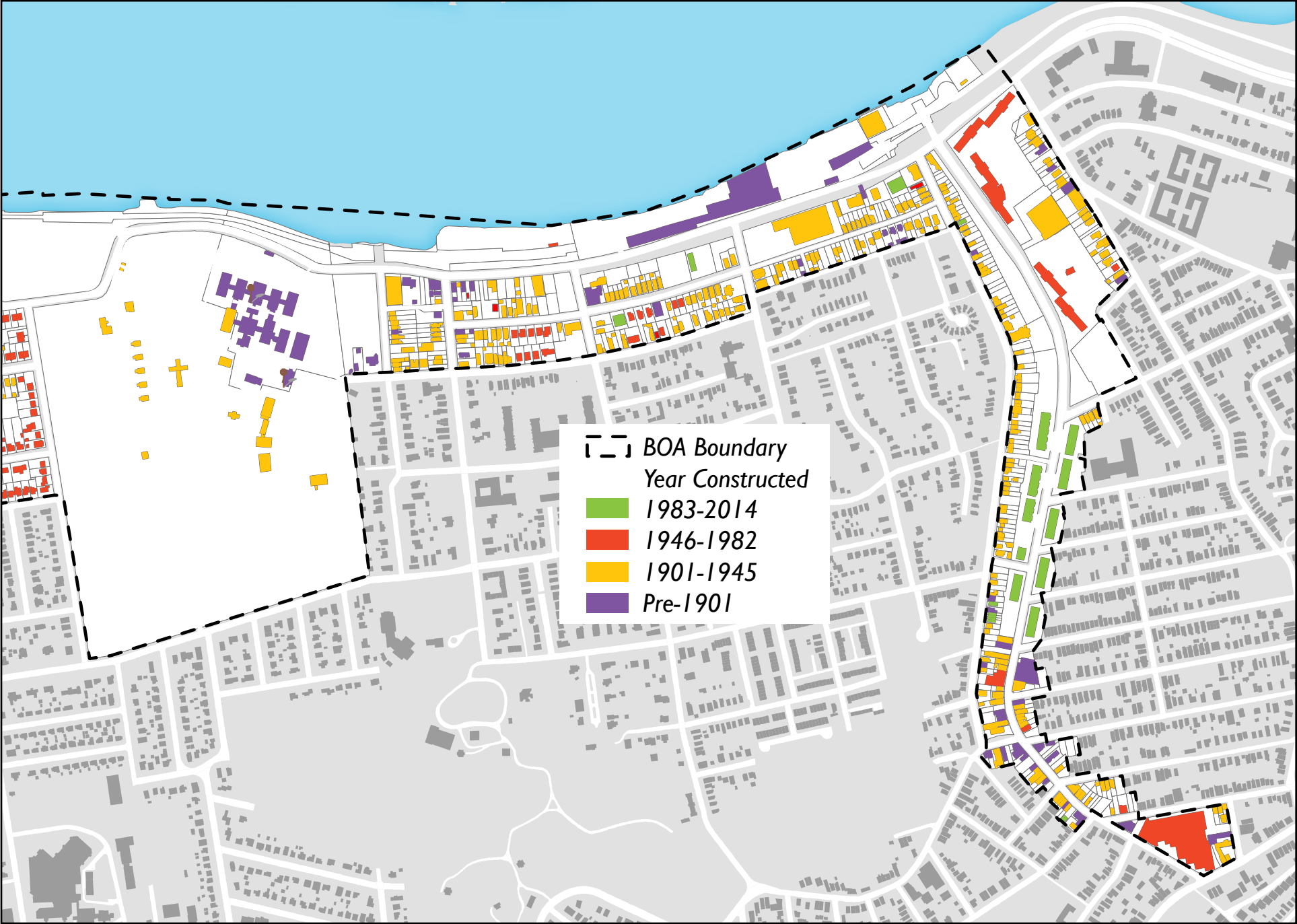
Map 3.19 West Brighton BOA Historical Places and Character



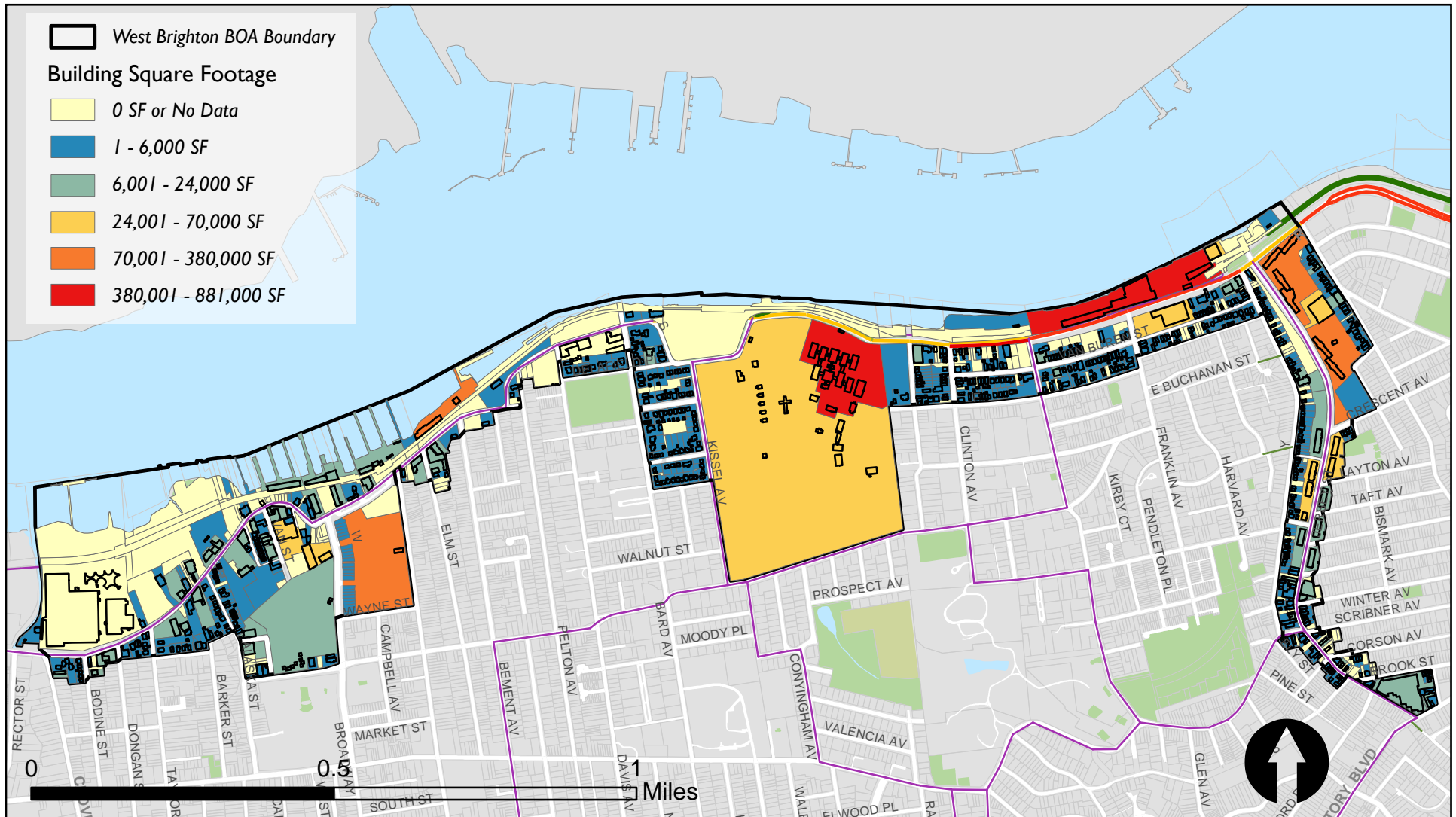
Map 3.20 Building Age - West Brighton Subarea



Map 3.21 Building Age - New Brighton and Jersey Street Subareas



Map 3.22 West Brighton BOA - Building Square Footage on Tax Lot



Unlike borough-wide enrollment statistics, the North Shore's (Community District 1) public schools are slightly over capacity. During the 2013-2014 school year, the enrollment of students in the North Shore Schools was 21,491 students, and the target capacity of the North Shore schools was 21,192 students. Therefore,

enrollment in the North Shore's public schools exceeded capacity by 299 students.

The New York City School Construction Authority (SCA) calculates the identified "need" for school seats in areas where over-enrollment persists by analyzing current

capacity figures, capacity scheduled to become available over the next several years, and long-term enrollment and housing projections. According to the SCA's 2015-2019 proposed five year capital plan, there is a projected "need" for approximately 1,500 additional school seats on Staten Island. Funding for 1,257

Table 3.5 School Seat Capacity				
District	Sub-District	Total November 2013 Identified Need	November 2014 Funded Need	Additional Need (Unfunded)
31	West Shore	456	456	0
	North Shore	640	456	184
Staten Island High School		400	345	55
Total		1496	1257	239
Source: New York City School Construction Authority Capital Plan 2015-2019				

new school seats in Staten Island has been requested by the SCA, which plans to create new seats at three PS or PS/IS and one IS/HS school buildings. Per the SCA's capital plan, 456 of the 1,257 new school seats in Staten Island will be allocated to the North Shore sub-district. However, the identified "need" for the North Shore sub-district as of November 2014 was 640. Because the SCA Capital Plan only provided funding for 456 new school seats in the North Shore sub-district, the North Shore still has an additional, or unfunded, need of 184 school seats.

The SCA notes that exceeding school seats capacity does not necessarily lead to poor quality education. However, individual schools have had to move students to other locations to accommodate instances of overcrowding. Most of the under-capacity schools are intermediate and middle schools, whereas most of the over-capacity schools are elementary schools. This is reflective of the general population trend on the North Shore that has seen substantial growth of the youth population. The SCA for future enrollment take into account these population and development trends; any significant amount of new development or addition of projected dwelling units through a rezoning, would need to consider the availability of school seats.

Wastewater and Stormwater Collection

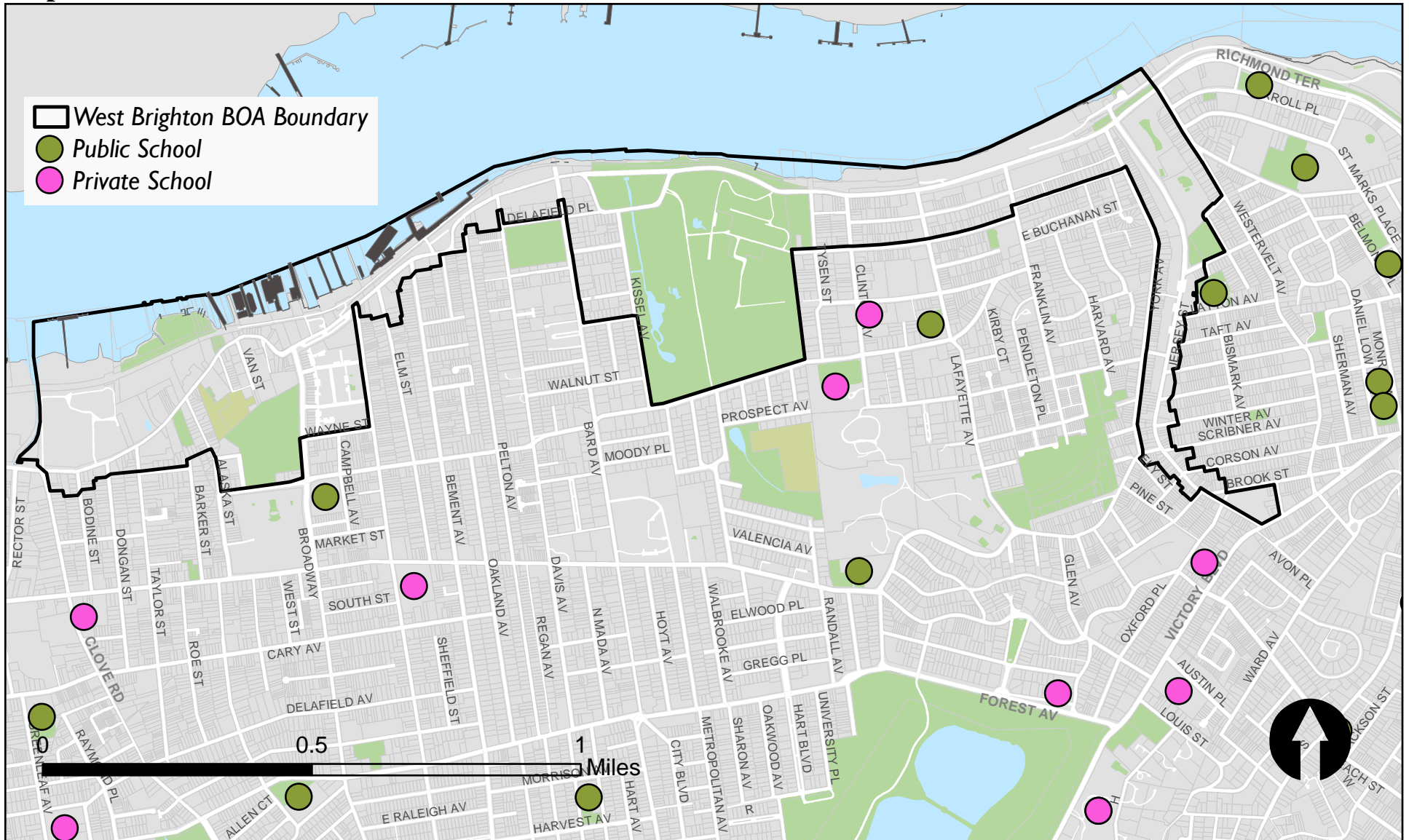
Citywide, most wastewater is collected through combined sewer systems (CSS), which are typically found in older cities. CSS collect and carry sanitary and industrial wastewater, rainwater and street runoff to treatment plants. Heavy rains or snow, however, inundate the combined sewers and produce a discharge called combined sewer overflow (CSO). CSOs contain both storm water and pollutants, but may be discharged into local waters. According to the EPA's Keeping Raw Sewage and Contaminated Storm Water Out of the Public's Water report, this mixing of rainwater and sewage can pose serious environmental and public health risks, such as an increased exposure of the local community to waterborne infections. Furthermore, DCP's *Open Industrial Use Study* identified 55 open industrial uses on Staten Island's North Shore, many of which are located in the West Brighton BOA and within the 100-year floodplain. During a storm surge or flood, openly stored materials can potentially become waterborne and result in public health hazards, navigational hazards, and the pollution of the city's waterways.

In West Brighton, wastewater and storm water flow into the DEP operated Port Richmond

Wastewater Treatment Plant. The plant is located on Richmond Terrace, just at the end of the study area boundary in the West Brighton BOA. The wastewater that comes into the plant is treated through a variety of physical and biological processes in order for it to be discharged into the Kill Van Kull without adversely affecting the water quality. The system and processes are regulated through the State Pollutant Discharge Elimination System permit, which is issued by the DEC. According to the DEP, the Port Richmond plant is designed to process up to 60 million gallons per day and the average flow is somewhere around 40 million gallons per day during dry weather. In order to avoid overburdening the treatment plant during storm events, the combined sewers are designed to release excess flow into nearby waterways at what is called a combined sewer overflow (CSO) outfalls. It is also noted that the communities in West Brighton and Port Richmond, however, frequently complain about strong odors coming from the Port Richmond plant.

Drainage plans were last updated for the area in the 1960s. According to the DEP, the sewer and drainage infrastructure in the area is relatively old and the pipes are generally between six and eight inches in diameter, designed for an outdated capacity standard. Clogged catch basins and other backups often lead to flooded roadways and basements, and the community tends to complain of flooding at certain locations during even minor rain events. DEP is engaged in long-term efforts to upgrade the drainage capacity with 10-inch pipes for the North Shore as funding becomes available. The City's limited resources can lead to lengthy delays for necessary sewer upgrades and connections for proposed new developments.

Map 3.23 Public and Private School Locations



This presents a challenge for the achieving the BOA's community-driven vision of support and create neighborhood centers along portions of Richmond Terrace and Jersey Street through new commercial and residential developments. Oftentimes, private developers construct the

necessary public upgrades themselves in order to avoid project interruptions. Developers are required to submit an engineering plan for site connection and flow anticipation as part of their applications for New York City Department of Buildings (DOB) permits.

DEP is also focused on green infrastructure strategies in combined sewer overflow areas, such as the North Shore, to reduce the speed of storm water entering the system and relieve backups in the system which would cause flooding in homes. The Staten Island Bluebelt

system is one example of a storm water management program that seeks to capture runoff through natural and constructed storm water retention areas such as natural wetlands, ponds, bioswales, and stream restorations. DEP has begun planning and funding design work for a Bluebelt system in Snug Harbor and the upland portions of New Brighton. Advancing green infrastructure projects, such as the Bluebelt expansion, can help address some of the challenges of the sewer and drainage infrastructure in the BOA, while also creating new open space opportunities and streetscape improvements.

Additional green infrastructure initiatives in the West Brighton BOA area include rain barrels and rainwater harvesting. As part of its citywide Rain Barrel Giveaway Program, the DEP is distributing rain barrels to homeowners that help reduce localized street flooding. Rain barrels can capture up to 60 gallons of rainwater runoff from roofs that can be used for watering lawns or washing cars. DEP has held several rain barrel giveaway events near the West Brighton and New Brighton neighborhoods. Rainwater harvesting is a GrowNYC initiative that can also reduce the amount of rainwater that flows into the storm drains. Rainwater harvesting systems in New York City collect over 1.5 million gallons of rainwater runoff a year from roofs or shade structures. The West Brighton Community Garden, which is located just outside the BOA study area, will soon feature a rainwater harvesting system.

ECONOMIC AND MARKET TRENDS ANALYSIS

General Summary

Staten Island's economic environment is unique among the five boroughs. Far less

dense than the rest of New York City and the most geographically removed, Staten Island's economy is more insular than the economies of the other boroughs. Its service-oriented economy, which includes health care, education, automotive services, restaurants, and transportation services, principally serves the local market and attracts only a limited customer base from outside the borough due to the limited access and high toll costs that discourage frequent shoppers. Within the BOA, approximately 54 percent – 51 out of 95 firms – are in the service sector. Many of these firms are small businesses with few employees. Overall, of the 1,417 jobs in the BOA study area in 2012, 295 are within the service sector. Within the service sector, 13 firms, or 25 percent, are automotive-related. Industrial firms make up the next largest sector in terms of total firms. Twenty-four firms, or 25 percent of all firms, are in the industrial sector. Despite their relatively small share of the total economic profile, the study area's industrial firms account for a considerable majority of its jobs. Of 1,417 jobs within the BOA in 2012, 944, or 66 percent, were in the industrial sector.

The proposed development of the New York Wheel and Empire Outlets in St. George present an opportunity for further growth in the North Shore's service industry. The Wheel's 100,000-square-foot Terminal Building will include retail stores, restaurants, and an exhibition space, while the Empire Outlets will feature 100 designer outlet stores and a 190-room hotel. According to NYCEDC, these projects are estimated to generate over \$750 million in private investment and create over 1,100 construction jobs and 1,300 permanent jobs. These projects will also help attract more of the two million tourists that ride the Staten

Island Ferry each year to other attraction on the North Shore, including Snug Harbor. Furthermore, the New York Wheel and Empire Outlets can potentially spur private investment in the West Brighton BOA.

The maritime industry also accounts for many of the jobs in the BOA. According to NYCEDC and Brooklyn Navy Yard Development Corporation's Maritime Support Service's Study, the maritime firms on the North Shore employed a total of 2,938 employees in 2009 and anticipated hiring an additional 1,185 employees over the following five years. Furthermore, the North Shore 2030 study recommended that the area's waterfront, including the portion of the waterfront within the West Brighton BOA, remain focused on maritime industrial growth. The West Brighton BOA seeks to advance that recommendation with targeted actions to improve the BOA's profile as a regional center of the maritime support services industry.

Housing Real Estate Market

Staten Island homes are characterized by larger single family detached homes, typically three or four bedrooms. This also differs from the citywide housing profile, which is dominated by one- and two-bedroom units in multi-family buildings. A large portion of homes on the North Shore, including those within the West Brighton BOA, were built in the late eighteenth and early nineteenth centuries. Recent housing construction in the BOA study area includes a large multi-family townhouse and senior living development at Markham Gardens.

Staten Island is characterized by a high homeownership rate and a relatively small rental market. As reflected in the 2010 U.S.

Census, the homeownership rate (percent of owner-occupied dwelling units) on Staten Island was estimated at 64.1 percent in 2010, higher than the national average (65.1 percent). This differs from the rest of New York City, which has the lowest homeownership rate among the nation's ten largest cities. Similar to citywide patterns, 60 percent of all housing units in the study area are rented, compared to 29.8 percent that are owned. Vacancy rates among rental units ranged from 1.5 percent in census tract 133.01 and 11.7 percent in census tract 9 ; owner occupied units for that same period ranged from about 1.7 percent in census tract 97 to 11.2 percent in census tract 7.

According to the 2009-2013 ACS, the property value of owner-occupied housing units in the BOA is generally lower than citywide and borough-wide property values. Six census tracts in the BOA have a lower median property value of owner-occupied housing units than Staten Island (\$441,000) and New York City (\$492,800). In fact, a majority of the homes in the BOA's eight census tracts (57 percent) falls between \$300,000 and \$500,000, census tract 9, which has a median property value of \$452,100, is the only tract in the BOA that exceeds the borough-wide median value. The only housing structures located on census tract 133.01 are the NYCHA public houses; therefore, the ACS did not report a median income for this census tract.

Additionally, 30 percent of all homes in the BOA are valued at less than \$300,000, which corresponds with recent real estate transactions in the BOA. According to the New York City DOF's Rolling Sales data, the average price of the 6 single family homes sold in the BOA study area between March 2014 and February 2015 was \$291,853.33. Similarly, the average

price of the 12 two-family dwellings and six three-family dwellings were sold in 2013 were \$287,166.83 and \$225,000.00, respectively. A majority of the homes (71 percent) sold between March 2014 and February 2015 were built before 1941. The remaining dwellings sold within this time period were built after 1970 or did not have a construction year on record.

Traditional real estate and census data, however, do not include instances of informal subdivisions of larger houses into multiple units without the required DOB permits. This is one way that the neighborhoods and many other parts of the city may be accommodating the growing population and providing affordable units. While no data exists on the extent or condition of such informal subdivisions, they have generated community concern over the risk for fire and overcrowding schools.

Commercial Retail Market

The West Brighton BOA can be characterized as an area without a significant commercial retail market. Some local shops are scattered along Richmond Terrace and serve independent businesses and workers, but only one commercial corridor, the southern end of Jersey Street, has a history as a local commercial area serving the surrounding residential communities. In the early twentieth century, Jersey Street served a diverse local community composed mostly of Polish, Italian, Jewish, and Black residents, with a thriving mix of businesses. However, the second half of the twentieth century saw the replacement of pedestrian commercial strips with automobile-oriented retail, causing Jersey Street's commercial corridor to decline. Some factors include urban renewal projects that constructed public housing for lower-income residents.

Today, a number of small, struggling businesses provide the most basic goods to the surrounding residential community, but struggle to compete with major chain stores as consumers prefer larger retail stores. A lack of an economically stable customer base and a perception of crime also continue to hinder Jersey Street's remnant commercial market.

Despite the lack of commercial services available within the BOA, the study area is surrounded by what are historically some of Staten Island's most prominent commercial markets. To the west, Port Richmond Avenue remains a significant retail destination for residents of the North Shore. A resurgent commercial market, buoyed by a fast-growing Hispanic population in the Port Richmond neighborhood, has returned considerable commercial activity to Port Richmond Avenue. Today, residents within the West Brighton BOA can find a large assortment of food and drink establishments, salons, hardware stores, and general merchandise retailers. However, because of limited parking and competition with larger, modern shopping centers, businesses in Port Richmond primarily serve the local community needs.

To the south of the BOA are two significant commercial retail markets: Castleton and Forest Avenues. Both corridors primarily serve the local population with a wide variety of general merchandise, food and drink establishments, commercial services, and large grocery stores that provide ample free parking lots. To the east of the BOA is St. George, considered the hub of Staten Island. While the commercial market in St. George is smaller than those of other areas in the Borough, St. George is attracting considerable investment in its commercial

Table 3.6 Median Value of Homes in the West Brighton BOA

Census Tract	Median Value of Owner-occupied Housing Units
7	\$166,900
9	\$452,100
11	\$302,300
77	\$339,100
81	\$397,700
97	\$371,400
133.01	N/A
133.02	\$383,400
Staten Island	\$441,000
New York City	\$492,800

market, including a major shopping mall that is currently under construction and located adjacent to the Ferry Terminal. In addition, St. George's commercial offerings cater to the large office and residential populations in

the neighborhood along with the estimated 1.5 million tourists that ride the Staten Island Ferry each year, per the Visit Staten Island website. A key focus of the West Brighton BOA is examining ways to improve access to commercial markets both within and without the BOA boundaries.

Commercial Office Market

The office market of Staten Island is the smallest of the five boroughs. Each of New York City's four other boroughs, as well as New Jersey, offer more modern and conveniently located office space. The commercial office markets in nearby Manhattan and Brooklyn are located in long-established central business districts. St. George, just to the east of the BOA, contains approximately one million square feet of primarily older B and C grade office real estate, making it the primary office market in Staten Island. While the West Brighton BOA does not have an established office market, there are small, isolated pockets of office space located throughout the BOA, mainly catering to

adjacent industrial and utility firms.

Industrial Market

The North Shore has long been an industrial and manufacturing center for the city and the region. Throughout the nineteenth century, early industrialists established a number of mills, and processing plants for coal and dyes, among other goods. These operations required intensive filling of land along the shoreline, as well as the creation of mill ponds and alterations to streams throughout the North Shore. That early industrial legacy provided the foundation for the North Shore's robust twentieth century industrial economy. Steel production, shipbuilding, and industries supporting New York City's rapidly growing real estate development industry flourished through the end of World War II. After the war, however, the North Shore's shipbuilding sector declined rapidly as the demand for ships used in the war effort disappeared. While North Shore firms continued to produce barges and tankers after the war, global economic trends, specifically a North American shift away from manufacturing, eventually led to a precipitous drop in the number of maritime and industrial jobs throughout the North Shore. In the wake of the North Shore's maritime collapse, much of its previously maritime industrial land was occupied by industrial uses that weren't water dependent.

Despite changing trends in manufacturing and global shipping over the last century, the vast majority of the North Shore remains zoned for manufacturing uses, including nearly 40 percent of the West Brighton BOA. According to NYCEDC, the average rental rate of industrial property on Staten Island in 2013 was \$10.51 per square foot, which is the

Table 3.7 Value of Homes in the West Brighton BOA

Value of Home	Total Owner-occupied Housing Units	Percentage of Owner-occupied Housing Units
Less than \$50,000	39	1.1%
\$50,000 to \$99,999	65	1.9%
\$100,000 to \$149,999	182	5.3%
\$150,000 to \$199,999	261	7.6%
\$200,000 to \$299,999	475	13.8%
\$300,000 to \$499,999	1,963	56.8%
\$500,000 to \$999,999	469	13.6%
\$1,000,000 or more	0	0.0%
Total Owner-occupied Units	43,454	100.0%
Source: 2009-2013 American Community Survey		

lowest rate in New York City. The low rents of industrial property along the waterfront are a natural market reaction to the long processing times and high costs associated to obtaining the necessary government approvals for the bulkhead improvements necessary for expanding maritime business operations and job creation. Unlike maritime businesses, non-water dependent uses do not have to undergo the permitting process. As a result, non-water dependent businesses pay low rents for property along the waterfront, which, in turn, produces underutilized waterfront properties.

Low rents and property values, particularly on M-zoned sites in the western portion of the BOA, have led to a significant lack of investment in property and infrastructure upkeep. Property owners are reluctant to invest in their properties because they are unable to find tenants who can pay a high enough rent to make their investments worthwhile. The average lease on the North Shore industrial properties is reported to be only 12 months, a likely result of property owners holding out for higher paying tenants or tenants unwilling to make a long-term commitment or investment in their business. Along with high tolls on the bridges connecting Staten Island to Brooklyn and New Jersey and a lack of infrastructure, short leases have produced high turnover rates and discouraged industrial tenants from establishing long-term operations and making meaningful investments on the North Shore.

In contrast to the overall trend toward declining maritime prospects on the North Shore, the West Brighton BOA has retained a considerable maritime sector largely because of the strength of its three major waterfront landowners: Atlantic Salt, Caddell Dry Dock and Repair,

and the City of New York. While only three of eight industrial firms located north of Richmond Terrace on the Kill Van Kull waterfront within the BOA are water dependent, those three firms employ a considerable portion of the BOA's industrial workforce. In addition, these maritime firms invest constantly in the maintenance of shoreline infrastructure. Caddell Dry Dock and Repair and Atlantic Salt remain two of New York City's most important water-dependent industrial uses. Caddell has operated one of the region's largest ship repair facilities out of its West Brighton location since 1916 and is one of the largest employers in the City's maritime sector. Atlantic Salt, which operates out of a prominent waterfront property at the eastern end of the BOA, is the largest distributor of road salt in New York City. During the winter season, an average of one large transport truck packed with salt leaves the Atlantic Salt site every minute. According to the American Institute of Architects' Regional/Urban Design Assistance Team Program (R/UDAT) study, increased truck traffic exacerbates the wear and tear of Richmond Terrace's roadbed, which was only built to handle normal vehicular traffic.

North Shore 2030's recommendation for continued focus on the West Brighton waterfront's maritime sector as a growth industry was in large part a reflection of a 2007 study produced by NYCEDC, the Brooklyn Navy Yard Development Corporation, and the State University of New York – Maritime College that recognized the competitive advantage of the area's maritime support services industry. That report, the Maritime Support Services Location Study (MSSLS), points out that 11 of the 18 ship operator and repair facilities in the Port of New York and New Jersey are located in Staten Island. The

major ship repair yards in the Kill Van Kull, of which Caddell is one of the largest, are equipped with floating dry docks that service a variety of vessels. MSSLS illustrates that demand for dry dock services throughout the region greatly exceed current capacities.

The completion of the Panama Canal expansion in 2015 and the raising of the Bayonne Bridge roadway will further support the growth of West Brighton's maritime sector. The expansion of the Panama Canal would allow larger and more energy efficient vessels to travel through the canal, while the raising of the Bayonne Bridge provides the necessary clearance for the larger ships to travel to docks on Staten Island via the Kill Van Kull. Per the *Bayonne Bridge Navigational Clearance Program Environmental Assessment*, the raising of the Bayonne Bridge is expected to reduce the number of vessels that use the Kill Van Kull from 3,080 to 2,840 by 2020. Fewer vessels traveling through the Kill Van Kull would reduce the use of tug vessels, which tend to have a greater impact on shoreline erosion than other vessels. This slight reduction in the number of tugboats, however, is not expected to affect the local economy. Nevertheless, a key focus of the recommendations in this report is to examine ways that planning initiatives can take advantage of the projected National Economic Development (NED) long-term benefits of over \$3 billion created by the Bayonne Bridge project.

3.3 BROWNFIELD, ABANDONED, AND VACANT SITES

The North Shore has a long history of industrial development and activity. The waters of the Kill Van Kull have provided access and

transportation for moving goods and people since the time of indigenous settlements. By the 1800s, however, the North Shore was home to major manufacturing and industrial operations that included dye, printing, iron, lead, coal, and steel operations. By the early 1900s commercial fishing and oystering had ceased on the North Shore due to pollution of the Kill Van Kull and surrounding waters caused by industrial operations. Shipbuilding also became a key industry for the North Shore, some of which remains today in the area of West Brighton. Both World Wars brought an influx of jobs and shipbuilding activity that was said to have gone on 24 hours a day, as over 12,000 workers produced destroyer warships and propellers for shipyards across the country.

A significant amount of land along the shoreline was filled during the first half of the twentieth century to build out bulkheads for the shipping operations. The expanded bulkheads along with other improvements made to the local shoreline transformed the North Shore into a destination for various shipping industries, one of which was coal. In the 1940s, however, ferries transitioned to using electric power, which resulted in the closing of several coal yards along the North Shore.

While most of the industry of this nature has moved from the North Shore, the legacy of these activities remains in the built environment and the contamination left behind. Shipments of coal, gasoline, and other sources of fuel were delivered to the North Shore and stored locally for distribution, and remnants from this period could contribute to a brownfields designation. Furthermore, large warehouses and factory buildings still line much of the waterfront, and the abandoned rail line remains mostly intact

across the entire North Shore. Many of the remaining active maritime businesses have been able to maintain their bulkheads, docks, and piers, but much of this infrastructure on abandoned sites has been neglected and is badly degraded. While some of the infrastructure serving the maritime businesses holds potential for reactivation and adaptive reuse, the area surrounding the infrastructure may contain some level of contamination that poses a challenge for any effort to revitalize the site.

There are 41 sites within the subarea that have been identified as having potential environmental issues due to historical and current conditions (Maps 3.24 and 3.25). The West Brighton BOA team identified these sites by using the Searchable Property Environmental E-Database on the New York City Office of Environmental Remediation's website. These resources indicated that, within the West Brighton BOA, there are:

- Three lots classified as a New York State Open Petroleum Spill Location
- Sixteen lots classified as a New York State Petroleum Bulk Storage Site
- Three lots classified as a both New York State Open Petroleum Spill Location and New York State Petroleum Bulk Storage Site
- One lot classified as a New York State Petroleum Bulk Storage site and a New York State Chemical Bulk Storage Site

Historical maps, however, indicate that contamination may exist on several untested sites. A number of the waterfront sites were used for coal storage and later used for

gasoline and other fuel storage. There is also the potential for ash from historical garbage incineration. Sites along the waterfront where the shoreline was altered and filled are potentially contaminated from the use of fill material from unknown origin. The fill material historically used in New York City included dredge material that may contain petroleum, heavy metal, or PCB contamination. Accordingly, all waterfront properties in the study area are considered to be potentially contaminated from such fill material. Additionally, any sites on or adjacent to the former railroad right-of-way should be considered for additional hazardous material assessments.

Current and recent uses involving auto repair, junk storage, and solid waste transfer also may have contributed to the contamination of sites. For example, openly stored materials on such industrial sites can become waterborne during a flood or storm surge, similar to Hurricane Sandy's storm surge in 2012. As a result, these contaminants create a public health issue for the surrounding communities. Sites with past or current industrial activities require further assessment in accordance with the New York City Environmental Quality Review Technical Manual.

Table 3.8 contains a list of potentially contaminated sites located with the West Brighton BOA. Of the sites mentioned above, 12 are completely vacant, comprising about 150,000 square feet of unused space. Most of these vacant and underutilized sites are concentrated north of the former rail road right-of-way and on the waterfront.

Sites for Additional Investigation

There are currently no remediation plans for the potential brownfield sites identified by the West Brighton BOA report; however, these unused and underutilized spaces within the study area have the potential to catalyze redevelopment and reinvestment in the West Brighton BOA's neighborhood centers, reconnect the community to the waterfront, and facilitate transportation improvements along the North Shore. In fact, additional environmental investigation and remediation efforts could help achieve the redevelopment potential of 7 sites (Maps 3.25 and 3.26). Four of these sites are located along Jersey Street and Richmond Terrace and present an opportunity to create or support new neighborhood centers in the BOA. Additional sites are located within a short distance of Heritage Park and the North Shore Railroad right-of-way and, thus, have the potential to expand West Brighton's open space network or create new commercial amenities near a proposed Bus Rapid Transit station. Further discussions regarding the redevelopment opportunities on these sites can be found in the Strategic Sites section.

3.4 STRATEGIC SITES

The BOA program is intended to facilitate neighborhood and area-wide revitalization through the implementation of redevelopment strategies for a number of key strategic sites. These strategic sites also represent an opportunity to advance the goals of *North Shore 2030* as well as the recommendations of this report. Additionally, the selected strategic sites are eligible for additional funding through both state and city programs for testing and cleanup.

The strategic sites discussed in this chapter have been nominated based on characteristics

listed in the *New York State Department of State's Guidance for Brownfield Opportunity Area Applicants*. These characteristics include, but are not limited to the following:

Location

A large number of brownfield sites are located between Richmond Terrace and the Kill Van Kull waterfront and within a short distance of the St. George neighborhood. The strategic location of brownfields along the waterfront, adjacent to the former North Shore Railroad right-of-way, and near the proposed development projects in St. George makes them particularly valuable for neighborhood revitalization.

Size

As part of the strategic site criteria, the West Brighton BOA team considered the size of the site. In contrast to smaller lots, larger lots or agglomerations of lots have more potential for future redevelopment efforts and achieving the community's vision for the BOA.

Capacity for redevelopment

The BOA's analysis of a site's capacity for future redevelopment considered the effect of existing regulatory, such as zoning, and the adequacy of existing infrastructure, transportation systems, and utilities on attracting and supporting new development. Additionally, a large percentage of several brownfields these strategic sites were flooded during Hurricane Sandy and are mapped within the FEMA flood zones, as denoted on the proposed FEMA Insurance Rate Maps (pFIRMS). Because of its zoning and regulatory challenges or vulnerability to flooding, a

site may not present substantial capacity for redevelopment and, thus, may need new infrastructure to support future redevelopment efforts.

Potential to spur additional development

The redevelopment of brownfields and consequent investment in the area's infrastructure can potentially serve as a catalyst for development in the BOA. For example, the North Shore Railroad right-of-way represents a unique opportunity to expand the maritime industry and create jobs in the North Shore. The right-of-way is now defunct, and landowners have been left with an easement for a rail line that has been disused for decades. Removing this easement and pursue land swaps could help advance the proposed North Shore Bus Rapid Transit network, while also facilitating additional development and jobs expansion on the North Shore.

Potential to improve quality of life or to site new public amenities

Achieving the community's vision for the West Brighton BOA involves bringing new quality of life improvements and public amenities to the area. Such improvements would include an expansion of commercial and residential opportunities, new parks and open spaces, and an improved transportation network on the North Shore. In the site selection criteria, the West Brighton BOA team considered the site's potential to bring these amenities to the area.

Ten draft strategic sites were identified through the selection criteria (Table 3.9). Many of these lots are part of larger agglomerations of sites that share a common owner or are part of sites that can conceivably be assembled for

Map 3.24 Potential Brownfield Sites - West Brighton Subarea



This map illustrates the West Brighton BOA Boundary, which is outlined by a dashed blue line. The map identifies several potential brownfield sites, numbered 26 through 41. Sites 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, and 38 are highlighted in yellow, indicating they are potential brownfield sites requiring additional environmental investigation. Sites 39, 40, and 41 are outlined in red but not filled, indicating they are potential brownfield sites. Vacant land is shown in grey. The map includes a legend, a scale bar (0 to 0.5 miles), and a north arrow. The map also shows the Snug Harbor Greenway and the East River.

Legend:

- West Brighton BOA Boundary (Dashed blue line)
- Potential Brownfield (Red outline)
- Potential Brownfield (Additional Environmental Investigation) (Yellow fill)
- Vacant Land (Grey fill)

Scale: 0 to 0.5 Miles

North Arrow: Upward pointing arrow

Map Labels: SNUG HARBOR GREENWAY, RICHMOND TERRACE, VAN BUREN STREET, FILLMORE STREET, CLINTON AVENUE, TYSEN STREET, CASIDY PLACE, HENDERSON AVENUE, CALDERA PLACE, DEVON PLACE, LOTIS PLACE, BRENTWOOD AVENUE, WEST BUCHANAN STREET, EADIE PLACE, EAST BUCHANAN STREET, HARVARD AVENUE, PARK PLACE, NASSAU STREET, PENDLETON PLACE, FRANKLIN AVENUE, KIRBY COURT, CORTELYOU PLACE, DIANE COURT, SUMNER PLACE, ARNOLD STREET, ROBERT LANE, CHESTNUT PLACE, LAFAYETTE AVENUE, BRIGHTON AVENUE, BUTLER TERRACE, CARROLL PLACE, ST. MARKS PLACE, ST. PETER PLACE, RICHMOND TERRACE, PHELPS PLACE, EGMONT PLACE, CURTIS PLACE, CRESCENT AVENUE, BECHWOOD AVENUE, LAYTON AVENUE, TAFT AVENUE, BISMARCK AVENUE, HENDRICKS AVENUE, BENZIGER AVENUE, BENZIGER AVENUE, SHERMAN AVENUE, FORT PLACE, FT. HILL CIRCLE, DANIEL LOW TERRACE, FT. HILL CIRCLE, WESTERLY AVENUE, WINTER AVENUE, SCRIBNER AVENUE, CORSON AVENUE, BROOK STREET, VICTORY BOULEVARD, ASTLETON AVENUE, JERSEY STREET, PENBROKE AVENUE, NORFOLK AVENUE, WILLOW AVENUE, TOMPKINS CIRCLE, FLEMING AVENUE.

Table 3.8 Potential Brownfield Sites

Site #	BBL	Address	Lot Area (sq. ft.)	Building Area (sq. ft.)	Potential Contamination				Historical Use ⁵	
					OS ¹	PBS ²	CBS ³	NYC E Designation ⁴	Potential Concern	Historical Use and Year
1	5001850600	RICHMOND TERRACE	204,357	-	-	-	-		✓	Scrap Iron Yard (1898)
2	5001850400	RICHMOND TERRACE	577,475	-		✓	✓		✓	Water pollution control (1917)
3	5002010030	1840 RICHMOND TERRACE	9,754	1,260	✓				✓	Gas Station
4	5001840280	1483 RICHMOND TERRACE	17,980	7,080	-	-	-		✓	Coal yard (1917)
5	5001850200	1741 RICHMOND TERRACE	20,892	400	-	-	-		✓	Dying and cleaning chemicals (1898)
6	5001860220	33 VAN STREET	60,297	27,443	-	✓	-		✓	Coal yard (1898)
7	5001840260	1473 RICHMOND TERRACE	22,583	2,000	-	✓	-		✓	Coal yard (1898)
8	5001880030	1696 RICHMOND TERRACE	29,922	2,640	-	-	-		✓	Auto repair (1917)
9	5002000030	1780 RICHMOND TERRACE	12,255	6,900	-	✓	-		-	-
10	5001850150	1641 RICHMOND TERRACE	74,351	1,500	-	✓	-		✓	Auto parking
11	5001870140	10 VAN STREET	7,704	2,666	-	✓	-		-	-
12	5001850170	1681 RICHMOND TERRACE	13,955	9,065	-	-	-		✓	Oil storage (1917)
13	5001880080	139 WOODRUFF LANE	5,490	3,510	-	-	-		✓	Coal yard (1917)
14	5001840330	1435 RICHMOND TERRACE	80,050	21,000	-	-	-		✓	Machine shop (1917, 1937, 1951)
15	5001880030	1684 RICHMOND TERRACE	40,553	7,031	-	-	-		✓	Coal yard (1937)
16	5001990040	1740 RICHMOND TERRACE	1,717	4,500	-	-	-		✓	Auto parking (1917)

¹ OS = New York State Open Petroleum Spill Location (Searchable Property Environmental E-Database, NYC Mayor's Office of Environmental Remediation)

² PBS = New York State Petroleum Bulk Storage Sites (Searchable Property Environmental E-Database, NYC Mayor's Office of Environmental Remediation)

³ CBS = New York State Chemical Bulk Storage Sites (Searchable Property Environmental E-Database, NYC Mayor's Office of Environmental Remediation)

⁴ New York City Environmental Designation (NYC Department of City Planning Zoning and Land Use Application)

⁵ Based on partially complete sets of Sanborn maps from 1898, 1917, 1937, and 1951.

Table 3.8 Potential Brownfield Sites

Site #	BBL	Address	Lot Area (sq. ft.)	Building Area (sq. ft.)	Potential Contamination				Historical Use ⁵	
					OS ¹	PBS ²	CBS ³	NYC E Designation ⁴	Potential Concern	Historical Use and Year
17	5001570010	1320 RICHMOND TERRACE	16,008	1,930	✓	-	-		-	-
18	5001850180	1693 RICHMOND TERRACE	34,296	3,566	-	✓	-		✓	Fuel, oil and coal storage (1937)
19	5001840360	RICHMOND TERRACE	75,585	72,992	-	-	-		✓	Railroad, Machine repair (1917, 1937, 1951)
20	5001500010	45 ELIZABETH AVENUE	10,823	1,708	-	✓	-		-	-
21	5001990030	1756 RICHMOND TERRACE	7,057	2,527	-	✓	-		-	-
22	5001860120	799 HENDERSON AVENUE	469,997	17,836	-	-	-		✓	Dying chemicals (1898, 1917, 1937, 1951)
23	5001570000	1388 RICHMOND TERRACE	28,216	15,712	-	✓	-		-	-
24	5001860040	1532 RICHMOND TERRACE	6,575	2,417	-	✓	-		✓	Auto repair
25	5000750050	1125 RICHMOND TERRACE	12,314	1,800	✓	✓	-		✓	Gas Station
26	5000670110	700 RICHMOND TERRACE	9,338	2,325	-	✓	-		✓	Auto repair
27	5000040020	561 RICHMOND TERRACE	348,877	881,000	-	-	-		✓	Oil storage (1989, 1917, 1937, 1951)
28	5000670100	17 LAFAYETTE AVENUE	9,940	8,163	-	✓	-		✓	Auto parking
29	5000620030	572 RICHMOND TERRACE	98,528	39,800	-	✓	-		✓	Gas Station
30	5000510080	105 JERSEY STREET	54,791	38,915	-	✓	-		✓	Gas Station
31	5000510000	163 JERSEY STREET	182,792	174,895	-	-	-		✓	Machine shop (1898)
32	5000510450	BEECHWOOD AVENUE	73,208	300	-	-	-		✓	Machine repair (1917)

¹ OS = New York State Open Petroleum Spill Location (Searchable Property Environmental E-Database, NYC Mayor's Office of Environmental Remediation)

² PBS = New York State Petroleum Bulk Storage Sites (Searchable Property Environmental E-Database, NYC Mayor's Office of Environmental Remediation)

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Table 3.8 Potential Brownfield Sites

Site #	BBL	Address	Lot Area (sq. ft.)	Building Area (sq. ft.)	Potential Contamination				Historical Use ⁵	
					OS ¹	PBS ²	CBS ³	NYC E Designation ⁴	Potential Concern	Historical Use and Year
33	5000510030	43 JERSEY STREET	196,172	265,820	✓	✓	-	-	✓	Gas Station
34	5000430000	385 JERSEY STREET	14,451	13,383	-	-	-	-	✓	Auto parking (1951)
35	5000520030	109 YORK AVENUE	37,182	7,200	-	✓	-	-	-	-
36	5000470000	5 YORK AVENUE	6,917	2,190	✓	-	-	-	✓	Gas Station (1951)
37	5001030020	14 BRIGHTON AVENUE	4,893	5,754	✓	✓	-	-	-	-
38	5000340000	100 BROOK STREET	107,336	14,535	✓	✓	-	-	-	-
39	5000610027	VAN BUREN STREET	2,830	-	-	-	-	✓	-	-
40	5000610029	FILLMORE STREET	2,775	-	-	-	-	✓	-	-
41	5000610031	FILLMORE STREET	2,775	-	-	-	-	✓	-	-

¹ OS = New York State Open Petroleum Spill Location (Searchable Property Environmental E-Database, NYC Mayor's Office of Environmental Remediation)

² PBS = New York State Petroleum Bulk Storage Sites (Searchable Property Environmental E-Database, NYC Mayor's Office of Environmental Remediation)

³ CBS = New York State Chemical Bulk Storage Sites (Searchable Property Environmental E-Database, NYC Mayor's Office of Environmental Remediation)

⁴ New York City Environmental Designation (NYC Department of City Planning Zoning and Land Use Application)

⁵ Based on partially complete sets of Sanborn maps from 1898, 1917, 1937, and 1951.

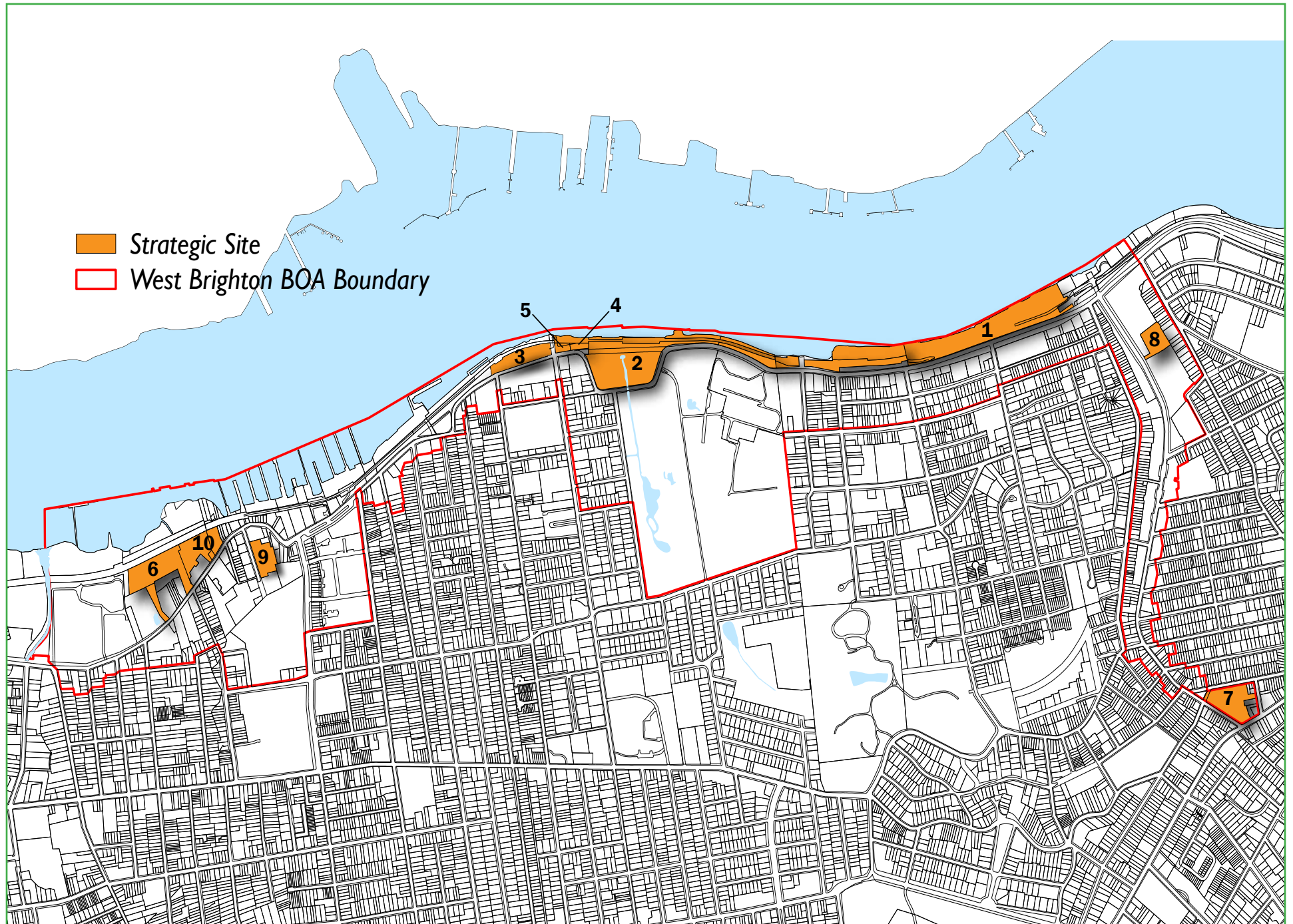
redevelopment purposes. Where agglomerations are identified as an individual site, the project team has carried out extensive outreach with property owners to confirm whether sites are indeed cohesive. The draft strategic sites include properties owned by the following key stakeholders within the community: Atlantic Salt, DSNY, and NYCEDC. The publicity of recent development projects in St. George may provide opportunities to further engage property owners and initiate substantial change on these sites. Continued outreach to property owners

will encourage reinvestment and assist in clarifying assumptions.

Table 3.9 Strategic Site Criteria

Strategic Site Name		Location	Size	Community Support	Owner Willingness	Capacity for Redevelopment	Catalyst for the Revilization of Surrounding Community	Potential to Improve Quality of Life or Public Amenities
1	561, 565 Richmond Terrace	✓	✓	✓	✓	-	✓	✓
2	Snug Harbor Waterfront	✓	✓	✓	✓	-	✓	✓
3	1149 Richmond Terrace	✓	✓	✓	-	-	✓	✓
4	1115 Richmond Terrace	✓	-	✓	-	-	✓	✓
5	1125 Richmond Terrace	✓	-	✓	-	-	✓	✓
6	Richmond Terrace (MTA Site)	✓	✓	✓	✓	✓	✓	✓
7	100 Brook Street	-	✓	✓	✓	✓	✓	✓
8	105 Jersey Street	✓	✓	✓	✓	-	-	✓
9	33 Van Street	✓	✓	✓	-	-	✓	✓
10	1641 Richmond Terrace	✓	✓	✓	✓	-	-	✓

Map 3.26 Strategic Sites



Strategic Site 1 | 561, 565 Richmond Terrace

Property Description

This strategic site is approximately 405,711 sq. ft. and is made up of three different lots that are located north of Richmond Terrace and along the Kill Van Kull waterfront. The property is currently being used by the company Atlantic Salt, New York City's largest distributor of road salt. Atlantic Salt is a maritime operation that receives shipments of salt from other

countries. The salt is stored on the site until needed and distributed throughout New York, New Jersey, and Connecticut during the winter season. Atlantic Salt maintains three large, primarily vacant buildings on site with a total area that surpasses 106,000 square feet. Atlantic Salt have invested millions of dollars in upgrading and maintaining sufficient maritime infrastructure on its site. Additionally, the right-of-way for the former North Shore Railroad

bisects this property.

Use and Environmental History

J.B. King Windsor Plaster Mill opened on the site in 1876. The company was a major presence in the Northeast plaster business and became the largest gypsum processing plant in the U.S. during its time. The factory processed gypsum shipped from Windsor, Nova Scotia. Gypsum is a non-toxic material that is used for fertilizer/soil additives, surgical and orthopedic cast moldings, toothpaste, and food additives. U.S. Gypsum, one the largest gypsum board producers in the world and the second largest in the United States, purchased the site in 1924 and constructed a plant to manufacture gypsum wallboard products that included potentially harmful vermiculite. U.S. Gypsum eventually closed the plant in the 1970s and, in 1988, sold the plant site to Eastern Minerals, Inc., who is the parent company to Atlantic Salt. The site is currently utilized for storing salt used in removing ice from roads in New York, New Jersey, and Connecticut. Over 350,000 tons of salt can be stored here at one time. Many adjacent lots on tax blocks 69, 71, 62, and 51 have been highlighted as petroleum spill locations, the latter three also containing multi-family housing.

Site Statistics

<i>Subarea</i>	New Brighton	New Brighton	New Brighton
<i>Block Number</i>	4	68	68
<i>Lot Number</i>	21	1	35
<i>Lot Area</i>	349,283 square feet	23,506 square feet	32,922 square feet
<i>Current Owner</i>	Regal Estates	Regal Estates	Department of Small Business Services
<i>Year Built</i>	1888	N/A	N/A
<i>Number of Existing Buildings</i>	3	0	0
<i>Estimate of Gross Floor Area</i>	881,00 square feet	0	0
<i>Total # of Units</i>	1	0	0
<i>Built FAR</i>	2.52	N/A	N/A
<i>Zoning</i>	M3-1	M3-1	M3-1
<i>Land Use</i>	Industrial and Manufacturing	Vacant	Transportation and Utility
<i>FEMA PFRIM</i>	Within 100-year Floodplain	Within 100-year Floodplain	Within 100-year Floodplain
<i>NYS Environmental Zone</i>	Yes	Yes	Yes
<i>NYS Empire Zone</i>	Yes	Yes	Yes
<i>Urban Renewal Area</i>	No	No	No
<i>Business Improvement District</i>	No	No	No
<i>Historical District</i>	No	No	No

Redevelopment Potential

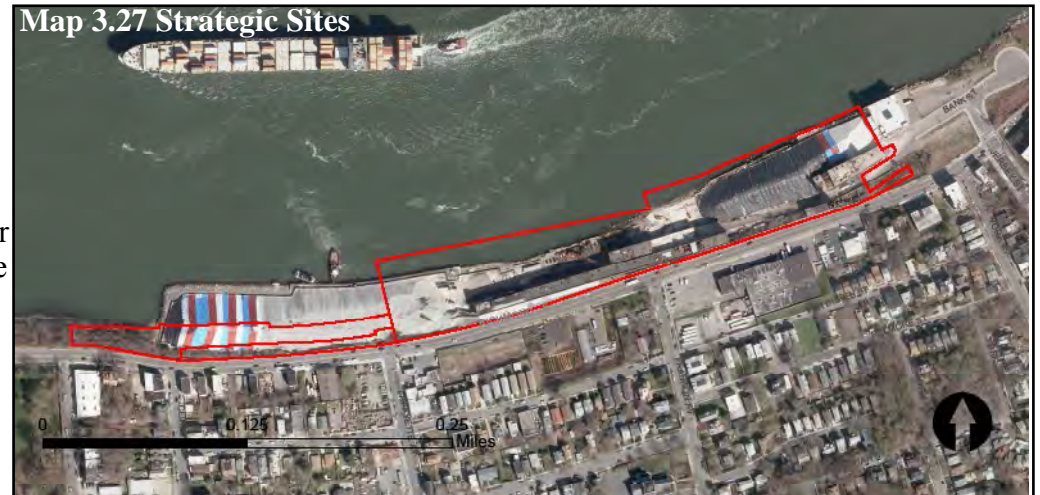
Atlantic Salt is a successful maritime business that provides high paying jobs in an area where unemployment is higher than city-wide and borough-wide averages. Atlantic Salt is

Strategic Site 1 | 561, 565 Richmond Terrace

also making important investments into the waterfront infrastructure that will buttress the maritime industry for years to come. The BOA can enhance the impact of Atlantic Salt on the surrounding community by addressing the challenges surrounding the existing right-of-way located on the property. Federal requirement prohibit property owners from constructing buildings on existing right-of-ways. For this reason, the property owner expressed interested in swapping land to create jobs and improve public transit along Richmond Terrace. Relocating the right-of-way can enable Atlantic Salt to expand its operations or create additional commercial, office, or industrial space along waterfront through the removal or replacement of a privately-owned underutilized 81,852 sq. ft. building.

Strategic land swaps with the property owner also presents the redevelopment opportunity to

implement new transportation improvements. In 2014, DCP, DOT, and MTA held workshops with the property owner to explore possible land swaps and relocation opportunities for the North Shore right-of-way. These discussions considered several development scenarios, including the potential removal of existing buildings on the site, the relocation of the right-of-way to Richmond Terrace, and the construction of Richmond Terrace to its mapped width of 100 feet. This collaborative effort produced



alternative concepts for that would support both job creation and future public transit . These concepts can be a part of a future environmental review, which would be necessary to advance the MTA's proposed BRT system.

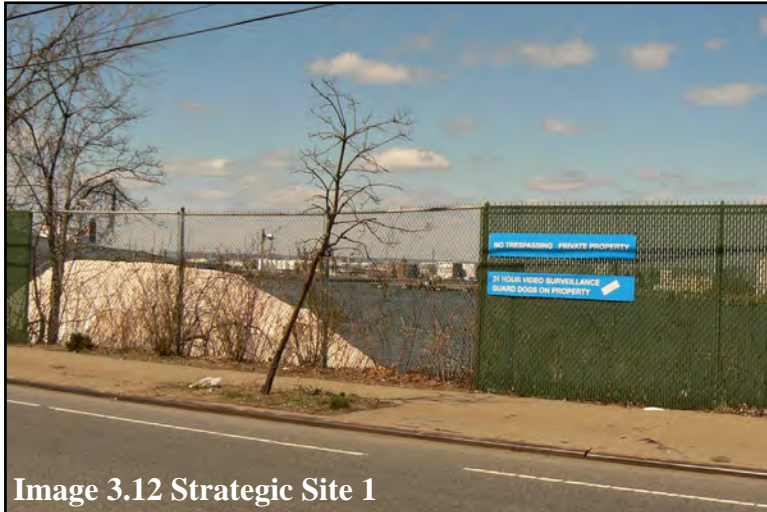


Image 3.12 Strategic Site 1



Image 3.13 Strategic Site 1

Strategic Site 2 | Richmond Terrace (Unknown Address)

Property Description

This strategic site is approximately 598,055 sq. ft. and is made up of nine different lots. Most of the tax lots are located north of Richmond Terrace and along the Kill Van Kull waterfront. The North Shore Railroad right-of-way traverses these properties, which are mapped as park land. The current land uses are categorized as park and open space and vacant. A paved walkway provides visitors with a passage through this parkland. Natural landscaping of the site has not been maintained; therefore, visitors are not encouraged to visit the park space. The portion of the strategic site that is located south of Richmond Terrace is the beginning of the wetlands on Snug Harbor's property.

Use and Environmental History

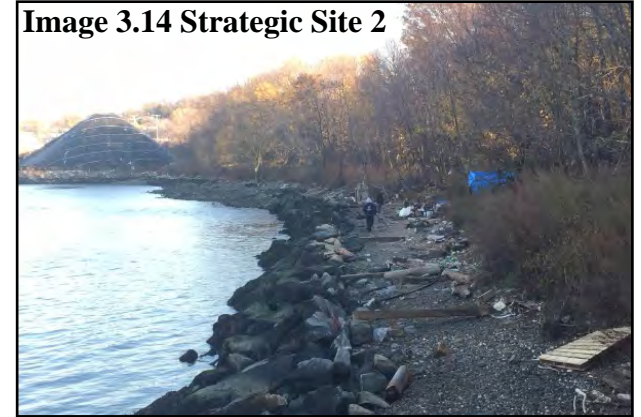
This strategic site has historically been used for

transportation networks along Staten Island's North Shore. A portion of the site north of Snug Harbor and along the waterfront was used as a harbor landing. Despite being heavily damaged by Hurricane Sandy in 2012, the infrastructure for a dock continues to exist on the site today. The remaining lots served as the right-of-way for the North Shore Railroad. Vestiges of the discontinued railway and rail station still exist on the site.

Redevelopment Potential

This strategic site presents the opportunity to improve transportation access to and create additional revenue sources for Snug Harbor Cultural Center, which is one of Staten Island's regional attractions. Throughout the BOA planning process, DCP collaborated with other city agencies and Snug Harbor to consider the challenges of the site, including flood resiliency, and envision an improved transportation network on this strategic site. In 2014, DCP coordinated a workshop between representatives of Snug Harbor, MTA, and several city agencies to develop scenarios for an improved transportation network along Richmond Terrace and the North Shore right-of-way. Each scenario addresses the potential

Image 3.14 Strategic Site 2



for new bicycle and pedestrian facilities, a dedicated busway for a new BRT route, and an additional lane for moving vehicles. The alternative concepts also address the flood resiliency challenges of the site by elevating the proposed busway above the base flood elevation, while also leveraging the site's proximity to the waterfront by envisioning the rehabilitation of the ferry dock at Snug Harbor.

Map 3.28 Strategic Site 2



Image 3.15 Strategic Site 2

Strategic Site 2 | Continued

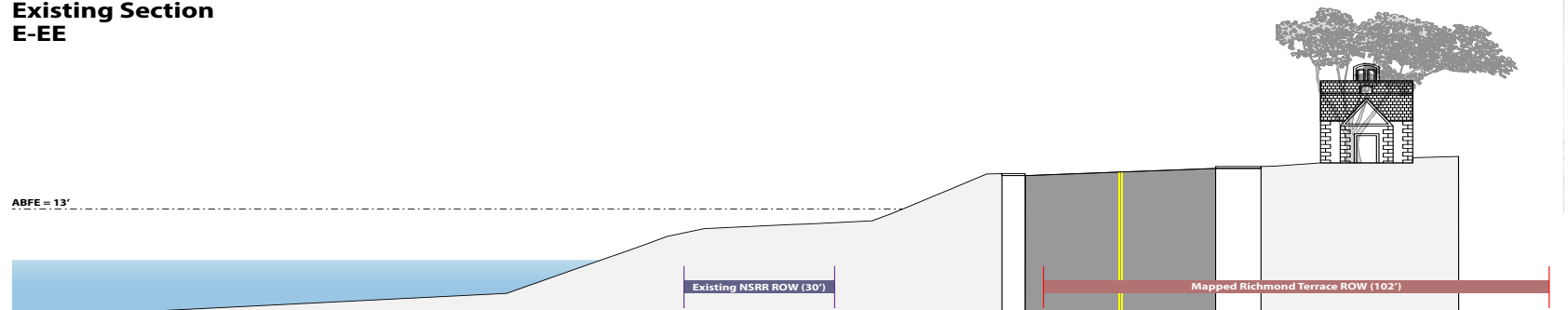
Site Statistics

<i>Subarea</i>	New Brighton	New Brighton	New Brighton	New Brighton	New Brighton	New Brighton	New Brighton	New Brighton	New Brighton
<i>Block Number</i>	75	68	75	75	75	75	68	68	75
<i>Lot Number</i>	30	60	200	150	60	1	80	70	100
<i>Lot Area</i>	4,257 square feet	232,000 square feet	69,773 square feet	136,000 square feet	3710 square feet	20,000 square feet	32,200 square feet	17,174 square feet	82,941 square feet
<i>Current Owner</i>	Parks and Recreation	Parks and Recreation	Parks and Recreation	Parks and Recreation	NYS Office of Real Property	NYC Public Library	NYS Office of Real PR	Department of Small Business Services	Department of Small Business Services
<i>Year Built</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<i>Number of Existing Buildings</i>	0	0	0	0	0	0	0	0	0
<i>Estimate of Gross Floor Area</i>	0	0	0	0	0	0	0	0	0
<i>Total # of Units</i>	0	0	0	0	0	0	0	0	0
<i>Built FAR</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<i>Zoning</i>	Park	Park	Park	Park	R3-1	R3-2	R3-2	Park	R3-1
<i>Land Use</i>	Open Space and Recreation	Open Space and Recreation	Open Space and Recreation	Open Space and Recreation	Vacant	Vacant	Vacant	Open Space and Recreation	Residential
<i>FEMA PFRIM</i>	Within 100 year Floodplain	Within 100 year Floodplain	Within 100 year Floodplain	Within 100 year Floodplain	Within 100 year Floodplain	Within 100 year Floodplain	Within 100 year Floodplain	Within 100 year Floodplain	Within 100 year Floodplain
<i>NYS Environmental Zone</i>	No	Yes	No	No	No	No	No	Yes	No
<i>NYS Empire Zone</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Urban Renewal Area</i>	No	No	No	No	No	No	No	No	No
<i>Business Improvement District</i>	No	No	No	No	No	No	No	No	No
<i>Historical District</i>	No	No	No	No	No	No	No	No	No

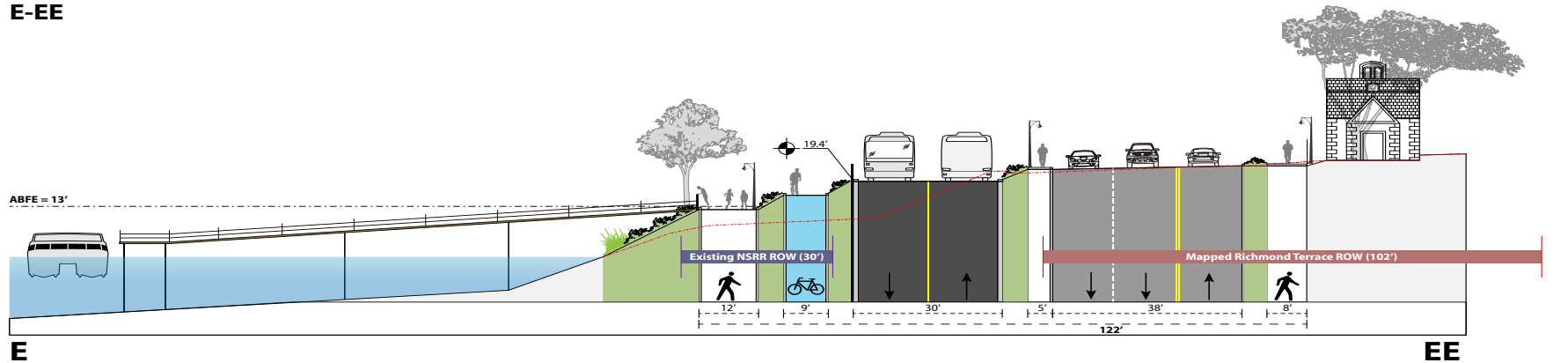
Strategic Site 2 | Image 3.16 Conceptual Design Scenarios



**Existing Section
E-EE**

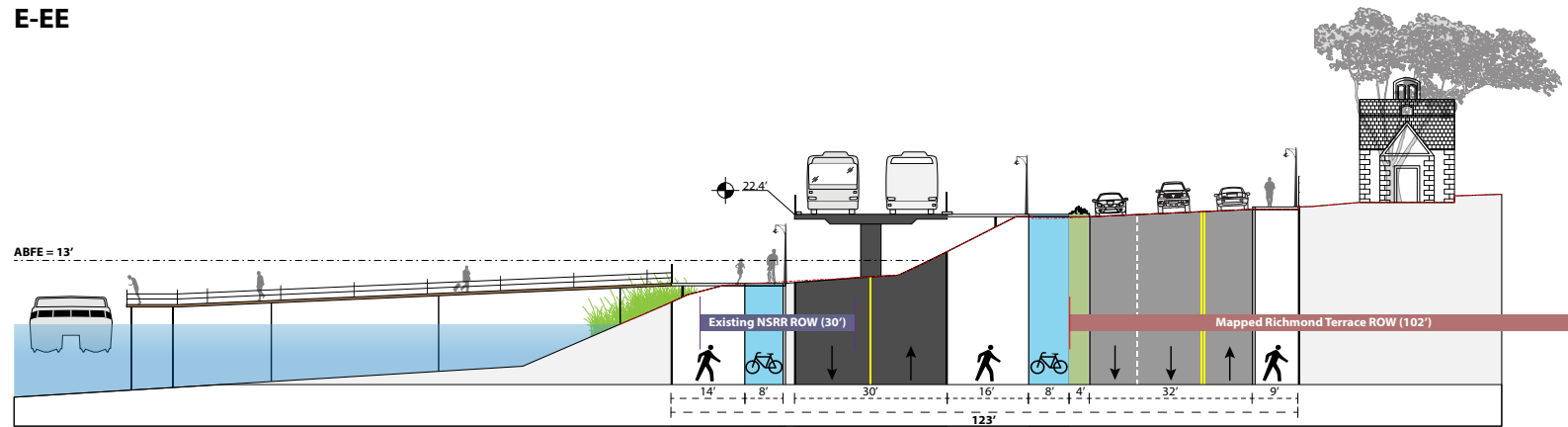


**Scenario 1
E-EE**

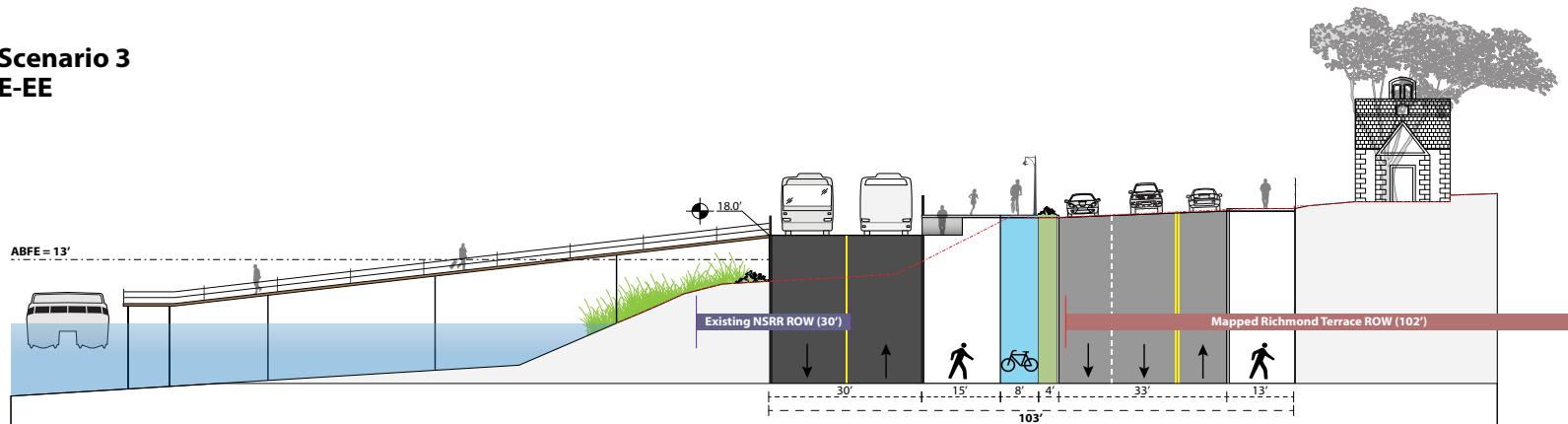


Strategic Site 2 | Image 3.16 Conceptual Design Scenarios

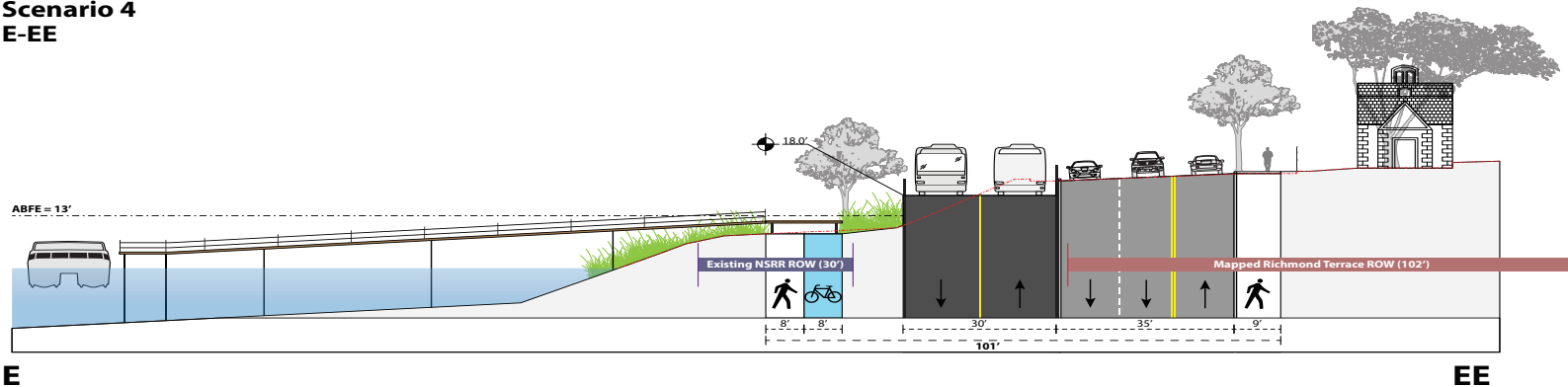
Scenario 2
E-EE



Scenario 3
E-EE



Scenario 4
E-EE



Strategic Site 3 | 1149 Richmond Terrace

Property Description

This strategic site is approximately 65,728 square feet sq. ft. and is located north of Richmond Terrace and along the Kill Van Kull waterfront. The property is currently being used as a parking lot for a Consolidated Edison facility that is located immediately south of the parking lot. Consolidated Edison is an energy provider to most of New York City. This strate-

Site Statistics

Subarea	West Brighton
Block Number	184
Lot Number	1
Lot Area	65,728 square feet
Current Owner	Consolidated Edison
Year Built	1928
Number of Existing Buildings	0
Estimate of Gross Floor Area	38,915 square feet
Total # of Units	1
Built FAR	0.78
Zoning	M1-1
Land Use	Transportation and Utility
FEMA PFRIM	Within 100 year Floodplain
NYS Environmental Zone	No
NYS Empire Zone	Yes
Urban Renewal Area	No
Business Improvement District	No
Historical District	No

gic site bounds the North Shore right-of-way in the north.

Use and Environmental History

Historical land use maps indicate that this site served residential uses and the Hesper Rowing Association's club house during the 1870s. By 1907, the Richmond Light and Railroad Company acquired the site to convert it into a power house for the North Shore railroad. The electric

street railway started service on Staten Island in 1897, and the First Electric Company opened on the site in the following year. It is unknown when ownership was transferred to Consolidated Edison.

Redevelopment Potential

The site could also be redeveloped as part of the MTA's proposed BRT system for the North Shore. In its North Shore Alternative Analysis,

Map 3.29 Strategic Site 3



Strategic Site 3 | Continued

the MTA proposes using this site as a station for the new BRT system. The station would feature a platform for loading/unloading buses and a Park-N-Ride, which could serve the residents of upland neighborhoods. Such public transit amenities would expand transportation options and offer improved public transit service for commuters. The next step in advancing the BRT proposal is conducting an environmental review for the project.

Alternatively, this currently underutilized site has the potential be redeveloped and integrated into the West Brighton BOA's working waterfront. The site offers over 500 feet of waterfront frontage that could be used to recruit new and expand existing maritime businesses in West Brighton. In fact, Caddell Dry Dock and Repair, which is one of West Brighton's largest property owners and longest running maritime businesses, is located immediately west of the site.

Creating additional space for the operations of new or existing maritime businesses could increase access to jobs and economic development opportunities for the neighborhood.



Image 3.17 Strategic Site 3

Strategic Site 4 | 1115 Richmond Terrace

Property Description

This strategic site is approximately 10,038 sq. ft. and bounds the North Shore right-of-way in the north and Richmond Terrace in the south. A restaurant, currently resides on the lot.

Use and Environmental History

The mansion belonging to Anson Livingston originally resided on this site as late as 1874, but, by 1888, the lot served as the location for

Site Statistics

Subarea	West Brighton
Block Number	75
Lot Number	59
Lot Area	10,038 square feet
Current Owner	1115 Richmond Terrace
Year Built	1956
Number of Existing Buildings	1
Estimate of Gross Floor Area	2,500 square feet
Total # of Units	1
Built FAR	0.25
Zoning	R3-1
Land Use	Commercial
FEMA PFRIM	Within 100 year Floodplain
NYS Environmental Zone	No
NYS Empire Zone	Yes
Urban Renewal Area	No
Business Improvement District	No
Historical District	No

the Livingston Station for the North Shore Railway. In 1953, passenger service ended on the North Shore Railway, resulting in the closing and eventual removal of the Livingston Station. Following the closure of the station, the site served as the location for R.H. Tugs, a restaurant that closed in 2011. R.H. Tugs was eventually replaced by Blue, a Mediterranean restaurant.

Redevelopment Potential

This strategic site serves as a much needed amenity to a community that lacks nearby stores and restaurants, but faces flood resiliency challenges. The restaurant is located within the 100-year floodplain and experienced damage as a result of Hurricane Sandy. Although resiliency measures, such as storm windows, reduced the effect of Hurricane Sandy on the site, the property owner could face regulatory issues since it is a nonconforming use under existing zoning. Updating zoning to reflect the existing



Image 3.18 Strategic Site 4



the commercial character of this portion of Richmond Terrace could help ensure that the site continues to serve the community. This site could also serve as important connector in the proposed Bus Rapid Transit network on the North Shore. The site is located to the east of the Livingston station for the proposed North Shore BRT, and the MTA's Alternative Analysis proposes an expanded right-of-way that extends into the rear portion of the sites to facilitate the BRT route.



Image 3.19 Strategic Site 4

Strategic Site 5 | 1125 Richmond Terrace

Property Description

This strategic site is approximately 12,009 sq. ft. and bounds the North Shore right-of-way in the north and Richmond Terrace in the south. A gas station currently resides on the lot.

Use and Environmental History

This site served as the westernmost portion of Anson Livingston's mansion, while the previ-

Site Statistics

<i>Subarea</i>	West Brighton
<i>Block Number</i>	75
<i>Lot Number</i>	49
<i>Lot Area</i>	12,009 square feet
<i>Current Owner</i>	Leemilts Petroleum Inc
<i>Year Built</i>	1940
<i>Number of Existing Buildings</i>	1
<i>Estimate of Gross Floor Area</i>	1,800 square feet
<i>Total # of Units</i>	2
<i>Built FAR</i>	.15
<i>Zoning</i>	R3-1
<i>Land Use</i>	Transportation and Utility
<i>FEMA PFRIM</i>	Within 100 year Floodplain
<i>NYS Environmental Zone</i>	No
<i>NYS Empire Zone</i>	Yes
<i>Urban Renewal Area</i>	No
<i>Business Improvement District</i>	No
<i>Historical District</i>	No

ous strategic site (1115 Richmond Terrace) served as the easternmost part of the residence. In 1888, the site became integrated into the Livingston Station for the North Shore Railway. Once passenger service on the North Shore rail line was discontinued in 1953, the station was closed. New York City Department of Buildings records indicate that the existing gas station on the site was constructed in 1963. The current property owner of the site is Leemilts Petroleum Inc.

Redevelopment Potential

Similar to 1115 Richmond Terrace, this location of this strategic site along the North Shore right-of-way underscores its importance to transportation improvements along the North Shore. The MTA's Alternative Analysis propos-

Map 3.31 Strategic Site 5



es an expanded right-of-way that extends into the rear portion of the sites and facilitates the dedicated busway.



Image 3.20 Strategic Site 5

Strategic Site 6 | Richmond Terrace (Unknown Address)

Property Description

This strategic site is approximately 151,900 sq. ft. and is made up of two separate lots under joint ownership that are bounded by Richmond Terrace and automobile companies to the south, the Port Richmond Wastewater Treatment Plant to the west, and the North Shore Railroad right-of way to the north, and Heritage Park to the

east. The current property owner is the Metropolitan Transportation Agency (MTA).

Use and Environmental History

Historical maps of the site from 1884 indicate that portions of this site served as rail yard for freight train with a platform leading to a freight house. Lot 185, which fronts contained dwell-

ing units. The MTA site is currently vacant, but is bordered by the Water Pollution Control Plant in the west and a variety of automotive repair shops and Rucci Oil Co Inc., which front Richmond Terrace.

North Shore. The MTA's North Shore Alternative Analysis released in 2012 proposed the construction a bus ramp that traverses the eastern portion of the site and allows buses to enter the busway that would be located immediately north of the site.

Site Statistics

Subarea	West Brighton	West Brighton
Block Number	185	185
Lot Number	170	185
Lot Area	133,900 square feet	18,000 square feet
Current Owner	Metropolitan Transportation Authority	1707 Richmond Terrace Co
Year Built	N/A	1931
Number of Existing Buildings	0	1
Estimate of Gross Floor Area	0	4,333 square feet
Total # of Units	0	1
Built FAR	N/A	0.24
Zoning	M1-1	M1-1
Land Use	Vacant	Commercial
FEMA PFRIM	Within 100 year Floodplain	Within 100 year Floodplain
NYS Environmental Zone	No	No
NYS Empire Zone	Yes	Yes
Urban Renewal Area	No	No
Business Improvement District	No	No
Historical District	No	No

Redevelopment Potential

The site is located immediately south of Heritage Park, a city park. Heritage Park, is a remediated brownfield site, with limited public access. This vacant MTA site could expand the park and provide new entrances to the park. Alternatively, this site could be incorporated into the proposed BRT system along the



Image 3.21 Adjacent Auto Uses

Strategic Site 7 | 100 Brook Street

Property Description

This site is approximately 114,730 square feet lot that is bordered by Brook Street, Jersey Street, Castleton Avenue, and Victory Boulevard. One 100,000 square foot building currently resides on the site. The site serves as a garage for the New York City Department of Sanitation and houses an array of garbage trucks and maintenance vehicles. In response to local concerns about the garage, the City has

allocated \$111 million to the construction of a new sanitation garage to replace the existing facility on Brook Street. Construction of the new facility on an existing DSNY property located in the West Shore is expected to begin in 2019.

Use and Environmental History

The existing building on the site was originally constructed as a trolley barn around 1900. By

1937, the Associated Gas and Electric Company created the Staten Island Coach Company (SICCO), who replaced the trolley services on Staten Island with bus services. In 1947, New York City acquired the site to be used as a garage and repair shop to service buses serving Staten Island. The Transit Authority surrendered the site to the Board of Estimate in 1958. In turn, the site was assigned to DSNY to store and service vehicles and equipment serving the

Site Statistics

<i>Subarea</i>	Jersey Street
<i>Block Number</i>	34
<i>Lot Number</i>	1
<i>Lot Area</i>	114,730 square feet
<i>Current Owner</i>	Regal Estates
<i>Year Built</i>	1950
<i>Number of Existing Buildings</i>	1
<i>Estimate of Gross Floor Area</i>	14,535 square feet
<i>Total # of Units</i>	1
<i>Built FAR</i>	0.13
<i>Zoning</i>	R5 (C2-2 Overlay)
<i>Land Use</i>	Industrial and Manufacturing
<i>FEMA PFRIM</i>	Zone X
<i>NYS Environmental Zone</i>	Yes
<i>NYS Empire Zone</i>	No
<i>Urban Renewal Area</i>	No
<i>Business Improvement District</i>	No
<i>Historical District</i>	No

Map 3.33 Strategic Site 2



Strategic Site 7 | Continued

borough, which is the current use of the site.

Redevelopment Potential

In conjunction with the proposed relocation of the sanitation garage, in 2014, the New York City Economic Development Corporation (NYCEDC) released a request for expressions of interest (RFEI) for the purchase or lease and redevelopment of the site. The site is currently mapped as an R5/C2-2 district, which allows for four-story buildings with residential, com-

mercial, and/or community uses. Recent development in the area includes a six-story senior housing facility with a community facility on the ground floor. The apartments opened in 2011 and was initiated by the Community Agency for Senior Citizens (CASC), a nonprofit organization. In addition, the site is well served by public transit. Five bus routes—S46, S48, S61, S62, and S66—have a stop immediately in front of the lot. The site is also located less than a half a mile from the Tompkinsville Station of the Staten Island Railway, which provide access

Staten Island's southernmost neighborhoods, and less than a mile from the Staten Island Ferry Terminal and the development site of Empire Outlets and the New York Wheel. Although the City is still processing the RFEI, outreach for the BOA has demonstrated that the community would like to see new commercial and community facilities on the site.

Image 3.22 Strategic Site 7



Strategic Site 8 | 105 Jersey Street

Property Description

This site is made up of one lot of approximately 50,000 square feet. The site fronts Jersey Street and is located between the two portions of the Richmond Terrace Houses New York City Housing Authority development. One building measuring 38,915 square feet currently resides on the site and houses a currently inactive manufacturing use.

Site Statistics

Subarea	Jersey Street
Block Number	51
Lot Number	80
Lot Area	50,000 square feet
Current Owner	Jersey Center LLC
Year Built	1928
Number of Existing buildings	1
Estimate of Gross Floor Area	38,915 square feet
Total # of Units	1
Built FAR	0.78
Zoning	M1-1
Land Use	Industrial and Manufacturing
FEMA PFRM	Zone X
NYS Environmental Zone	Yes
NYS Empire Zone	Yes
Urban Renewal Area	No
Business Improvement District	No
Historical District	No

Use and Environmental History

In 1885, the Irving Manufacturing Company founded a plant on the site to manufacture silk and cotton plush, mohair, woolen upholstery and dress goods and velvets. The following owner was Meyer Florist, who purchased the property at an unknown date. The property is currently vacant, and the owner of the site is Jersey Center LLC.

Redevelopment Potential

Strategically located between the buildings of a NYCHA housing development, the site presents an opportunity to revitalize Jersey Street as a neighborhood center. The site could provide new uses for the surrounding neighborhood and encourage a mixed-income community along Jersey Street. According to the BOA's public outreach, many community members, including residents of the Richmond Terrace Houses, would like to see new commercial space or

community spaces, including a job training center at the site. The area is supported by Staten Island's existing transportation network. Six bus routes—S40, S42, S44, S52, S90, and S94—are within a short walking distance and terminate at the Staten Island Ferry Terminal, which is also approximately one mile away from the site. Additionally, the site is located within a short walking distance of the future New York Wheel and Empire Outlet Mall.



Strategic Site 9 | 33 Van Street

Property Description

This strategic site is approximately 65,200 sq. ft. and is located south of Richmond Terrace. Gaeta, a demolition and sanitation company, currently resides on the site and uses the lot for a waste transfer station and the storage of trucks.

Use and Environmental History

Historical maps indicate that, in 1917, the C.W. Hunt Co. Inc. used this site for the production and selling of industrial equipment. Ancillary uses to this business, such as storage facilities

for metal parts and coal, wood working shops, an erecting shop for skylights, and a drafting room were also located on the site. The maps also indicate that a collection of residential dwellings and offices were located immediately east of the C.W. Hunt Co. Inc. Facility, and the New York Dyeing & Print Works establishment, which is the current site of Corporal Thompson Park, was situated just south of the site. Gaeta, the current occupant of the site, established a waste transfer station at the site in 1985.

Redevelopment Potential

Because of its size and location near existing and proposed public amenities, this site has potential to create new commercial and residential opportunities for the West Brighton neighborhood. In its North Shore Alternative Analysis, the MTA proposed a Bus Rapid Transit station at the northern end of Broadway and less than a quarter mile away from this strategic site. The proposed BRT station could invite development interest in the site and increase the capacity of the site to support a redevelopment project. Additionally, Heritage Park and Cor-

Site Statistics

<i>Subarea</i>	West Brighton
<i>Block Number</i>	186
<i>Lot Number</i>	221
<i>Lot Area</i>	65,200
<i>Current Owner</i>	VAN STREET REALTY
<i>Year Built</i>	1900
<i>Number of Existing Buildings</i>	1
<i>Estimate of Gross Floor Area</i>	27,443
<i>Total # of Units</i>	1
<i>Built FAR</i>	.42
<i>Zoning</i>	M1-1
<i>Land Use</i>	Parking Facilities
<i>FEMA PFRIM</i>	None
<i>NYS Environmental Zone</i>	No
<i>NYS Empire Zone</i>	Yes
<i>Urban Renewal Area</i>	No
<i>Business Improvement District</i>	No
<i>Historical District</i>	No

poral Thompson Park are located within a short walking distance of the site. A redevelopment proposal of the site could include a connector between Heritage Park and Corporal Thompson Park.

Map 3.35 Strategic Site 9



Strategic Site 10 | 1641 Richmond Terrace

Property Description

This strategic site is approximately 289,461 sq. ft. and front Richmond Terrace to the north in the West Brighton neighborhood. J & J Recycling is the current business located on the site and provides services in towing, waste materials, wrecking and dismantling, and a range of recycling services, including aluminum, electronics, and scrap metal recycling. The site is also located immediately south of the North Shore right-of-way and Heritage Park.

Use and Environmental History

Historical maps indicate that, in 1917, a waterbody existed on the site. By the mid-1900s, an unknown type of fill was used on the site. The site is located just south of the North Shore Railroad right-of-way and Heritage Park, the former Blissenbach Marina and contaminated

boat yard. The Trust for Public Land and the Port Authority of New York and New Jersey acquired Blissenbach Marina in 2004 and led the remediation effort on the site. Heritage Park was opened to the public in 2014.

Redevelopment Potential

Because of its size and its location just south of Heritage Park, the site could also be integrated into the open space network in West Brighton to create new access points and increase the visibility of Heritage Park, a waterfront destination in West Brighton.

The site also presents the opportunity to expand commercial opportunities in West Brighton.

The site is located just west of the Caddell Dry Dock and Repair property and within a quarter mile radius of the proposed BRT station at the northern end of Broadway. Both the density of jobs in the area and potential transportation improvements

in the surrounding area could attract development interest in the site. The redevelopment of the site to create new commercial opportunities, however, would require advancing zoning changes in the area. The site's location in the 100-year floodplain also presents a challenge for redevelopment efforts.

Site Statistics

<i>Subarea</i>	West Brighton	West Brighton	West Brighton
Block Number	185	185	185
Lot Number	52	150	152
Lot Area	220,000 sq. ft.	2,914 sq. ft.	66,547 sq. ft.
Current Owner	Richmond Terrace Real	Richmond Terrace Real	Luke, Albert
Year Built	1900	0	2009
Number of Existing Buildings	0	0	1
Estimate of Gross Floor Area	0	0	1,500 sq. ft.
Total # of Units	0	0	1
Built FAR	0	0	.02
Zoning	M3-1	M3-1	M3-1
Land Use	Industrial and Manufacturing	Industrial and Manufacturing	Industrial and Manufacturing
FEMA PFRIM	Within 100 year Floodplain	Zone X	Within 100 year Floodplain
NYS Environmental Zone	No	No	No
NYS Empire Zone	Yes	Yes	Yes
Urban Renewal Area	No	No	No
Business Improvement District	No	No	No
Historical District	No	No	No

Map 3.36 Strategic Site 10



4 | Summary Analysis, Findings, and Recommendations

The vision outlined in this section for a new, revitalized West Brighton emerged after more than two years of extensive existing conditions analysis and public outreach. Reflecting the rigorous engagement process that is built into the BOA program, each of the recommendations issued here have been affirmed by a consensus among local civic organizations, Staten Island's Community Board 1, and the BOA Steering Committee. Furthermore, these recommendations expand upon prior planning frameworks for the study area, including North Shore 2030, a comprehensive planning document produced through a partnership between the New York City Economic Development Corporation (EDC) and the New York City Department of City Planning (DCP). Specific recommendations are made under five broad project goals:

- **Support and Create Neighborhood Centers**
- **Create Quality Jobs and Workplaces**
- **Improve Access to Waterfront, Parks, and Open Space**
- **Improve Connections and Mobility**
- **Address Environmental Challenges**

Recommendations should guide future land use decisions, including rezonings and targeted development proposals, as well as infrastructure investments to support the community vision. Of particular importance are recommendations for a number of strategic brownfield sites

that are envisioned as catalysts for the broad revitalization and cleanup of the West Brighton Study Area.

COMMUNITY VISION

An analysis of existing conditions and extensive public outreach identified three subareas within the BOA, each of which has its own distinct vision. Together, these three sub-areas complement each other to compose a socially, economically, and environmentally sustainable community.

Jersey Street

The Jersey Street subarea is a diverse community of Victorian homes and residential towers with a commercial spine that is the largest such corridor in the West Brighton BOA. Furthermore, Jersey Street is where the West Brighton BOA meets St. George, the cultural, governmental, and transit hub of Staten Island. The community vision for the subarea includes improving the walkability and streetscape along Jersey Street by adding new plantings and community gardens to the corridor. The community also sees the redevelopment of key strategic brownfield sites that anchor Jersey Street at its northern and southern ends as an opportunity to diversify the retail along Jersey Street and bring more community facilities, such as health, education, recreational, and job training centers, to the neighborhood. The community identified banks and restaurants as some examples of retail uses that are missing from Jersey Street. At the southern end of the subarea is the Department of Sanitation

(DSNY) garage, an approximately 107,000 square foot facility that is gradually being phased out and relocated to a new, larger facility on the West Shore of Staten Island. Construction for the new garage is scheduled to start on July 2019. Meanwhile, a city-initiated redevelopment of the site is being coordinated by the EDC. While there is no estimate of a completion date for either the relocation of the DSNY facility or the site's redevelopment, the community considers this initiative a key to revitalizing the surrounding commercial and residential neighborhoods. At the northern end, existing underdeveloped or vacant sites are seen as an opportunity to coordinate a better strategy for public and private sites to provide needed amenities to the NYCHA housing development and introduce a mixed-income housing model. Together, the redevelopment of these sites is envisioned as having a catalytic, reactivating effect on the Jersey Street corridor.

New Brighton

The New Brighton subarea is an area of residential homes, scattered and small industrial operations, a large maritime industrial site, few commercial services, and a series of strategic brownfield sites. In addition, the area is the link between the St. George Ferry Terminal, with its millions of annual visitors, and Snug Harbor, one of the premier cultural institutions and open spaces on Staten Island. Through the BOA's public workshops, the community envisioned the redevelopment of a string of strategic sites along Richmond Terrace that would produce a vibrant, mixed-use town center with mid-rise buildings. Accompanying that development is

a vision for a new, widened Richmond Terrace with expanded pedestrian sidewalks, protected bicycle lanes, the MTA-proposed Bus Rapid Transit system, and additional traffic lanes and on-street parking to accommodate the needs of residents.

West Brighton

The West Brighton subarea possesses a disparate mix of uses, including thriving maritime businesses, upland industrial operations, waterfront and upland open spaces, and new and historic homes. The community vision for West Brighton is for strengthened industrial centers and expanded commercial uses along Richmond Terrace that could create new job opportunities for the surrounding area. A vibrant and diverse retail corridor along Richmond Terrace could help connect adjacent North Shore communities and support the surrounding maritime businesses and upland residential neighborhoods. A key aspect of this vision is to reconnect the community with the working waterfront. The community believes that new commercial uses could provide vistas of the Kill Van Kull for shoppers.

The community also envisions an expanded parks and open spaces network in West Brighton that features a combination of active and passive uses, such as recreational facilities and seating along Richmond Terrace and the waterfront. The community underscored the importance of creating safe connections between existing and new public spaces and the upland neighborhoods. The community's vision for these connections include transportation and streetscape improvements, such as new public transit, bicycle, and pedestrian facilities and greenery designed to help improve the neighborhood's resiliency to flood hazards.

4.1 SUPPORT AND CREATE NEIGHBORHOOD CENTERS

Jersey Street has historically served as a commercial corridor that provided connections between the waterfront and upland neighborhoods. However, the construction of public housing through the urban renewal program replaced many former commercial sites and neighborhood amenities. Today, the West Brighton BOA today has just one commercial corridor located at the southern end of Jersey Street. While the businesses along Jersey Street provide much-needed goods to the immediate community, it remains stifled by high poverty rates and a perception of crime. Revitalizing this and building new commercial centers in the New Brighton and West Brighton subareas will establish the commercial presence needed for healthy, sustainable neighborhood centers in the BOA. Detailed development scenarios for strategic sites are given below.

Create a Mixed-use corridor in New Brighton

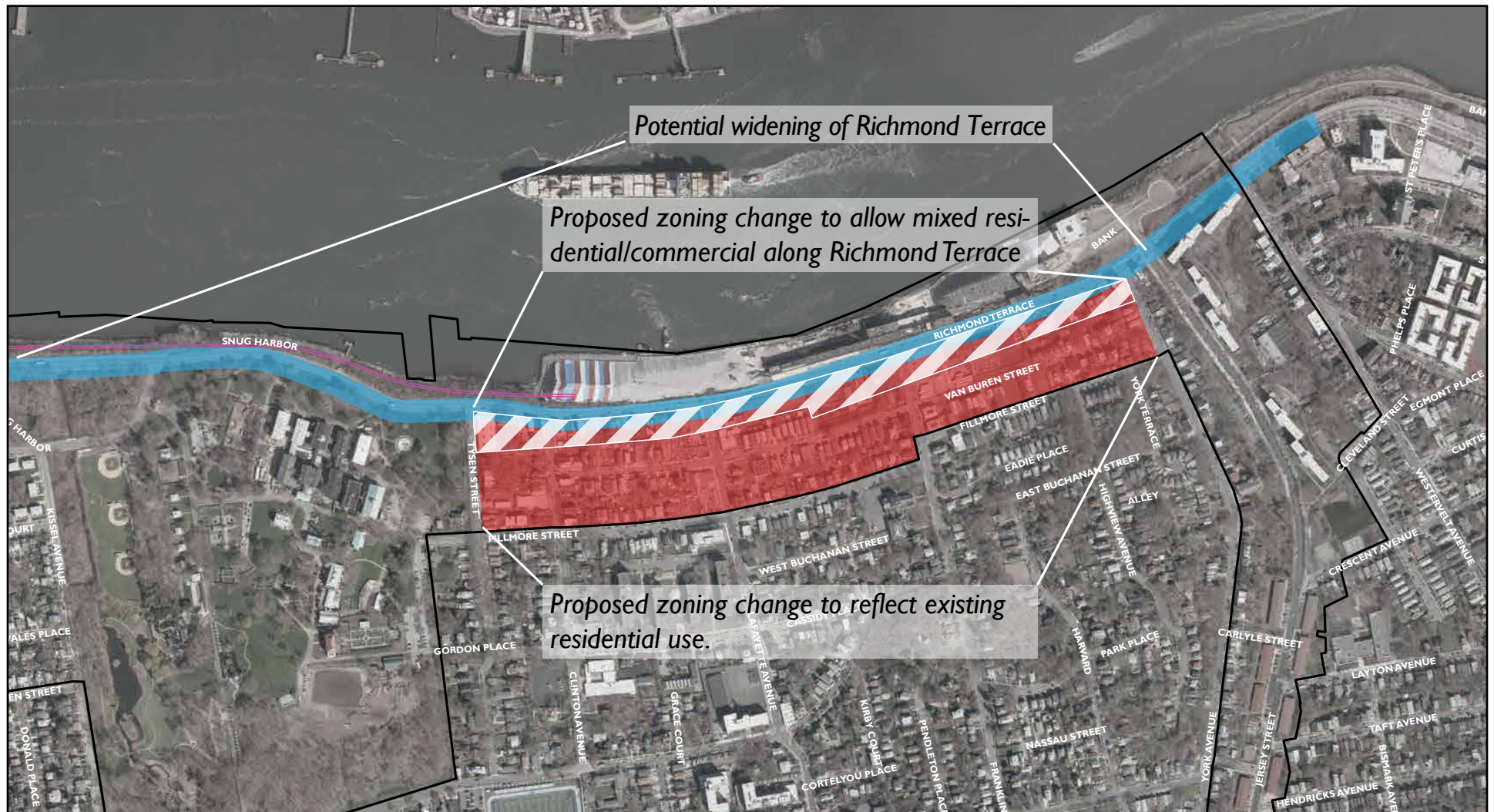
New Brighton is an area that is strategically located to become a thriving mixed-use corridor on the North Shore. Located less than a mile from the St. George Ferry Terminal, New Brighton is a roughly 45-minute trip via public transit to Manhattan, putting the area on par with many thriving neighborhoods in Queens, Brooklyn, and the Bronx. In addition, over one billion dollars of public and private investment in St. George and the surrounding areas is bringing new commercial and entertainment destinations to within close proximity of New Brighton, making it an increasingly attractive address. Finally, the area is the connection between St. George, with its millions of annual

ferry riders arriving on the free Staten Island Ferry and Snug Harbor, one of Staten Island's premier open spaces and cultural institutions. A two-pronged approach of redeveloping the area's strategic brownfields and expanding and improving its transportation infrastructure will allow New Brighton to capitalize on its optimal location. This BOA report presents a framework that highlights specific locations for planning and design recommendations.

North Shore 2030 recommends that DCP should *craft a zoning proposal to promote mixed-use mid-rise development fronting Richmond Terrace between Jersey Street and Snug Harbor, while maintaining and supporting maritime uses along the waterfront* (Map 4.1). Public input suggests that due to the grade change between Richmond Terrace and the upland neighborhoods and the desire for new retail and residential opportunities in the area, large lots could accommodate the development of six to twelve stories (Image 4.1). It is recommended that new developments feature much needed residential units and ground floor commercial and pedestrian services to create an inviting connection between the Staten Island Ferry and Snug Harbor. It is also recommended that the upland portions of the existing manufacturing districts should be rezoned to provide a residential zoning district that provides better development rules that reflect the low-density character of these streets.

Following city-wide policy, any rezoning that has the potential to create a significant amount of new residential units should also address the local neighborhood's need for affordable housing units. The City's rules for mandatory inclusionary housing would be incorporated into the rezoning to guarantee a mix of incomes

Map 4.1 New Brighton Proposed Rezoning Areas



in New Brighton and help ensure that the North Shore remains an affordable neighborhood for years to come.

Because New Brighton's strategic sites are brownfields, *ensuring a clear path toward their cleanup is essential to supporting the revitalization of the Richmond Terrace corridor.* Together with West Brighton Community

Local Development Corporation, the City should assist property owners in conducting Environmental Site Assessments. For example, the New York City Brownfield Incentive Grant (BIG) Program offers funding to property owners and developers for activities throughout the brownfield development process. One of these grants includes the Mayor's Office of Environmental Remediation Environmental

Investigation Grant, which allows up to \$20,000 for subsurface testing within the BOA. Funding for conducting such assessments could also become available if the West Brighton BOA progresses to the Step 3: Implementation Strategy of the program.

In coordination with any neighborhood rezoning proposal, *the City should coordinate*

Image 4.1 New Brighton Development Option

SLENDER TOWER - UP TO 12 STORIES

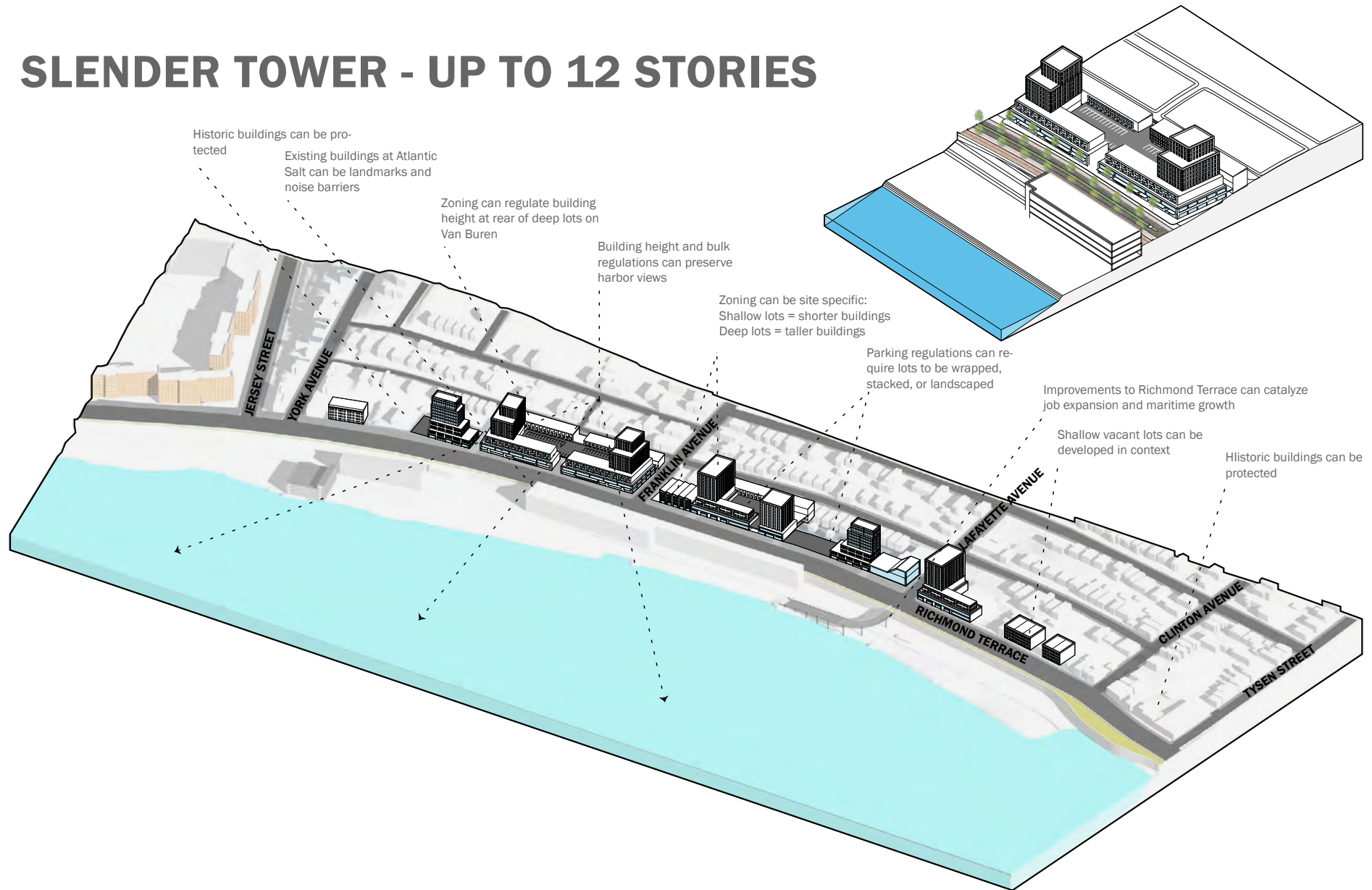


Image 4.2 Richmond Terrace New Brighton - Existing Conditions and Potential Scenario with Transportation System Management Improvement (Curbside Bus Lanes)

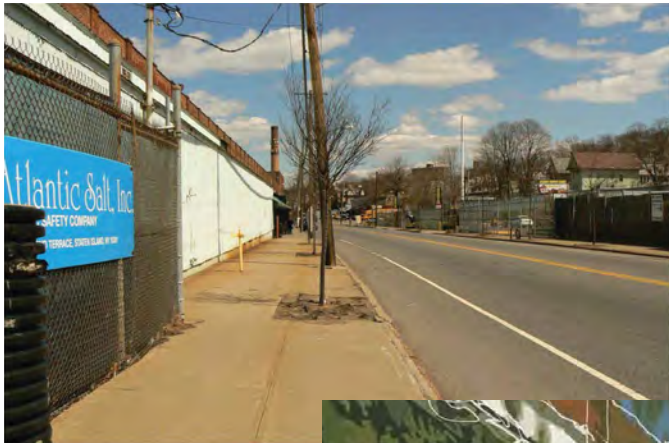


Image 4.3: Richmond Terrace at Lafayette Avenue - Existing Conditions and Potential Scenario with Transportation System Management Improvement (Curbside Bus Lanes)



agency efforts to expand Richmond Terrace's level of service for all users, including pedestrians, cyclists, transit-users, and drivers. The City can capitalize on its 1963 purchase of the full 100 foot Richmond Terrace right-of-way to widen the road from Jersey Street to Lafayette Avenue with no additional property purchases or condemnation required. The mapped width of 100 feet, could facilitate the first phase of the North Shore Greenway, protected bicycle lanes, additional traffic lanes, on-street parking, and a separated bus rapid transit corridor.

Relocate Segments of the City-owned North Shore Railroad to Improve Transit to North Shore Neighborhoods

The North Shore Railroad Right-of-Way was the primary freight and passenger rail corridor on Staten Island's North Shore for much of the twentieth century. However, the transition to automobile-centric development patterns and the decline of industry on the North Shore precipitated the decline of rail usage. The line saw its last passenger service in 1953 and its last freight load in 1983. Today, the North Shore Railroad Right-of-Way bisects a number of key active maritime and industrial businesses and creates a barrier to better public access to the Snug Harbor waterfront. A 2012 MTA study of transit alternatives on the North Shore identified the right-of-way as the preferred location for a bus rapid transit (BRT) line connecting St. George to other North Shore neighborhoods and providing better bus service to neighborhoods geographically located in the middle of the borough.

The relocation of portions of the unused, city-owned railroad right-of-way presents an

opportunity to achieve a number of goals set out in this report. Among those is the opportunity to support and create neighborhood town centers by improving mobility and provide safe access to area parks and open spaces. The advancement of the MTA's North Shore Bus Rapid Transit along the right-of-way could significantly reduce travel time for bus riders on the North Shore, making the area's neighborhood centers more attractive as residential and commercial development locations. Open space access and safe, comfortable public realms are also critical components of New York City's best neighborhoods. By relocating the right-of-way, the City can free up space to provide expanded pedestrian, bicycle, and transit amenities, while also improving the function and safety of the Richmond Terrace roadway. For further information regarding the land swap proposal, please see Action Item 2: Create Quality Jobs and Workplaces.

Support a Mixed-use Corridor along Jersey Street

Redeveloping former manufacturing sites, such as the DSNY Sanitation Garage, along Jersey Street will improve the quality of life for residents and will provide a commercial hub in this underserved community. The DSNY has operated a garage and maintenance facility on Jersey Street since the 1970s. The community has long requested its relocation to a more appropriate location on Staten Island. In 2015, the City allocated \$111 million to construct a sanitation facility on Staten Island's West Shore that would replace the sanitation garage on Jersey Street. This 114,700 square foot site now represents a prime development opportunity with the potential to catalyze further revitalization of the Jersey Street corridor.

In advance of the relocation, EDC issued a request for Expressions of Interest (RFEI) to solicit interest in the site's future redevelopment. *It is recommended that the City further explore any regulatory or necessary approvals to facilitate the sites future development and to ensure that the neighborhood's needs for local retail and services are met.*

Due to the area's past use as manufacturing and apparent current use as unauthorized storage facilities, there is a potential for contamination and remediation may be required. *The City's Office of Environmental Remediation (OER) should work with property owners to identify funding sources for Environmental Site Assessments.* Should the testing determine that remediation is necessary, the City could work with the community and property owners on a remediation strategy and potential zoning proposals that facilitate redevelopment of former manufacturing sites.

Additionally, many vacant and underutilized sites front Jersey Street. The BOA's soft site analysis identified 28 soft sites along Jersey Street. These soft sites account for approximately 34 percent of the square footage of lots fronting Jersey Street and 51 percent of the building frontage along Jersey Street. Current zoning along Jersey Street allows for buildings with a height of 40 feet and floor area ratio of 1.25. *The BOA recommends the City to encourage the redevelopment of existing private sites to fully utilize existing zoning, which would result in the bringing new amenities to the neighborhood.*

Encourage Commercial Uses along Richmond Terrace in West Brighton

West Brighton is an area within the BOA that has the potential to provide neighborhood retail, services, and waterfront access. With brand new waterfront open space at Heritage Park, along with Corporal Thompson Park and Snug Harbor, the area has a wealth of open space opportunities. In addition, the Markham Gardens development has recently transformed a blighted public housing complex into an inviting new residential community. With successful maritime and industrial operations like Caddell Dry Dock and Repair, the neighborhood has potential as a live-work community. By encouraging redevelopment of a number of strategic sites and incentivizing commercial development along Richmond Terrace in West Brighton, the City can help transform this area into a sustainable neighborhood center.

DCP and EDC have identified West Brighton as a FRESH community, meaning that it is underserved in terms of access to fresh food stores. The FRESH program incentivizes development of full-line grocery stores by offering additional floor area in mixed-use buildings, reducing parking requirements, and allowing larger stores to locate as-of-right in light manufacturing areas. *The BOA recommends the City to encourage the use of FRESH incentives to attract fresh food stores to underserved areas.*

There is also the potential to expand commercial and retail opportunities in West Brighton by rezoning portions of the manufacturing districts mapped along Richmond Terrace. The extensive land use analysis conducted in the BOA's Inventory and Analysis section identified several vacant lots and parking facilities that front

Richmond Terrace and heavy industrial sites that are adjacent to West Brighton's residential community. These sites include a large MTA-owned lot that is situated north of Richmond Terrace and immediately east of the Port Richmond Wastewater Treatment Plan. *The BOA recommends initiating a rezoning of these uses or vacant lots to permit a diverse range of commercial uses to serve the local community's needs.*

4.2 CREATE QUALITY JOBS AND WORKPLACES

The West Brighton BOA includes two large, successful and strategically important maritime businesses, Caddell Dry Dock and Repair and Atlantic Salt Inc., which serve as anchors to a thriving working waterfront. These businesses are remnants of an era in which the North Shore was a maritime hub not just for the City

Map 4.2 West Brighton Potential Rezoning Area



but for the country. The BOA report outlines a strategy of building upon the existing industrial strengths and opportunities to forge a revitalized maritime industrial sector that is clean, supportive, and consistent with the other goals laid out in this report.

Support Maritime Industry

The West Brighton BOA is strategically located on the Kill Van Kull to be a center of maritime industry in New York City. The Kill Van Kull is the primary conduit to and from the massive port operations in Port Elizabeth, New Jersey and Howland Hook on the West Shore. The heavy volume of ship traffic generated by the port facilities requires a considerable maritime support services sector, of which the North Shore is the largest hub in New York City. In fact, DCP's Waterfront Revitalization Program (WRP) designated the North Shore as a "Significant Maritime and Industrial Area," which are areas in New York City that are characterized by clusters of industrial firms and water-dependent businesses and are particularly well-suited for maritime and industrial development. While the BOA has retained Caddell Dry Dock and Repair and Atlantic Salt, there is considerable opportunity in the BOA to expand existing operations and promote new maritime uses.

Industrial jobs in the maritime field are high paying jobs, and in this area where unemployment is higher than city-wide and borough-wide averages, these job opportunities and skill training are important for the community. The health and sustainability of New York City's maritime and maritime support services sectors depends on a trained and highly-skilled workforce. As one of the region's most important maritime centers, the

North Shore is ideally situated as a location for a maritime training facility. In addition to securing the skilled labor required for maritime work, such a facility would provide important economic opportunities for members of the West Brighton and North Shore communities. *It is recommended that EDC explore the potential for securing a site and soliciting interest for a private maritime education facility on the North Shore.*

Hurricane Sandy exposed the vulnerability of the City's waterfront properties to coastal flooding and the effects of storm surges. The

BOA's maritime businesses suffered damage to piers, bulkheads, buildings, and equipment. Concurrent to the completion of the West Brighton BOA, DCP is conducting a study that aims to improve the flood resiliency of the City's industrial businesses called Resilient Industry. The BOA report has informed that study by helping to identify the need for regulatory and financial tools to encourage bulkhead upgrades and floodproofing at industrial sites. Upon completion of the Resilient Industry study in late 2016, *DCP and OER should work with the area's waterfront businesses to ensure that they are prepared for*



Image 4.4 Caddell Dry Dock and Repair

the next storm.

The BOA report also recommends expanding mooring space for maritime businesses by identifying and upgrading off-shore areas of city-owned properties, such as Heritage Park. Such a strategy would ensure that the area's maritime infrastructure is maintained in good condition and is usable in the coming years along with creating revenues for shoreline renovation and maintenance.

Relocate Segments of the Former North Shore Railroad Right-of-Way to Support Job Creation

For most of the twentieth century, the North Shore Railroad served as the primary freight rail corridor for maritime businesses moving goods and supplies between the waterfront and factories across the country via the Arthur Kill Lift Bridge. With the transition to automobile-centric development patterns during the mid-twentieth century, the North Shore's maritime businesses no longer relied on the rail line, which contributed to the closure of the North Shore Railroad in 1983. Today, the unused, city-owned ROW bisects private properties and is located on valuable land the maritime businesses could use to expand their services and create jobs. Realigning the Right-of-Way, via land swaps, would allow maritime businesses to invest on consolidated properties to improve operations and spur potential job growth.

The BOA report recommends that the city, MTA, and the major property owners enter into an agreement to relocate the right-of-way across the private properties that would support the bus rapid transit service proposed by the MTA parallel to Richmond Terrace. This effort

would require preliminary surveys to confirm the location and width of the city-owned right-of-way and the approval of the Federal Transit Administration (FTA) to confirm that the ROW would continue to be used for transportation purposes.

By relocating the right-of-way, the City would allow the advancement of long-planned and needed improvements to the Caddell Dry Dock and Repair and Atlantic Salt properties, spurring business expansion and job creation in West Brighton.

In addition to encouraging the growth of the area's two most important maritime businesses, *the relocation of the Railroad right-of-way would allow for continued planning work in the effort to improve transit options on the North Shore.* An improved public transit system would decrease conflicts between buses and trucks and encourage employees of the area's maritime and industrial businesses to take transit to and from work, thereby reducing the overall amount of traffic on Richmond Terrace.

The relocation of the North Shore Railroad right-of-way is also an important step in the overall strengthening of West Brighton's local economy by providing increased transit options and promoting access to the town centers of West Brighton, New Brighton and Jersey Street.

Expand Commercial and Mixed-use Opportunities Near the Proposed BRT Station in West Brighton.

In the North Shore Alternative Analysis report released in 2012, the MTA proposed a Bus Rapid Transit (BRT) station to be located near the intersection of Broadway and Richmond Terrace. Improved public transit access in

West Brighton presents the potential to support commercial and residential growth that could bring much needed retail, services, and jobs to the neighborhood.

The BOA recommends a rezoning of portions of the manufacturing districts in West Brighton to encourage new commercial developments in West Brighton. As discussed in the *Support and Create Neighborhood Centers* section, the BOA's land use analysis identified several vacant lots and parking facilities located within West Brighton's manufacturing districts. A potential rezoning in conjunction with the proposed BRT station could facilitate retail expansion along Richmond Terrace, create jobs for the community, and support the surrounding maritime businesses and open spaces at Heritage Park and Corporal Thompson Park.

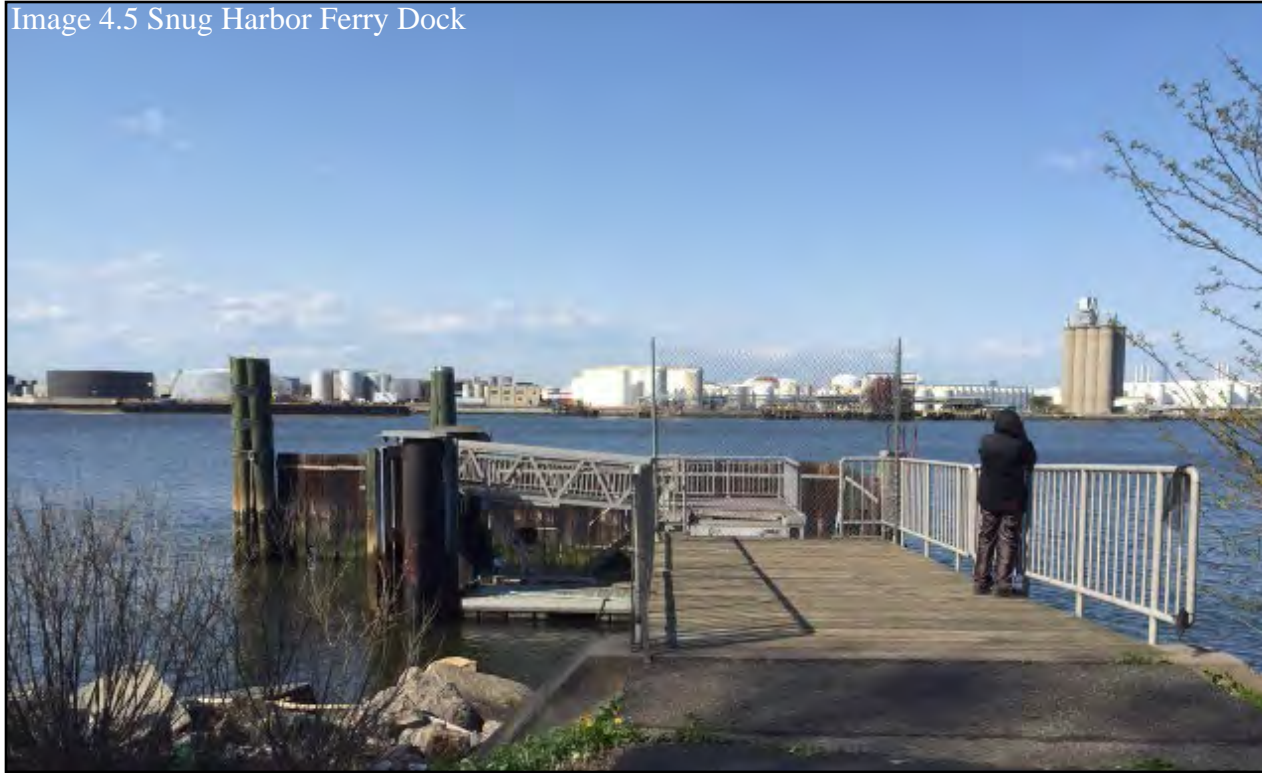
4.3 IMPROVE ACCESS TO WATERFRONT, PARKS, AND OPEN SPACE

The West Brighton BOA contains a mixture of passive and active open spaces, ranging in size from small pocket parks to larger, regional facilities like Snug Harbor. The BOA report outlines a strategy of improving and building upon these open space assets, primarily by ensuring that they are easily and safely accessible. In addition, the BOA report provides recommendations that will improve public waterfront access and highlight the area's active maritime businesses.

Create Publicly Accessible Waterfront Parks and Destinations

From the gardens, trails, and historic landmarks

Image 4.5 Snug Harbor Ferry Dock



at Snug Harbor to the waterfront vistas at Heritage Park and Corporal Thompson Park's recreational facilities, the West Brighton BOA is rich in open space amenities, but is lacking in safe pedestrian access to public waterfronts even with an abundance of waterfront property

Snug Harbor is one of Staten Island's premier cultural and outdoor destinations. With a history steeped in the North Shore's maritime tradition, Snug Harbor possesses a nearly half-mile of waterfront. Unfortunately, this waterfront space is difficult to access, and is visually and physically separated from Richmond Terrace and Snug Harbor's main grounds. In addition, the waterfront is overgrown and frequently strewn with litter and debris from the Kill Van Kull. *The BOA report and North Shore 2030*

recommends that the City work to create new public space amenities, such as a restored shoreline, lookouts, pedestrian and bicycle paths, and seating areas, as well as ensuring that all facilities are maintained, well lit, visible, and have safe pedestrian connections from upland areas along Richmond Terrace and on the main grounds at Snug Harbor.

In addition to outlining strategies for the improvement of Snug Harbor's waterfront spaces, *the BOA report recommends that the New York City Department of Parks and Recreation (DPR) and Snug Harbor collaborate on a reconstruction of the Snug Harbor ferry dock that was heavily damaged and unusable since Hurricane Sandy.* A restored ferry dock at Snug Harbor will restore a vital connection

for visitors from other boroughs and provides a revenue source to support maintenance efforts for the waterfront.

Heritage Park, which occupies the former site of a marina and affords users expansive views of the Kill Van Kull, has limited pedestrian access from upland communities and its only pedestrian and vehicular entrance is located near a busy curve on Richmond Terrace with limited sight lines for entering/exiting traffic. An opportunity exists to expand the park using adjacent publicly-owned properties and thus improve its visibility within the community. *The BOA report recommends that DCP coordinate with the New York City Department of Environmental Protection (DEP) and the MTA on an analysis of opportunities for utilizing these agencies' properties for the expansion of Heritage Park to increase amenities for the local neighborhood and provide additional access points.*

Safe public access from upland neighborhoods to public waterfronts at Snug Harbor and Heritage Park also remains a significant concern of community members and limits the ability of these open spaces to foster a thriving, sustainable West Brighton. In addition to creating connections between open spaces, *the BOA recommends improving pedestrian and bicycle access to Heritage Park from the area's upland neighborhoods.* Currently, no bicycle lanes exist from the BOA's residential neighborhoods to its waterfront parks. Providing bike lanes and dedicated pedestrian crosswalks on Richmond Terrace would allow BOA residents the opportunity to safely and easily access the waterfront.

The West Brighton BOA also contains many streets that dead-end at the Kill Van Kull.

Throughout New York City, DOT has utilized its Public Plaza program to convert similar street ends into temporary or permanent public spaces. *The BOA report recommends the closure of the portion of Bard Avenue between the Kill Van Kull and Richmond Terrace and providing public access in coordination with DOT's Public Plaza program.* This site is constrained by the North Shore right-of-way and MTA proposes that it would be incorporated into the Livingston station of the Bus Rapid Transit (BRT) system. Any plans for public access to the waterfront would have to be incorporated in any future transit designs, but the portion of Bard Avenue that is north of Richmond Terrace is an opportunity to provide a key waterfront vista.

Explore Potential for a North Shore Greenway

The North Shore Greenway is a proposal advanced by Community Board 1 that would create a bicycle and pedestrian link from St. George to points west along the North Shore waterfront, as well as connecting St. George with Stapleton and Fort Wadsworth further south. The Greenway would also create much-needed alternative transportation infrastructure to the North Shore and allow locals and tourists alike a safe, comfortable connection to West Brighton's wealth of open spaces.

As part of the West Brighton BOA, City agencies, the MTA, and local property owners collaborated to produce several alternative scenarios for the right-of-way realignment that features a continuous pedestrian and bicycle greenway that stretches from Jersey Street to Heritage Park. The BOA recommendation to relocate portions of the former North Shore Railroad right-of-way, thus, presents

a promising opportunity to implement both Greenway and new mass transit options on former rail and current Richmond Terrace rights-of-way. *The BOA recommends additional collaboration between DCP, DOT, DPR, DDC, EDC, MTA, and the Federal Transit Administration to finalize the appropriate location and design for a Greenway and facilitate land swaps with property owners affected by the present location of the North Shore Railroad ROW.* By implementing a land swap between the City and waterfront industrial businesses, the City would remove the biggest obstacle to constructing a North Shore Greenway and provide a framework for job creation and future transit improvements.

In order to enhance the viability of the North Shore Greenway proposal, *the BOA report recommends a phased Greenway construction strategy as part of any future street improvements to Richmond Terrace and would require coordination with DOT and DPR, among other agencies.* Phase 1 of a bike/pedestrian waterfront connection is already under construction as part of the New York Wheel and Harbor Commons projects on the St. George waterfront. As part of the New York Wheel and Harbor Commons projects, the width of Bank Street will be widened from 24 feet to 30 feet and include a dedicated bicycle lane. *The BOA report recommends that the City ensure that the bicycle and pedestrian paths along Bank Street make connections to Richmond Terrace at Jersey Street.* In coordination with any necessary traffic improvements, *a proposed extension of the North Shore Greenway would connect St. George to Lafayette Street and the eastern edge of Snug Harbor with separated pedestrian paths and Class I bicycle infrastructure.* This



Image 4.6 Bard Avenue Street End

stretch of Greenway would create much-needed connections to new developments in New Brighton, as well as to Snug Harbor. The proposed North Shore Greenway also includes an extension to the waterfront and main grounds at Snug Harbor, tapping into the site's potential as a regional open space attraction. The proposed expansion of the North Shore Greenway from Snug Harbor to Heritage Park could feature a separated bicycle and pedestrian path running parallel to Richmond Terrace. Such a design would improve safety for pedestrians and cyclists, as well as automobile users on Richmond Terrace.

Promote and Protect Working Waterfront Views and Maritime Overlooks

In addition to providing an economic engine for West Brighton's growth, the area's maritime uses afford locals and visitors a unique opportunity to experience one of New York City's true working waterfronts. *North Shore 2030* also places importance on creating and maintaining these waterfront vistas. New public waterfront open spaces, such as Heritage Park, and upland vistas are ideal places to watch a container ship laden with consumer goods arriving from overseas or smaller vessels traversing the New York Harbor and provide reminders of the area's maritime history and continued importance as a working waterfront. However, current zoning regulations require industrial businesses to surround their properties with a solid wall or opaque fencing to protect both nearby residences and industrial operations from intruding upon one another. On long stretches of Richmond Terrace, which is zoned for manufacturing and industrial uses, these walls and fencings block waterfront views for residents of the adjacent neighborhoods and

Photo 4.7 Curve along Richmond Terrace at Broadway



people traveling along Richmond Terrace. The West Brighton BOA presents opportunities to strengthen existing open spaces and collaborate with industrial business owners to improve connections between the community and working waterfront.

It is recommended that DCP should craft zoning tools that permit transparent fencing at appropriate locations and/or street ends of upland streets to allow views of the working waterfront while maintaining secure facilities for maritime businesses. Today, the area's waterfront industrial businesses are lined with opaque fencing that prevents the community from seeing the Kill Van Kull and understanding what land uses are in their neighborhood.

The final objective in promoting views of the working waterfront is *a recommendation to explore public/private partnerships to maintain*

city-owned and vacant waterfront properties. Properties that today are vacant are often overgrown with brush have the potential to be important view corridors to the waterfront for area residents and visitors. Proper maintenance of overgrown areas would also provide a more safe and secure business environment for maritime firms and make the North Shore more attractive for future investment.

4.4 IMPROVE CONNECTIONS AND MOBILITY

The West Brighton BOA is an area with limited transportation options. The MTA offers a number of bus routes that connect the North Shore with St. George, but all roads, including major arterials, are limited to one lane in each direction; thus, all buses, autos and vehicles serving maritime businesses are constrained by existing roadways and the limited number of

east-west connections. Narrow sidewalks and a lack of bicycle lanes provide inconvenient and unsafe conditions for pedestrians and cyclists. The West Brighton BOA outlines a strategy of improving mobility by supporting the MTA's proposed BRT corridor along with widened sidewalks, bike lanes, straightened road curves, and a DOT study of other additional improvements.

Support the Implementation of the MTA North Shore Bus Rapid Transit (BRT) Plan

The MTA North Shore Bus Rapid Transit (BRT) Plan is a proposal to provide an express busway, separate from Richmond Terrace, along the North Shore waterfront with connections to St. George and the ferry terminal. The MTA, in 2012, identified BRT as the fastest, most cost-effective transit alternative available to the North Shore. *The BOA report recommends establishing an interagency working group to advance a series of actions that will be key guideposts for the*

implementation of the BRT proposal.

The BOA report, as mentioned above, also recommends that *the New York City Economic Development Corporation (EDC) coordinate a land swap proposal with waterfront property owners to secure a continuous corridor for the location of the MTA-proposed BRT busway.* Design workshops conducted through the BOA work identified where land swaps are needed and provide alternative conceptual designs that can accommodate the required width of the BRT infrastructure.

The 2012 Alternatives Analysis identified a number of potential issues and concerns that will need to be investigated in further detail as work progresses on the BRT proposal. In its proposed 2015-2019 Capital Program, the MTA allocated \$5 million for the project's environmental review process. Once its 2015-2019 Capital Program is funded, the MTA will be able to provide an timeline for the completion of the environmental review

for the North Shore BRT proposal. After the completion of the environmental review, the MTA would require funding to initiate the design and construction of the BRT proposal.

Coordinate MTA North Shore BRT planning with Transportation and Streetscape Improvements on the North Shore

Including the West Brighton BOA, city and state agencies are currently advancing studies of transportation improvements on the North Shore. During the West Brighton BOA inter-agency transportation workshops, DCP, MTA, property owners, and other city agencies collaborated to identify opportunities to provide a wider and straighter Richmond Terrace, pedestrian and bicycle connections, and protected BRT lanes and station areas that would also allow waterfront businesses to invest in job creation. Future planning efforts for the proposed North Shore BRT should also consider Community Board 1's North Shore Greenway proposal, which strives toward



Image 4.8 ROW at Snug Harbor Waterfront



Photo 4.9 Narrow Sidewalk in New Brighton

connecting North Shore neighborhoods to the area's major destinations. In addition, the City has initiated a North Shore Transportation Improvement Strategy to help examine how and when people use transportation on the North Shore and offer recommendations for transportation improvements. The findings and proposals from these studies present the opportunity to advance a broader Richmond Terrace Corridor study to address the transportation challenges in the BOA.

The roadbed of Richmond Terrace follows a historic Native American footpath, which itself traced the pre-industrial Kill Van Kull shoreline. As such, the road contains a number of abrupt, dangerous curves throughout its five mile-long course through the North Shore. Two such curves are in the West Brighton BOA, at the intersections with Bement Avenue and Broadway. As noted earlier, the West Brighton BOA brought together city agencies, the MTA, and major property owners to discuss potential land swaps to relocate portions of the North Shore Railroad right-of-way to support future transit improvements, such as the bicycle and pedestrian connections featured in the North Shore Greenway proposal. *These same discussions proposed land swaps between the city and major property owners to straighten these curves and guarantee that the future roadway is provided with adequate pedestrian and bicycle amenities, which can also serve as traffic calming measures.*

In addition to dangerous curves, Richmond Terrace is often too narrow to accommodate the current amount of traffic and new pedestrian and bicycle amenities. In 1907, the City mapped Richmond Terrace at a width of 100 feet ostensibly to provide for traffic serving

waterfront businesses and communities. However, even then the North Shore was fairly developed and the mapped roadbed included a number of existing businesses and buildings which the City did not acquire at that time. In 1963, the City did acquire the full mapped road width for the approximately .40-mile stretch between Jersey Street and Lafayette Avenue; however the City has never constructed a wider Richmond Terrace, and instead it remains a narrow roadway (one lane in each direction) with widths between 30 and 50 feet throughout the North Shore.

The BOA report recommends that DOT coordinate with EDC, MTA, and major property owners to pursue potential land swaps to relocate segments of the North Shore Railroad right-of-way in conjunction with the necessary street improvements to Richmond Terrace to create capacity for future transit, vehicular movements and the North Shore Greenway, while promoting safe driving speeds and pedestrian safety. This could be done in coordination with the City's North Shore Transportation Improvement Strategy, which will propose a series of short-term, medium-term, and long-term recommendations. The estimated release date of these recommendations is the Summer of 2016. Additionally, a Richmond Terrace Corridor Study could help identify how targeted improvements could be made throughout the corridor, where the City currently owns title to the full width of the street, or where land swaps are possible. An overall work plan or Corridor Study would direct all agencies and private companies to advance designs, investments and construction for a widened Richmond Terrace to improve traffic flow and safety, and to provide opportunities for transit and alternative modes

of transportation.

Improve Safety for Pedestrians, Bicyclists, and Drivers

The BOA's transportation network is based on historic land use and road conditions that create physical limitations to vehicular and pedestrian capacity which can result in unsafe conditions. Where they exist, sidewalks are often narrower than the DOT recommends for citywide pedestrian facilities (at least five feet wide in low-rise residential areas). The area's one bicycle lane, along Richmond Terrace in New Brighton, ends abruptly, endangering cyclists who are forced into traffic with little advance notice. Finally, narrow roadway, tight curves, and a mix of traffic, including large trucks serving industrial and maritime businesses, can make driving on the North Shore's roads an often slow and trying experience. This report outlines a strategy to make the North Shore's roadways, sidewalks, and bicycle infrastructure a safer, transportation network.

An additional recommendation that seeks to improve safety and traffic flow on Richmond Terrace is a proposed limit on curb cuts, where appropriate, on Richmond Terrace at new development sites in New Brighton. Such a limit would prevent costly traffic backups and would prevent conflicts between pedestrian, cyclists, and cars accessing New Brighton's shops and residential buildings.

Improving the pedestrian and bicycle experience is an important community goal, which aligns with the recommendations of the earlier *North Shore 2030* report. To that end, the DOT should implement new wayfinding options to improve the visibility of the area's attractions, such as Heritage Park and Snug

Harbor, along with sidewalk improvements on Richmond Terrace to both widen existing amenities and provide new ones where they currently do not exist. The redesign of Richmond Terrace should be informed by *New York City's Active Design: Shaping the Sidewalk Experience* report to create a comfortable pedestrian space. These guidelines recommend encouraging good lighting, shade, a complexity of visuals on the building wall plane, and a variety of activities along the sidewalk, which can enhance the pedestrian experience, regardless of the individual's mood and walk purpose. The guidelines also suggest benches, shade trees, and planting buffers between sidewalk and street for pedestrian paths that are adjacent to arterial roads, as these can be longer paths between points of interest.

West Brighton's upland neighborhoods are ideally located to take advantage of a quick bicycle ride to the area's waterfront open spaces or a short trip into St. George or Port Richmond or the parks and recreation located at Clove Lake, Silver Lake, Snug Harbor, Corporal Thompson Park, and Heritage Park. However, minimal bicycle infrastructure currently exists that would promote increase ridership between these neighborhood destinations. To that end, *the BOA report recommends that DOT expands the bicycle lane network within the BOA, providing connections to Richmond Terrace and the area's open spaces.*

4.5 ADDRESS ENVIRONMENTAL CHALLENGES

The West Brighton BOA's history as an industrial waterfront community defines its current environmental conditions. A number of post-industrial brownfields are located on

the waterfront and in upland neighborhoods. Similarly, a number of active industrial operations present potential environmental risks and hazards to the area's residents and natural resources. Cleaning up brownfields and ensuring that active industrial operations are environmentally sound is an ongoing objective of New York City's public agencies and is a key challenge for the West Brighton BOA. In addition to issues of contamination, the BOA's waterfront land uses are susceptible to flooding and sea level rise as a result of climate change and the continued erosion of the North Shore coastline due to ship wakes. Ameliorating these environmental challenges is a primary focus of this BOA report.

Improve Climate Resilience in Flood-prone Areas

New York City has experienced significant coastal flooding as a result of hurricanes and storm surges, most recently during 2012's Hurricane Sandy. In addition, climate change is creating rising sea levels that threaten the land uses that line the City's lengthy shoreline. Identifying strategies to mitigate flooding from storms and rising seas is an important goal of the West Brighton BOA.

DCP is currently conducting a *Resilient Industry* study that aims to make the City's industrial businesses more flood resilient. West Brighton's maritime businesses are part of a key maritime support services sector that is a focus of that study. *The BOA report recommends that the City identify flood risks that are specific to water-dependent industrial uses and provide recommendations to better inform private businesses located in flood zones on how to better secure their operations and storage to enhance their resilience during future storm*

and flood events.

While the vast majority of residences affected by Hurricane Sandy on Staten Island were located on the East Shore, small pockets of homes located along the western edge of Snug Harbor and at Markham Gardens were also flooded. *The BOA report recommends that the DEP advance ongoing green infrastructure programs in the area, such as its \$23.9 million proposal to expand the Bluebelt program to the Snug Harbor.* This green infrastructure project would help reduce the surrounding neighborhood's vulnerability to flood risks. Funding for the Snug Harbor Bluebelt project was included in the City's Fiscal Year 2015-2018 Capital Plan.

Clean Up Brownfield Sites

The legacy of industry in the West Brighton BOA has left a number of brownfield sites, large and small, scattered throughout the area. For years, many of these sites have remained vacant as the North Shore economy remained stagnant. However, with unprecedented development interest occurring across the North Shore, these brownfields are becoming important sites that will play a role in the BOA's revitalization. The New York State BOA program is an important tool in identifying, cleaning up, and redeveloping these sites.

Since brownfield cleanup is at the core of the BOA program mission, *this report recommends that DCP and the Mayor's Office of Environmental Remediation work with property owners to discuss contamination concerns and to identify funding sources for Environmental Site Assessments.* Such assessments are the first step in converting brownfields from potential creators of blight to catalysts of revitalization.

An important brownfield site that has been a focus of various city agencies for decades is the DSNY garage at Jersey Street. The City recently announced \$111 million in funding to support the garage's relocation. Design and construction of a new location on the West Shore is to begin in 2019. *The BOA report recommends that EDC advance its 2014 Request for Expressions of Interest (RFEI) in order to propose a future redevelopment*

strategy for the site after the DSNY garage has been relocated. A prerequisite for such redevelopment will be testing for contamination. If the site is contaminated, it is recommended that the City identify funding sources for its cleanup or incorporate the costs into a future redevelopment strategy.

The BOA report also identifies a number of strategic brownfield sites along Richmond

Terrace in New Brighton. As recommended earlier, a city-initiated rezoning of the area to support a mixed-use corridor of residential and commercial uses that would serve local community needs and provide an attractive pedestrian/retail connection between Snug Harbor and St. George would also promote the redevelopment of potential brownfield sites and create an incentive for their testing and remediation.

Table 4.1 West Brighton BOA Recommendations Action Agenda

West Brighton BOA Recommendations			
Support and Create Neighborhood Centers	1. Create a mixed-use corridor along Richmond Terrace in New Brighton		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Explore a zoning proposal to promote mixed-use development of medium- to high-density with market-rate and affordable housing along the south side of Richmond Terrace between Jersey St. and Snug Harbor	DCP	DOT, SCA, DEP, DPR
	Assist with conducting Environmental Site Assessments for strategic brownfield sites to advance remediation efforts and future redevelopment opportunities	OER	DCP, NYSDOS
	Investigate potential street improvements on Richmond Terrace between Jersey Street and Lafayette Avenue to improve access to and through the corridor	DOT	DCP, NYCEDC, DEP
	2. Relocate Segments of the former North Shore Railroad Right-of-Way to improve transit to North Shore Neighborhoods		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Explore land swap proposal with property owners to facilitate development, improve mobility, and provide safe access to area parks and open spaces	NYCEDC	MTA/NYCT, DOT, DCP, FTA, Property Owners
	Advance the environmental review and design process for the North Shore Bus Rapid Transit (BRT) proposal	MTA/NYCT	DOT, DCP, NYCEDC, FTA, DPR, Property Owners
	3. Support a mixed-use corridor on Jersey Street		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Advance relocation and construction of new site for DSNY Garage	DSNY	DPR, NYCEDC, DCP
	Advance redevelopment plans for DSNY Garage site that encourages a diversity of uses, including residential, commercial, and community facilities	NYCEDC	DCP, DSNY, DPR, HPD

	Explore zoning proposal with property owners, community stakeholders, and related city agencies for strategic development sites that support existing public and private affordable housing sites	DCP	NYCHA, NYCEDC
	Assist with conducting Environmental Site Assessments for strategic brownfield sites to advance remediation efforts and future redevelopment opportunities	OER	OER, NYSDOS
	Encourage redevelopment of existing private sites to provide additional housing, retail, and services by fully utilizing the existing zoning on Jersey Street	DCP	HPD, NYCHA, SBS, NYCEDC
	4. Encourage commercial uses along Richmond Terrace in West Brighton		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Explore zoning proposal to promote the expansion or creation of new commercial uses along Richmond Terrace	DCP	DOT, DEP, SBS, NYCEDC
	Encourage use of FRESH zoning incentives to attract fresh food stores to underserved areas	DCP	
Create Quality Jobs and Workplaces	1. Support maritime industry		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Encourage the expansion of commercial uses to support maritime jobs and businesses	DCP	NYCEDC
	Advance strategies of DCP's <i>Resilient Industry</i> study to reduce flood hazards for businesses, identify emergency preparedness guidelines, and identify regulatory and financial tools that encourage shoreline improvements and flood mitigation measures	DCP	NYCEDC
	Explore a potential expansion of available mooring space for maritime businesses at off-shore areas of city-owned properties	SBS	DCAS, DPR
	Explore creation of a maritime training facility	NYCEDC	DCP, DOE
	2. Relocate the former North Shore Railroad ROW to support job creation		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Explore land swap proposal with property owners to remove RR ROW from maritime property to allow for business expansion and job creation	NYCEDC	MTA/NYCT, DOT, DCP, FTA, Maritime Property Owners
	Evaluate transit improvement alternatives, including the proposed MTA Bus Rapid Transit Plan, expanded bus service and others	MTA/NYCT	DOT, DCP, NYCEDC, FTA, DPR, and Maritime Property Owners
	3. Expand commercial uses near the MTA-proposed BRT station in West Brighton		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Dependent upon MTA's advancing of their BRT proposal, explore zoning proposal with property owners, local stakeholders, and related city agencies to expand commercial opportunities near a proposed BRT station	DCP	MTA/NYCT, DOT, NYCEDC, SIEDC, WBCLDC

Improve access to waterfront, parks, and open space	1. Create publicly accessible waterfront parks and destinations		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Improve public waterfront access at Snug Harbor waterfront	DPR	DCP, DCA, DOT, MTA/NYCT
	Ensure future North Shore Greenway development provides access to Snug Harbor and Heritage Park	DOT	DPR, MTA/NYCT, DCP
	Explore potential bicycle and pedestrian connections from upland neighborhoods to Heritage Park, including dedicated crosswalks on Richmond Terrace	DOT	DCP, DPR
	Investigate options for expanding Heritage Park using publically-owned land	DPR	DCP, DOT, MTA/NYCT
	Coordinate the potential reconstruction Snug Harbor ferry dock to generate revenue for and increase access to Snug Harbor and surrounding sites in the BOA	NYCEDC	Snug Harbor, DOT, DCA, NYCEDC, SBS
	Investigate options for closure of Bard Avenue street end to provide public open space under DOT plaza program	DOT	DCP, MTA/NYCT
	2. Advance planning for a North Shore Greenway		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Explore appropriate alignment for proposed Greenway to facilitate land swaps with property owners affected by present location of North Shore RR ROW	DOT	NYCEDC, MTA/NYCT, DPR, DCP, FTA, Maritime Property Owners
	Ensure planned Bank Street bicycle and pedestrian path (North Shore Greenway Phase 1) provides connection to Richmond Terrace and points beyond	DOT	DOT, DPR, DCP, NYCEDC, Property Owners
	Explore potential street improvements, including bicycle and pedestrian infrastructure, on Richmond Terrace from Jersey Street to Lafayette Avenue to accommodate traffic connections and future rezonings	DOT	MTA/NYCT, DCP
	Explore pedestrian and bicycle improvements along the Snug Harbor waterfront as part of the North Shore Greenway proposal	DOT	MTA/NYCT, DPR, Snug Harbor
	Identify appropriate location for the proposed North Shore Greenway from Snug Harbor to Heritage Park	DOT	MTA/NYCT, NYCEDC, DCP, DPR
	3. Promote and protect working waterfront views and maritime overlooks		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Explore zoning tools that permit transparent fencing at appropriate locations while maintaining secure facilities to ensure community awareness of industrial activities in their neighborhood	DCP	NYCEDC, Maritime businesses
	At street ends, coordinate with maritime businesses to encourage the installation transparent fencing to allow views of maritime activity and maintain on-site security	DCP	NYCEDC, Maritime businesses
	Explore public/private partnerships to maintain city-owned and vacant waterfront properties and to preserve waterfront view corridors	NYCEDC	DPR, MTA/NYCT, DCAS, DOT

Improve Connections and Mobility	1. Support the implementation of the MTA North Shore Bus Rapid Transit Proposal		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Explore potential land swap proposals with property owners to create a transitway running contiguous to Richmond Terrace	NYCEDC	MTA/NYCT, DOT, DCP, FTA, DPR, Property Owners
	Advance environmental review and engineering study for proposed Bus Rapid Transit system	MTA/NYCT	DOT, NYCEDC, DPR, DCP
	Identify appropriate BRT station locations	MTA/NYCT	DOT, NYCEDC, DPR, DCP
	2. Coordinate MTA North Shore BRT planning with transportation and streetscape improvements on the North Shore		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Implement recommendations of North Shore Transportation Improvement Strategy	DOT	MTA/NYCT, NYCEDC, DCP
	Explore land swap proposals to allow straightening of hazardous curves on Richmond Terrace at Bement Avenue and Broadway intersections	DOT	NYCEDC, DCAS, Property Owners
	Explore potential designs for the construction of street improvements on city-owned portion of Richmond Terrace between Jersey Street and Lafayette Avenue to improve traffic flow and safety	DOT	MTA/NYCT, DCP
	Investigate the potential of implementing the proposed North Shore Greenway - Pedestrian and Bicycle amenities on Richmond Terrace from Jersey Street to Snug Harbor	DOT	MTA/NYCT, DPR, Snug Harbor
	Investigate the potential of implementing the proposed North Shore Greenway - Pedestrian and Bicycle path along Snug Harbor waterfront	DOT	MTA/NYCT, NYCEDC, DCP, DPR, Snug Harbor
	3. Improve safety for pedestrians, bicyclists and drivers		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Explore locations for additional signalized intersections on Richmond Terrace to promote safe driving speeds and pedestrian safety	DOT	MTA/NYCT
	Implement sidewalk improvements along Richmond Terrace to create safe pedestrian routes that would also support existing businesses and future redevelopment	DOT	MTA/NYCT, NYCEDC
	Explore wayfinding options for improved visibility of area destinations, including Snug Harbor and Heritage Park	DOT	Snug Harbor, DPR, NYCEDC
	Provide bicycle lanes from upland neighborhoods to Richmond Terrace and waterfront destinations and open spaces	DOT	DPR
	Limit curb cuts on Richmond Terrace at new development sites in New Brighton to limit traffic congestion and conflicts between pedestrian, bicyclists and drivers	DOT	DCP

Address Environmental Challenges	1. Improve climate resilience in flood-prone areas		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Advance DCP's <i>Resilient Industries</i> strategies for reducing flood risks to industrial uses	DCP	ORR, OEM
	Advance the expansion of the Bluebelt to Snug Harbor to reduce flooding concerns	DEP	DPR, Snug Harbor
	2. Clean up brownfield sites		
	Recommendation	Implementation Lead Agency	Supporting Agencies and Stakeholders
	Identify contamination issues on brownfield and strategic sites by working with property owners and matching them to funding sources for Environmental Site Assessments to determine if cleanup is necessary	OER	NYCEDC, ORR
	Explore a zoning proposal to promote redevelopment and the construction of new mixed-use resilient buildings on strategic brownfields in New Brighton	DCP	OER, ORR, NYCEDC
	Explore zoning and redevelopment proposals for Jersey Street	DCP	NYCHA, NYCEDC, HPD, OER
	Advance relocation of DSNY Garage at Jersey Street	DSNY	NYCEDC, OER

Appendix A | List of Figures, Images, Maps, and Tables

Executive Summary			
Number	Title	Source	Page Number
Images			
ES.1	Snug Harbor Waterfront	New York City Department of City Planning (DCP)	3
ES.2	Transportation Workshop	DCP	6
ES.3	Public Meeting	DCP	7
Maps			
ES.1	West Brighton BOA Boundaries	Orthophoto Base Map Copyrighted by the New York City Department of Information Technology and Telecommunications (DOITT). All rights reserved	1
ES.2	West Brighton BOA Subareas	Orthophoto Base Map Copyrighted by DOITT. All rights reserved	2
ES.3	West Brighton BOA Municipal Context	DCP	4
ES.4	West Brighton BOA Regional Context	DCP	5
ES.5	Potential Brownfield Sites - West Brighton Subarea	DCP PLUTO Dataset	8
ES.6	Potential Brownfield Sites - New Brighton and Jersey Street Subareas	DCP PLUTO Dataset	9
ES.7	Strategic Sites	DCP PLUTO Dataset	10
Tables			
ES.1	West Brighton BOA Recommendations Action Agenda	DCP	12-15
Section 1			
Figures			
1.1	West Brighton BOA Goals	DCP	25
Images			
1.1	Cadell Dry Dock and Repair	DCP	16
1.2	Industrial East and North Shores	From the collection of the Staten Island Museum	17
1.3	U.S. Gypsum	From the collection of the Staten Island Museum	18
1.4	Atlantic Salt Building	DCP	19
1.5	Heritage Park	DCP	20

Maps			
1.1	West Brighton Soft Sites	DCP	21
1.2	West Brighton BOA Boundaries	Orthophoto Base Map Copyrighted by DOITT. All rights reserved	22
1.3	West Brighton BOA Subareas	Orthophoto Base Map Copyrighted by DOITT. All rights reserved	23
Section 2			
Tables			
2.1	Steering Committee Meetings	DCP	27
Images			
2.1	Transportation Workshop	DCP	28
2.2	West Brighton BOA Open House	DCP	28
2.3	West Brighton BOA Visioning Workshop	DCP	29
2.4	Interactive Community Workshop	DCP	30
2.5	Interactive Community Workshop	DCP	30
2.6	Interactive Community Portal	DCP	31
Section 3			
Images			
3.1	Cadell Dry Dock and Repair	DCP	32
3.2	Snug Harbor from the Kill Van Kull, 1900	From the collection of the Staten Island Museum	37
3.3	New Brighton, 1904	From the collection of the Staten Island Museum	38
3.4	Cadell Dry Dock and Repair	DCP	38
3.5	Cadell Dry Dock and Repair	DCP	47
3.6	Atlantic Salt Facility	DCP	50
3.7	Jersey Street Commercial Area	DCP	50
3.8	Mapped Width of Richmond Terrace at Jersey Street Intersection	DCP	61
3.9	Mapped Width of Richmond Terrace between Franklin and Lafayette Avenues	DCP	61
3.10	Snug Harbor	DCP	66
3.11	Pond at Snug Harbor	DCP	70
3.12	Strategic Site 1	DCP	98
3.13	Strategic Site 1	DCP	98
3.14	Strategic Site 2	DCP	99

3.15	Strategic Site 2	DCP	99
3.16	Strategic Site 2 Conceptual Design Scenarios	DCP	101-102
3.17	Strategic Site 3	DCP	104
3.18	Strategic Site 4	DCP	105
3.19	Strategic Site 4	DCP	105
3.20	Strategic Site 5	DCP	106
3.21	Adjacent Auto Uses to Strategic Site 6	©2016 Google Maps	107
3.22	Strategic Site 7	DCP	109
3.23	Strategic Site 8	DCP	110
Maps			
3.1	West Brighton BOA County Context	DCP	33
3.2	West Brighton BOA Municipal Context	DCP	34
3.3	West Brighton BOA Regional Context	DCP	35
3.4	West Brighton BOA Study Area Census Tracts	DCP	40
3.5	Land Use - West Brighton Subarea	DCP PLUTO Dataset	48
3.6	Land Use - New Brighton and New Brighton Subareas	DCP PLUTO Dataset	49
3.7	Zoning Districts - West Brighton Subarea	DCP	52
3.8	Zoning Districts - New Brighton and Jersey Street Subareas	DCP	53
3.9	West Brighton BOA Commerical Zoning Districts	DCP	55
3.10	Publicly-owned Properties	DCP	57
3.11	North Shore Right-of-Way	DCP	58
3.12	Public Transit	DCP	63
3.13	Bicycle Network	New York City Department of Transportation NYC Bike Routes	64
3.14	Parks and Open Space	DCP	65
3.15	Topography	New York City Office of Emergency Management Digital Elevation Model	69
3.16	Wetlands	DEC	71
3.17	FEMA Flood Zone and Sandy Inundation - West Brighton Subarea	Federal Emergency Management Agency (FEMA) Digital Flood Insurance Rate Map Database	74
3.18	FEMA Flood Zone and Sandy Inundation - New Brighton and Jersey Street Subareas	FEMA Digital Flood Insurance Rate Map Database	75

3.19	West Brighton BOA Historical Places and Character	NYC Landmarks Preservation Commission Individual Landmarks and Historic Districts	78
3.20	Building Age - West Brighton Subarea	DCP PLUTO Dataset	79
3.21	Building Age - New Brighton and Jersey Street Subareas	DCP PLUTO Dataset	80
3.22	West Brighton BOA - Building Square Footage	DCP PLUTO Dataset	81
3.23	Public and Private School Locations	NYC Department of Education School Point Locations	83
3.24	Potential Brownfield Sites - West Brighton Subarea	DCP PLUTO Dataset	90
3.25	Potential Brownfield Sites - New Brighton and Jersey Street Subareas	DCP PLUTO Dataset	91
3.26	Strategic Sites	DCP PLUTO Dataset	96
3.27	Strategic Site 1	Orthophoto Base Map Copyrighted by DOITT. All rights reserved	98
3.28	Strategic Site 2	Orthophoto Base Map Copyrighted by DOITT. All rights reserved	99
3.29	Strategic Site 3	Orthophoto Base Map Copyrighted by DOITT. All rights reserved	103
3.30	Strategic Site 4	Orthophoto Base Map Copyrighted by DOITT. All rights reserved	105
3.31	Strategic Site 5	Orthophoto Base Map Copyrighted by DOITT. All rights reserved	106
3.32	Strategic Site 6	Orthophoto Base Map Copyrighted by DOITT. All rights reserved	107
3.33	Strategic Site 7	Orthophoto Base Map Copyrighted by DOITT. All rights reserved	108
3.34	Strategic Site 8	Orthophoto Base Map Copyrighted by DOITT. All rights reserved	110
3.35	Strategic Site 9	Orthophoto Base Map Copyrighted by DOITT. All rights reserved	111
3.36	Strategic Site 10	Orthophoto Base Map Copyrighted by DOITT. All rights reserved	112
Tables			
3.1	Private Investment in St. George	The New York Times	36
3.2	Population Change from 2000 to 2010	U.S. Census 2000 and 2010	41
3.3	Number of Maritime Establishments by Employment-Size Class	2012 U.S. Census Bureau's County Business Patterns for Zip Codes 10310 and 10301	45
3.4	Classification of West Brighton BOA Building Inventory	DCP PLUTO Dataset	74
3.5	School Seat Capacity	NYC Department of Education (DOE) 2013-2014 Enrollment, Capacity and Utilization Report	80
3.6	Median Value of Homes in the West Brighton BOA	U.S. Census Bureau American Community Survey 2009-2013	84
3.7	Value of Homes in the West Brighton BOA	U.S. Census Bureau American Community Survey 2009-2013	84
3.8	Potential Brownfield Sites	Sanborn Maps from 1898, 1917, 1937, and 1951 and the NYC Mayor's Office of Environmental Remediation	90-92
3.9	Strategic Sites Criteria	DCP PLUTO Dataset	93

Strategic Site Statistics		DCP PLUTO Dataset	97-112
Figures			
3.1	Race/Ethnicity	U.S. Census 2010	41
3.2	Language Spoken at Home	U.S. Census Bureau American Community Survey 2009-2013	42
3.3	Age	U.S. Census Bureau American Community Survey 2009-2013	42
3.4	Median Income	U.S. Census Bureau American Community Survey 2009-2013	44
3.5	Education	U.S. Census Bureau American Community Survey 2009-2013	44
3.6	Unemployment Rate	U.S. Census Bureau American Community Survey 2009-2013	45
3.7	Home Ownership	U.S. Census Bureau American Community Survey 2009-2013	46
Section 4			
Images			
4.1	New Brighton Development Scenario	DCP	116
4.2	Richmond Terrace New Brighton - Existing Conditons	DCP	117
4.3	Richmond Terrace at Lafayette Avenue - Existng Condi- tions and Potential Scenario	DCP	118
4.4	Cadell Dry Dock and Repair	DCP	121
4.5	Snug Harbor Ferry Dock	DCP	123
4.6	Bard Avenue Street End	DCP	124
4.7	Curve along Richmond Terrace at Broadway	DCP	125
4.8	Former ROW at Snug Harbor Waterfront	DCP	126
4.9	Narrow Sidewalk in New Brighton	DCP	126
Maps			
4.1	New Brighton Proposed Rezoning Areas	Orthophoto Base Map Copyrighted by DOITT. All rights reserved	115
4.2	West Brighton Proposed Rezoning Area	DCP PLUTO and Orthophoto Base Map Copyrighted by DOITT. All rights reserved	120

Appendix B | Potential Brownfield Sites

Site #	BBL	Address	Lot Area (sq. ft.)	Building Area (sq. ft.)	Potential Contamination				Historical Use ⁵	
					OS ¹	PBS ²	CBS ³	NYC E Designation ⁴	Potential Concern	Historical Use and Year
1	5001850600	RICHMOND TERRACE	204,357	-	-	-	-		✓	Scrap Iron Yard (1898)
2	5001850400	RICHMOND TERRACE	577,475	-		✓	✓		✓	Water pollution control (1917)
3	5002010030	1840 RICHMOND TERRACE	9,754	1,260	✓				✓	Gas Station
4	5001840280	1483 RICHMOND TERRACE	17,980	7,080	-	-	-		✓	Coal yard (1917)
5	5001850200	1741 RICHMOND TERRACE	20,892	400	-	-	-		✓	Dying and cleaning chemicals (1898)
6	5001860220	33 VAN STREET	60,297	27,443	-	✓	-		✓	Coal yard (1898)
7	5001840260	1473 RICHMOND TERRACE	22,583	2,000	-	✓	-		✓	Coal yard (1898)
8	5001880030	1696 RICHMOND TERRACE	29,922	2,640	-	-	-		✓	Auto repair (1917)
9	5002000030	1780 RICHMOND TERRACE	12,255	6,900	-	✓	-		-	-
10	5001850150	1641 RICHMOND TERRACE	74,351	1,500	-	✓	-		✓	Auto parking
11	5001870140	10 VAN STREET	7,704	2,666	-	✓	-		-	-
12	5001850170	1681 RICHMOND TERRACE	13,955	9,065	-	-	-		✓	Oil storage (1917)
13	5001880080	139 WOODRUFF LANE	5,490	3,510	-	-	-		✓	Coal yard (1917)
14	5001840330	1435 RICHMOND TERRACE	80,050	21,000	-	-	-		✓	Machine shop (1917, 1937, 1951)
15	5001880030	1684 RICHMOND TERRACE	40,553	7,031	-	-	-		✓	Coal yard (1937)
16	5001990040	1740 RICHMOND TERRACE	1,717	4,500	-	-	-		✓	Auto parking (1917)

¹ OS = New York State Open Petroleum Spill Location (Searchable Property Environmental E-Database, NYC Mayor's Office of Environmental Remediation)

² PBS = New York State Petroleum Bulk Storage Sites (Searchable Property Environmental E-Database, NYC Mayor's Office of Environmental Remediation)

³ CBS = New York State Chemical Bulk Storage Sites (Searchable Property Environmental E-Database, NYC Mayor's Office of Environmental Remediation)

⁴ New York City Environmental Designation (NYC Department of City Planning Zoning and Land Use Application)

⁵ Based on partially complete sets of Sanborn maps from 1898, 1917, 1937, and 1951.

Site #	BBL	Address	Lot Area (sq. ft.)	Building Area (sq. ft.)	Potential Contamination				Historical Use ⁵	
					OS ¹	PBS ²	CBS ³	NYC E Designation ⁴	Potential Concern	Historical Use and Year
17	5001570010	1320 RICHMOND TERRACE	16,008	1,930	✓	-	-		-	-
18	5001850180	1693 RICHMOND TERRACE	34,296	3,566	-	✓	-		✓	Fuel, oil and coal storage (1937)
19	5001840360	RICHMOND TERRACE	75,585	72,992	-	-	-		✓	Railroad, Machine repair (1917, 1937, 1951)
20	5001500010	45 ELIZABETH AVENUE	10,823	1,708	-	✓	-		-	-
21	5001990030	1756 RICHMOND TERRACE	7,057	2,527	-	✓	-		-	-
22	5001860120	799 HENDERSON AVENUE	469,997	17,836	-	-	-		✓	Dying chemicals (1898, 1917, 1937, 1951)
23	5001570000	1388 RICHMOND TERRACE	28,216	15,712	-	✓	-		-	-
24	5001860040	1532 RICHMOND TERRACE	6,575	2,417	-	✓	-		✓	Auto repair
25	5000750050	1125 RICHMOND TERRACE	12,314	1,800	✓	✓	-		✓	Gas Station
26	5000670110	700 RICHMOND TERRACE	9,338	2,325	-	✓	-		✓	Auto repair
27	5000040020	561 RICHMOND TERRACE	348,877	881,000	-	-	-		✓	Oil storage (1989, 1917, 1937, 1951)
28	5000670100	17 LAFAYETTE AVENUE	9,940	8,163	-	✓	-		✓	Auto parking
29	5000620030	572 RICHMOND TERRACE	98,528	39,800	-	✓	-		✓	Gas Station
30	5000510080	105 JERSEY STREET	54,791	38,915	-	✓	-		✓	Gas Station
31	5000510000	163 JERSEY STREET	182,792	174,895	-	-	-		✓	Machine shop (1898)
32	5000510450	BEECHWOOD AVENUE	73,208	300	-	-	-		✓	Machine repair (1917)

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Site #	BBL	Address	Lot Area (sq. ft.)	Building Area (sq. ft.)	Potential Contamination				Historical Use ⁵	
					OS ¹	PBS ²	CBS ³	NYC E Designation ⁴	Potential Concern	Historical Use and Year
33	5000510030	43 JERSEY STREET	196,172	265,820	✓	✓	-	-	✓	Gas Station
34	5000430000	385 JERSEY STREET	14,451	13,383	-	-	-	-	✓	Auto parking (1951)
35	5000520030	109 YORK AVENUE	37,182	7,200	-	✓	-	-	-	-
36	5000470000	5 YORK AVENUE	6,917	2,190	✓	-	-	-	✓	Gas Station (1951)
37	5001030020	14 BRIGHTON AVENUE	4,893	5,754	✓	✓	-	-	-	-
38	5000340000	100 BROOK STREET	107,336	14,535	✓	✓	-	-	-	-
39	5000610027	VAN BUREN STREET	2,830	-	-	-	-	✓	-	-
40	5000610029	FILLMORE STREET	2,775	-	-	-	-	✓	-	-
41	5000610031	FILLMORE STREET	2,775	-	-	-	-	✓	-	-

¹ OS = New York State Open Petroleum Spill Location (Searchable Property Environmental E-Database, NYC Mayor's Office of Environmental Remediation)

² PBS = New York State Petroleum Bulk Storage Sites (Searchable Property Environmental E-Database, NYC Mayor's Office of Environmental Remediation)

³ CBS = New York State Chemical Bulk Storage Sites (Searchable Property Environmental E-Database, NYC Mayor's Office of Environmental Remediation)

⁴ New York City Environmental Designation (NYC Department of City Planning Zoning and Land Use Application)

⁵ Based on partially complete sets of Sanborn maps from 1898, 1917, 1937, and 1951.

Appendix C | Transportation Workshop Conceptual Designs

During August and September 2014, DCP coordinated three interagency workshops exploring planning and design solutions for Richmond Terrace and the MTA North Shore BRT proposal. Each workshop focused on a single major waterfront site – Caddell Dry Dock and Repair, Snug Harbor and Atlantic Salt. Together, these three properties control 75% of West Brighton’s 2.5 mile waterfront and are affected by the location of the North Shore Railroad right-of-way (ROW) and an underbuilt Richmond Terrace. The workshop attendees included representatives from each of the three major property owners, along with staff from DCP, DOT, NYCT/MTA, DDC, DEP, DPR and EDC. During the workshop, the following issues and opportunities were considered:

- Possible maritime job expansion
- Potential land use changes that support retail and community services
- Creating public access to the waterfront where appropriate
- Supporting future transit utilizing ROW opportunities
- Potential roadway improvements to Richmond Terrace
- Potential locations for a bicycle and pedestrian greenway
- The flood resiliency of proposed transportation improvements

The result of the workshops was a series of planning and conceptual design scenarios that can help inform future recommendations for transportation improvements and rezonings in West Brighton and the larger North Shore

community. A summary of the workshop discussions and conceptual design scenarios is provided below:

Area-wide

All three workshops identified the need to eliminate the uncertainties presented to additional property owners by the unbuilt mapped portions of Richmond Terrace and to remap the ROW to be contiguous with Richmond Terrace. This action would eliminate a significant barrier to business expansion for Caddell and Atlantic Salt while facilitating improved public access along the Snug Harbor waterfront. Additionally, the workshops reviewed the station locations for the BRT proposal and identified locations for pedestrian and bicycle infrastructure improvements. These improvements include sidewalks that range from 8 to 15 feet in width, on-street bicycle lanes, a separated esplanade, and greenway that would provide access, both physical and visual, to the Kill Van Kull waterfront.

Atlantic Salt

Discussions between the property owner and city agencies produced a set of scenarios for the A, B, and C segments. Scenarios 1 and 2 for Segment A consider pedestrian and bicycle pathways on the existing ROW, while scenario 3 presents a pedestrian and bicycle pathway adjacent to Richmond Terrace. Based upon discussions with the property owner, DCP developed scenarios for Segment B that explore potential transportation improvements along Richmond Terrace if an existing, unused building on the

site is removed.

Snug Harbor

An important discussion topic for the Snug Harbor workshop was flood resiliency. City agencies and representatives from Snug Harbor developed different scenarios for transportation improvements that explored the impact of raising the busway above the base flood elevation on the connectivity of the entire transportation network. For example, scenarios 1 and 4 for Segment F proposed aligning the busway with Richmond Terrace and constructing bicycle path and walkway along the waterfront, while scenarios 2 and 3 considered placing the busway on an elevated structure and having a walkway and bicycle path adjacent to Richmond Terrace.

Caddell Dry Dock and Repair

The conceptual design scenarios for segments G, H, and I were a product of the coordination between city agencies and the property owner. Initiated by representatives from Caddell, the workshops reached a consensus for straightening a problematic curve on Richmond Terrace at Pelton Avenue (Segment G, scenarios 1, 2, 3, and 4). The workshop attendees also considered the opportunity to address the dangerous curve on Richmond Terrace near the intersection with Broadway by conducting a land swap with the property owner. Segment I, scenario 3 illustrates the potential realignment of Richmond Terrace and a new parcel south of the roadbed for the property owner.

New Development Opportunity

Using this document

This document includes draft drawings that were completed following a series of three focused inter-agency planning and design workshops looking at transportation infrastructure on Staten Island's North Shore. The primary goal of the workshops was to identify alignment options for a tentative MTA Bus-Rapid Transit plan, as well as for a future widening and realignment of Richmond Terrace. In addition, workshop participants were tasked with devising strategies that combine economic development, urban design and climate resiliency initiatives with long-standing requests for a waterfront greenway and open space network. Four scenarios emerged from the workshops. These scenarios can be read as one connected strategy. Conversely, each of the sections can be read individually and combined with concepts from the other three documents.

Bard Avenue BRT Station

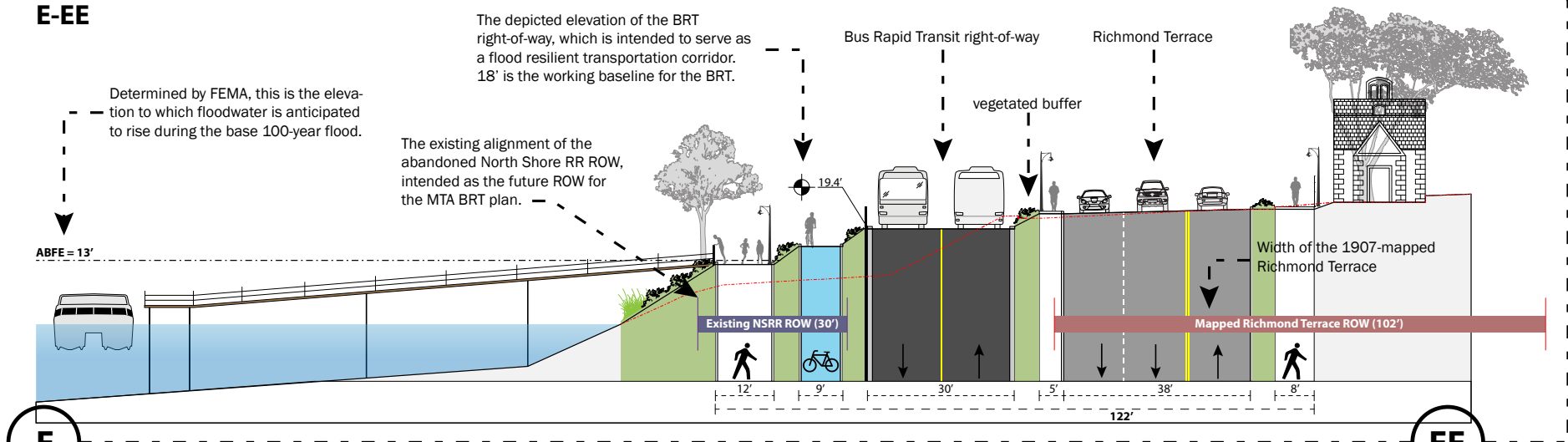
New Richmond Terrace/BRT Brige

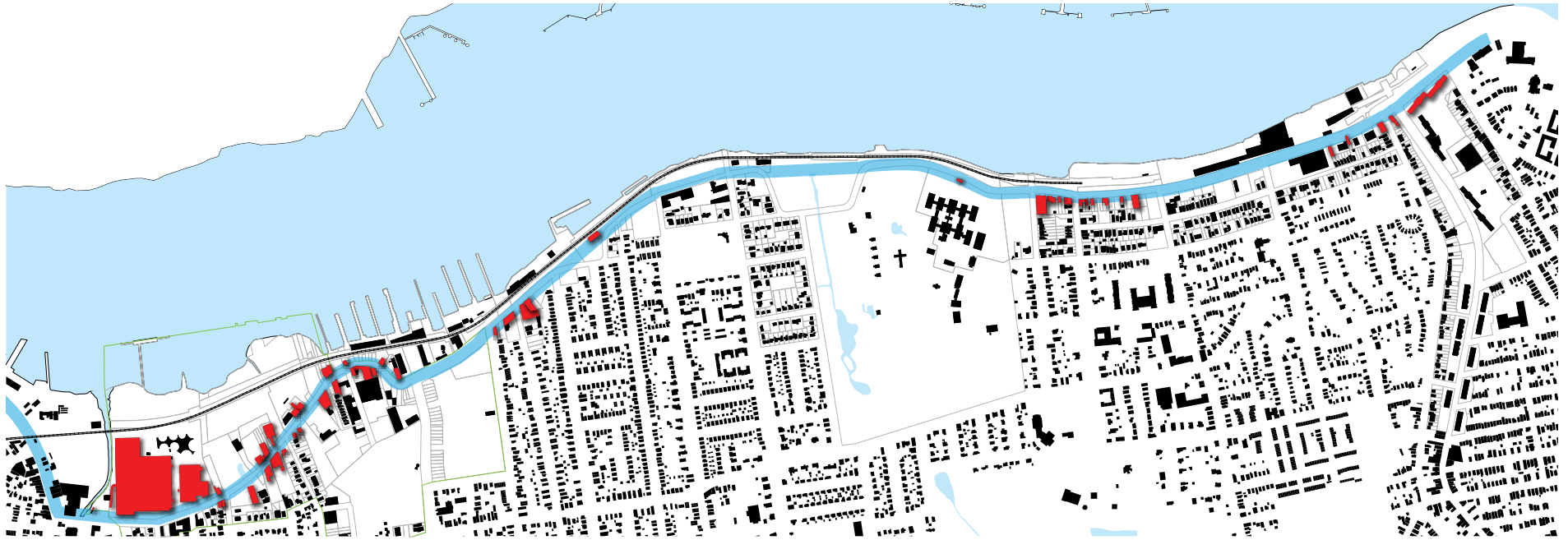
Snug Harbor Dock

(Orange) Bike/Ped pathway

(Blue) BRT Station Platform

Scenario 1 E-EE





North Shore

Transportation Workshop

Scenario 1



New Development Opportunity

Using this document

This document includes draft drawings that were completed following a series of three focused inter-agency planning and design workshops looking at transportation infrastructure on Staten Island's North Shore. The primary goal of the workshops was to identify alignment options for a tentative MTA Bus-Rapid Transit plan, as well as for a future widening and realignment of Richmond Terrace. In addition, workshop participants were tasked with devising strategies that combine economic development, urban design and climate resiliency initiatives with long-standing requests for a waterfront greenway and open space network. Four scenarios emerged from the workshops. These scenarios can be read as one connected strategy. Conversely, each of the sections can be read individually and combined with concepts from the other three documents.

Bard Avenue BRT Station

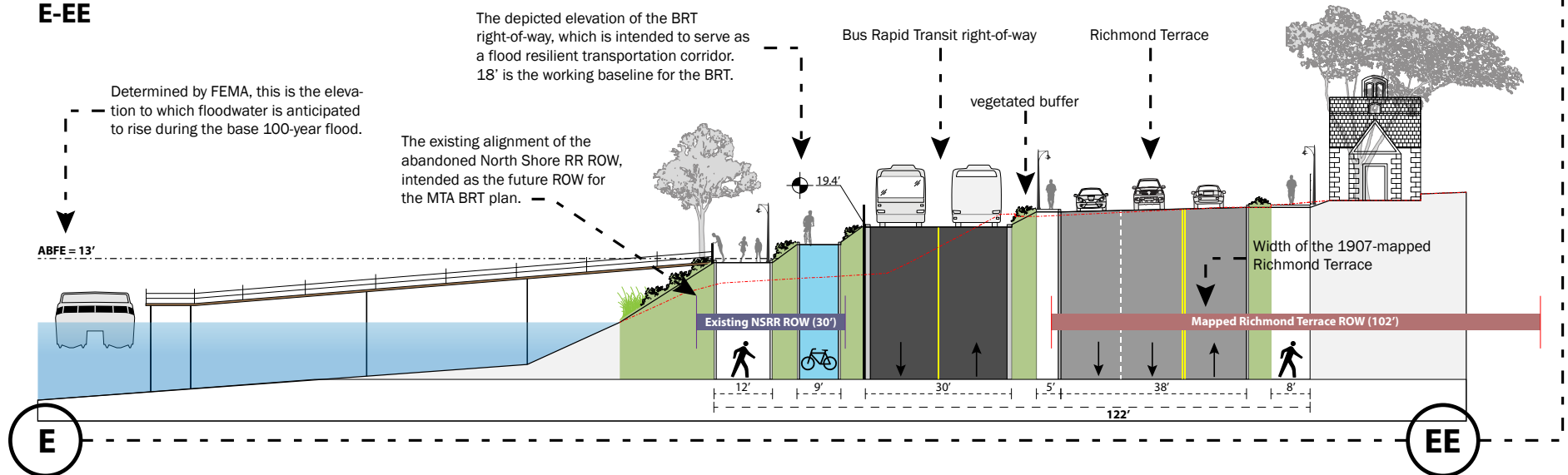
New Richmond Terrace/BRT Brige

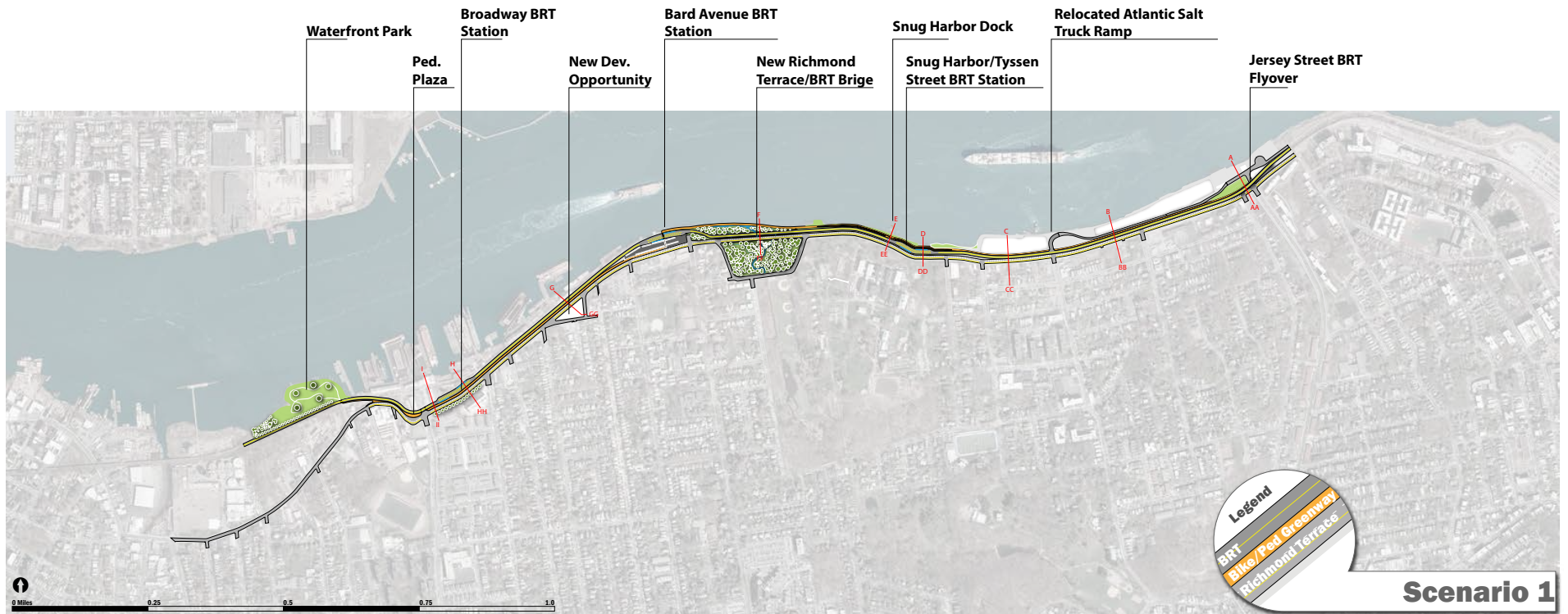
Snug Harbor Dock

(Orange) Bike/Ped pathway

(Blue) BRT Station Platform

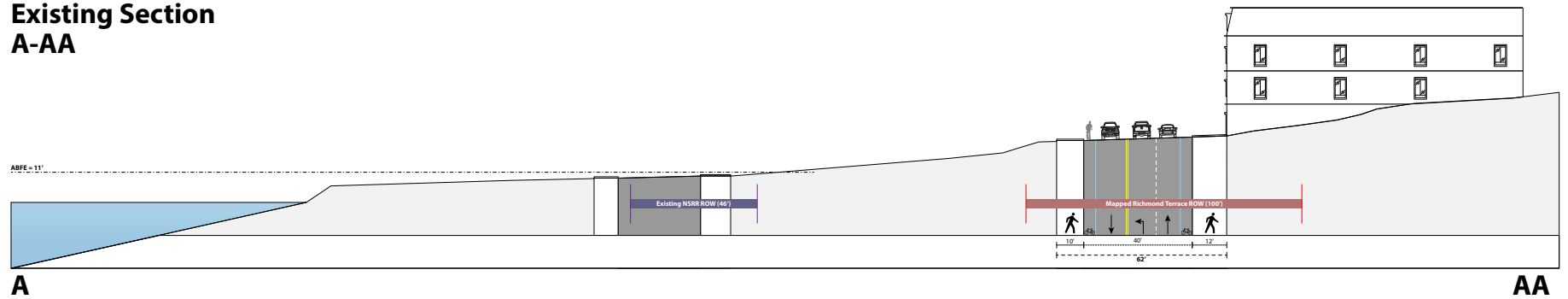
Scenario 1 E-EE

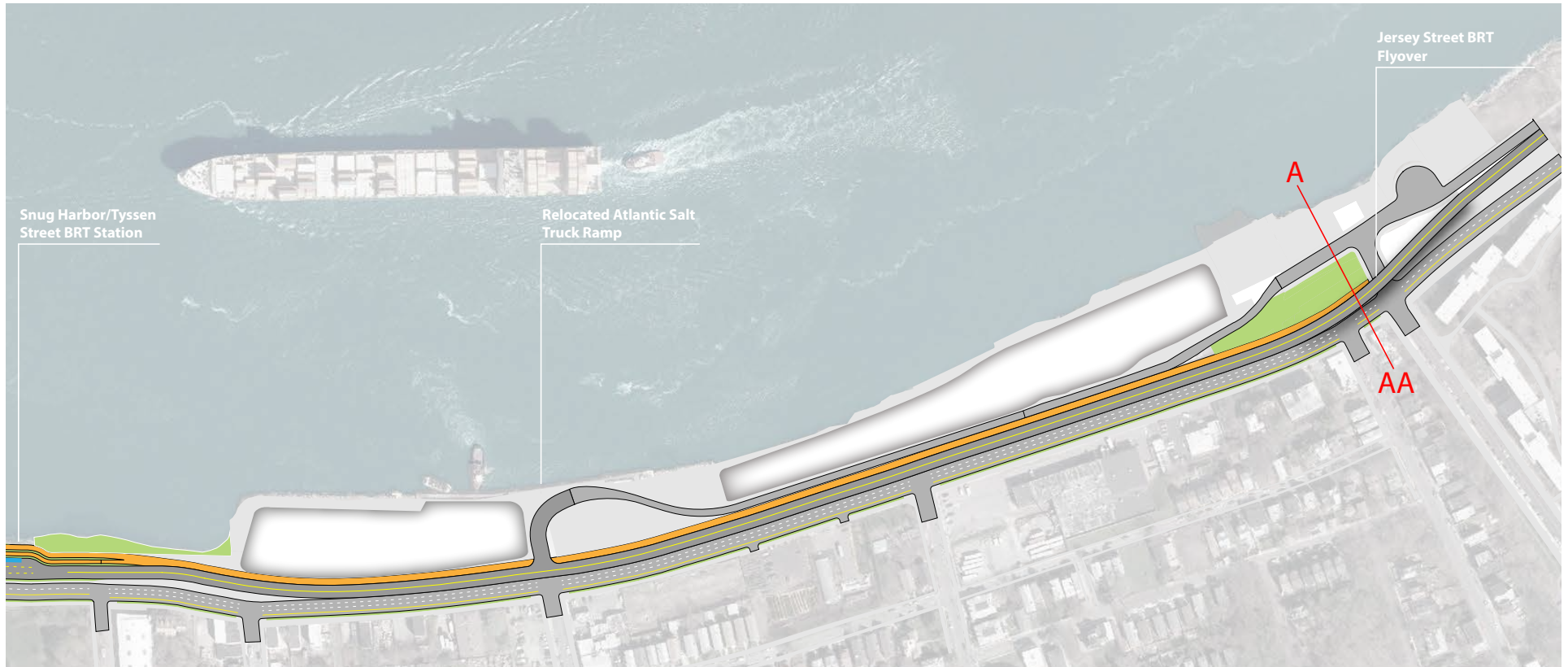




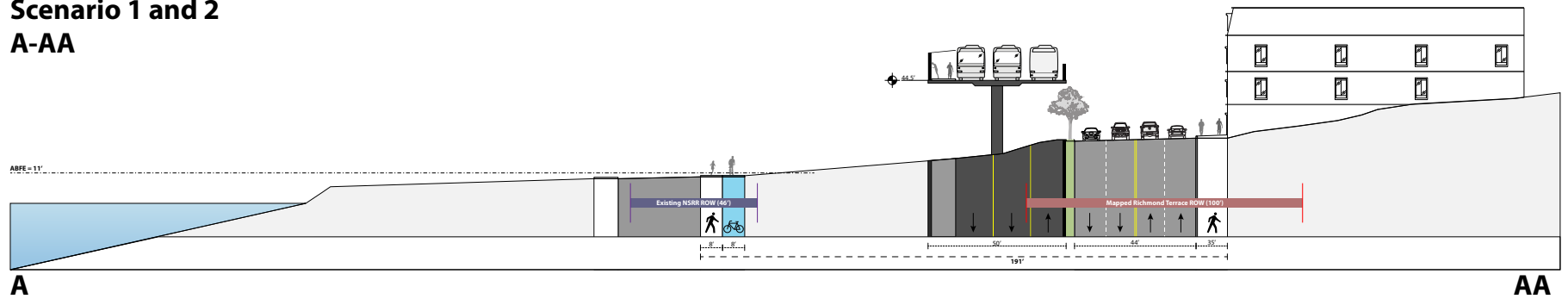


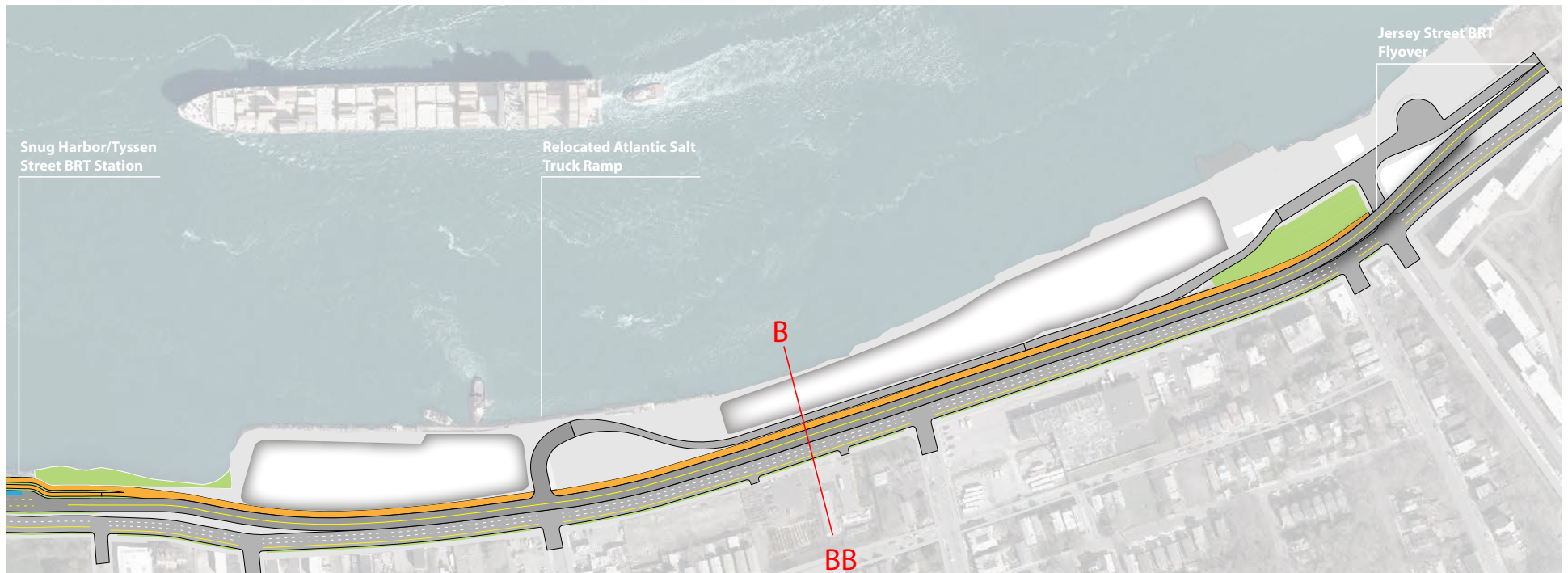
Existing Section A-AA



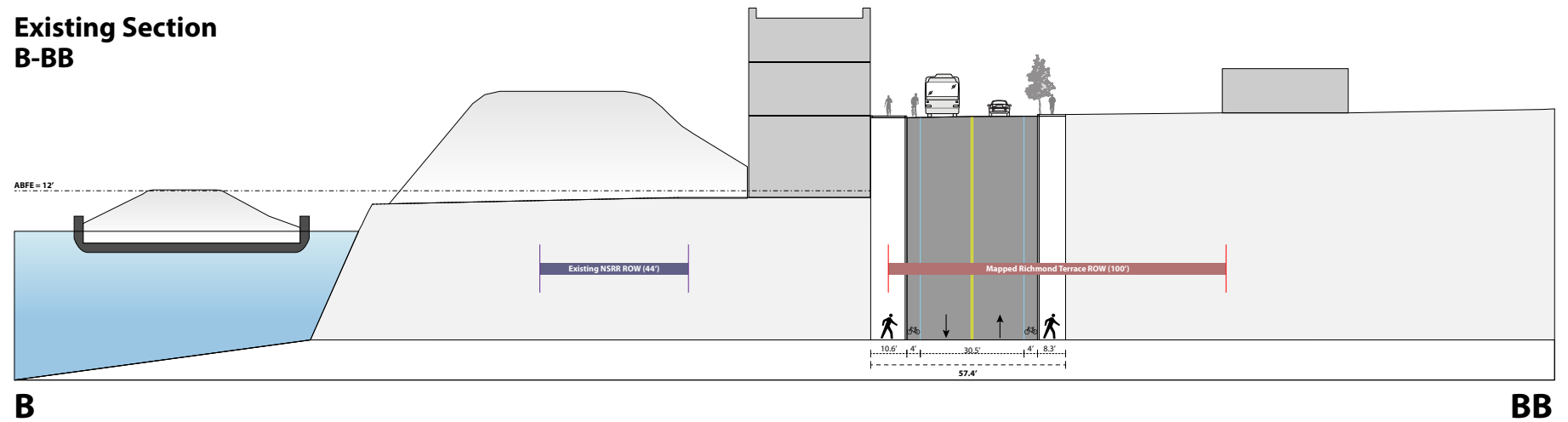


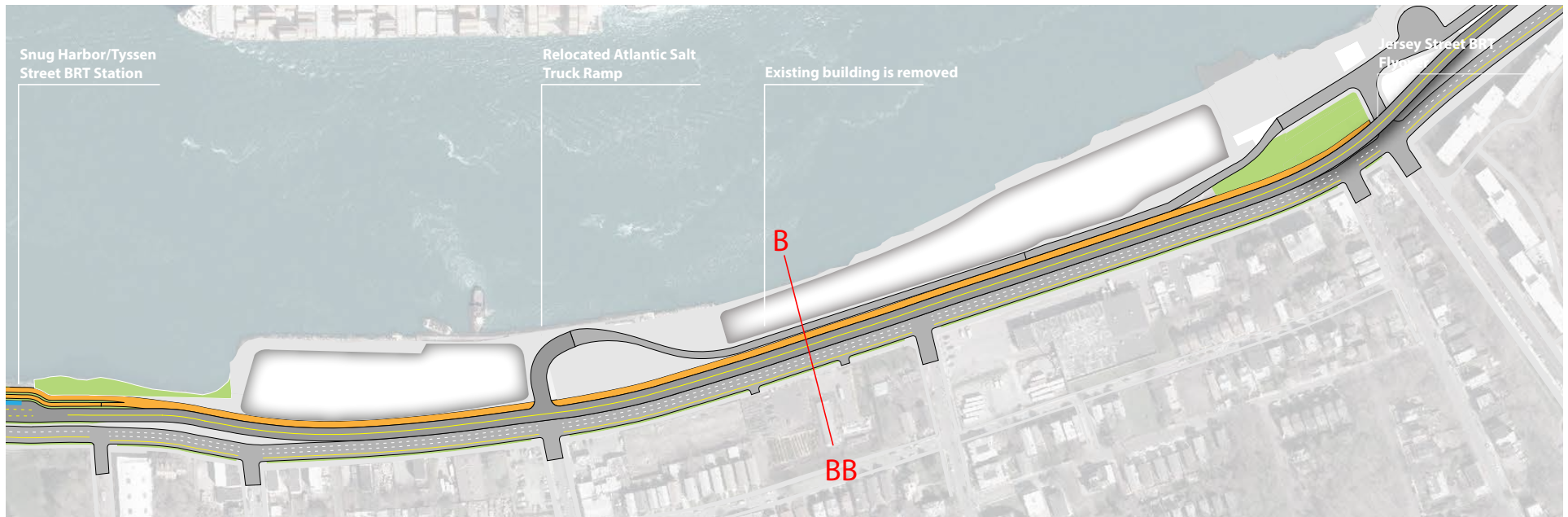
Scenario 1 and 2 A-AA



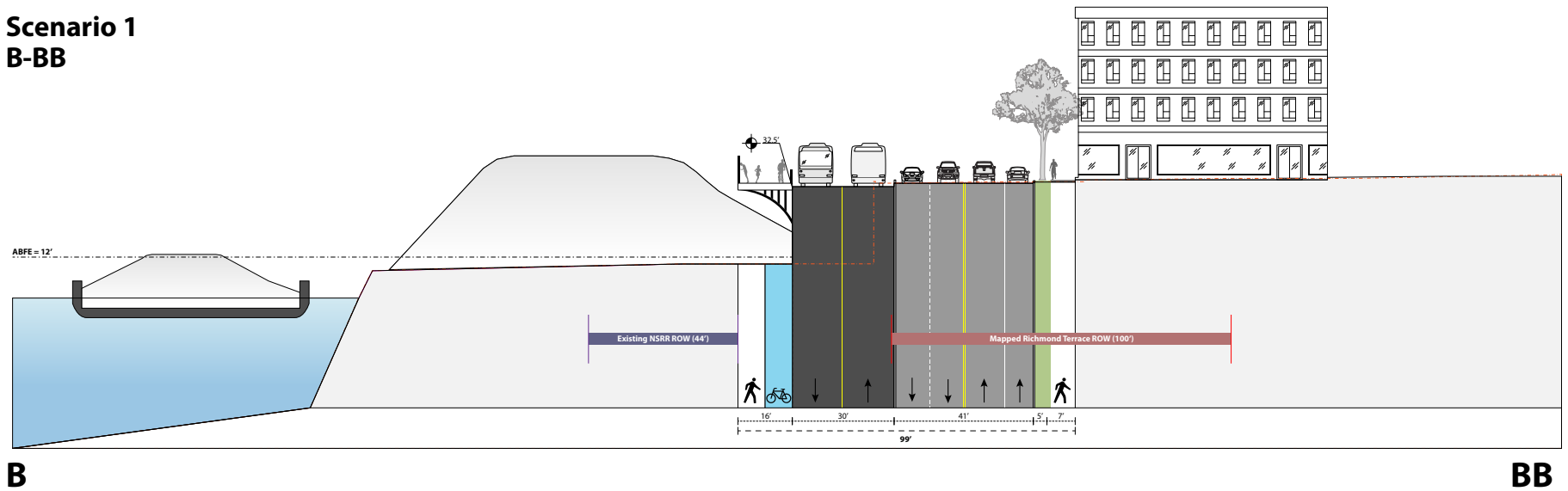


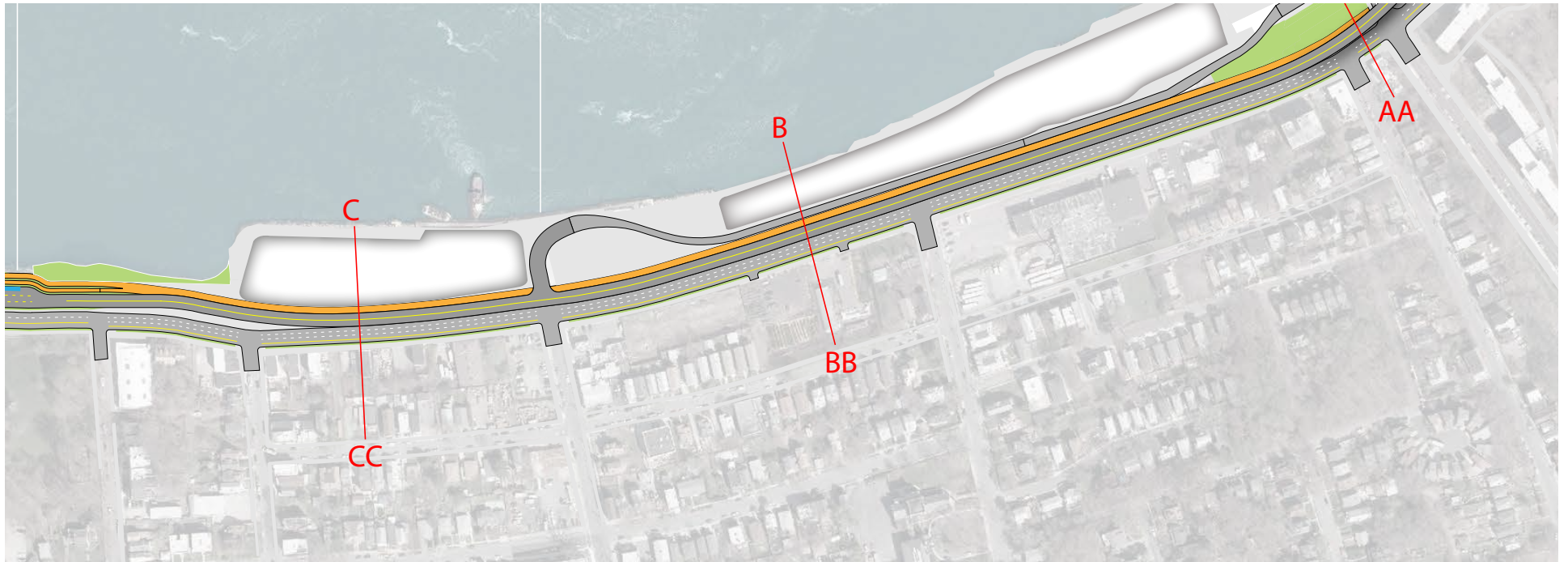
Existing Section B-BB



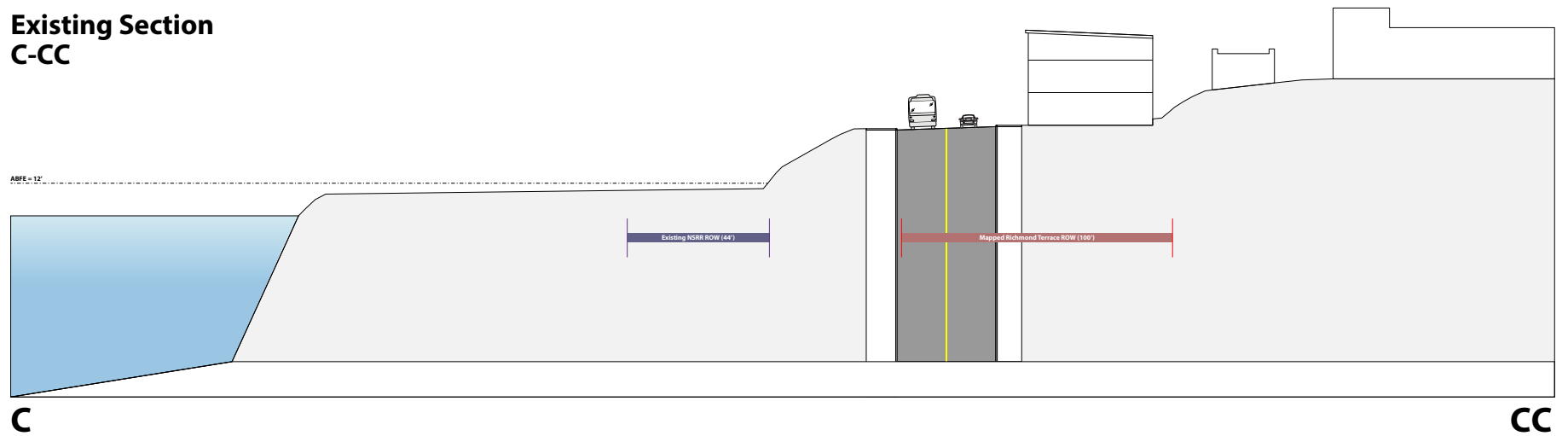


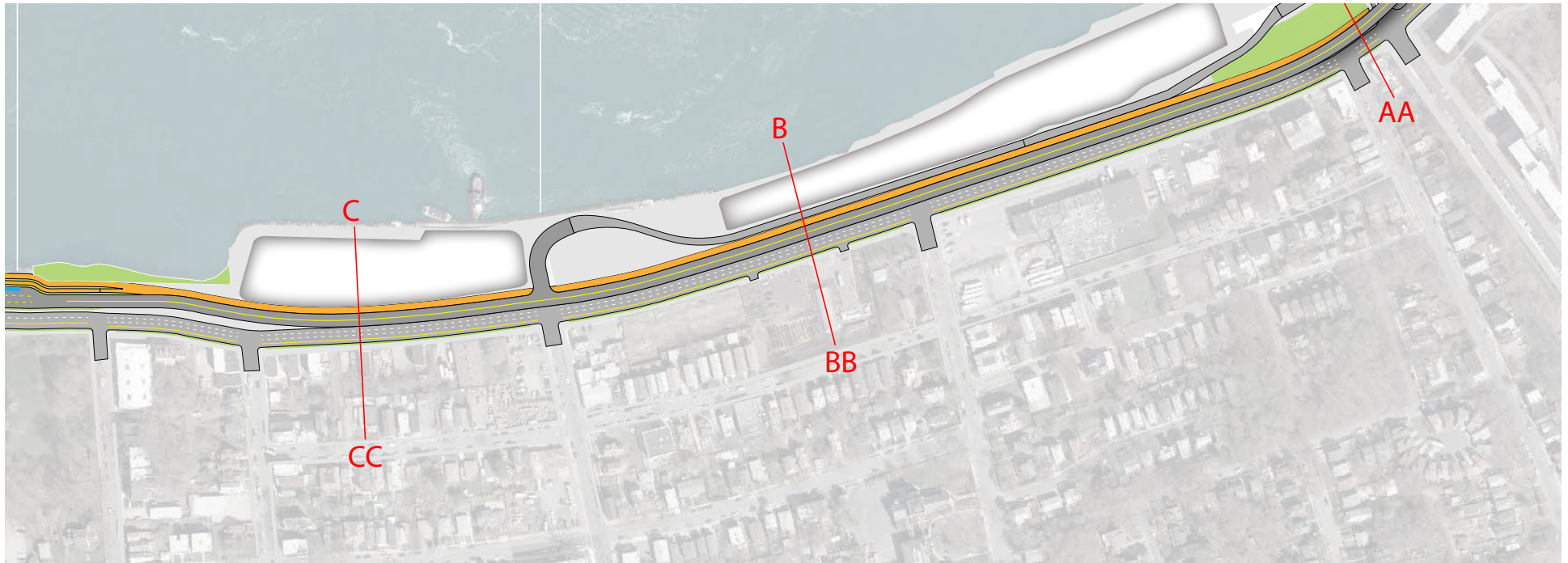
Scenario 1 B-BB



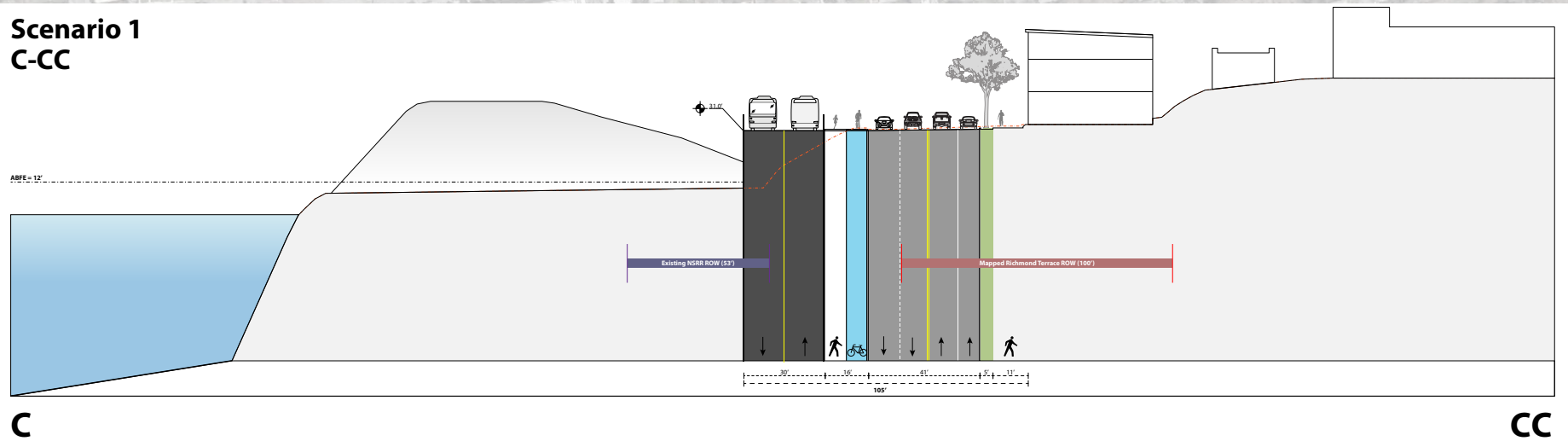


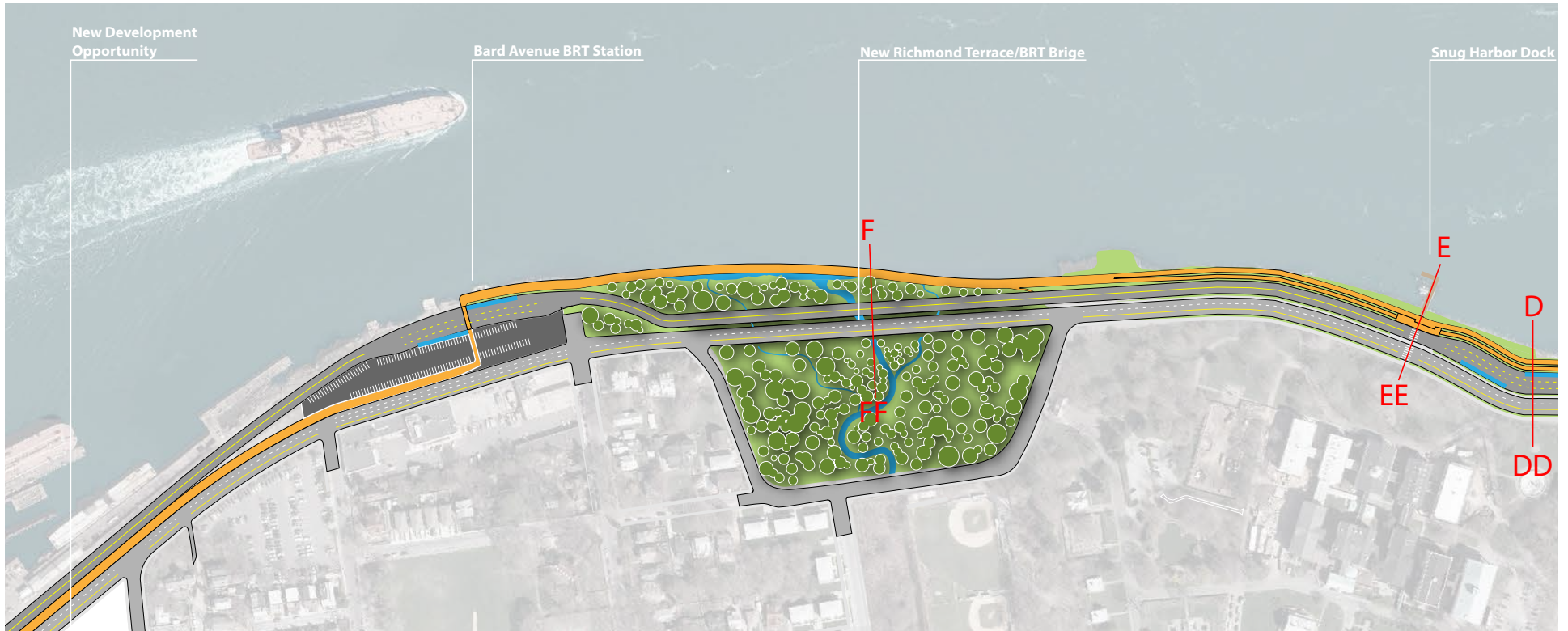
**Existing Section
C-CC**



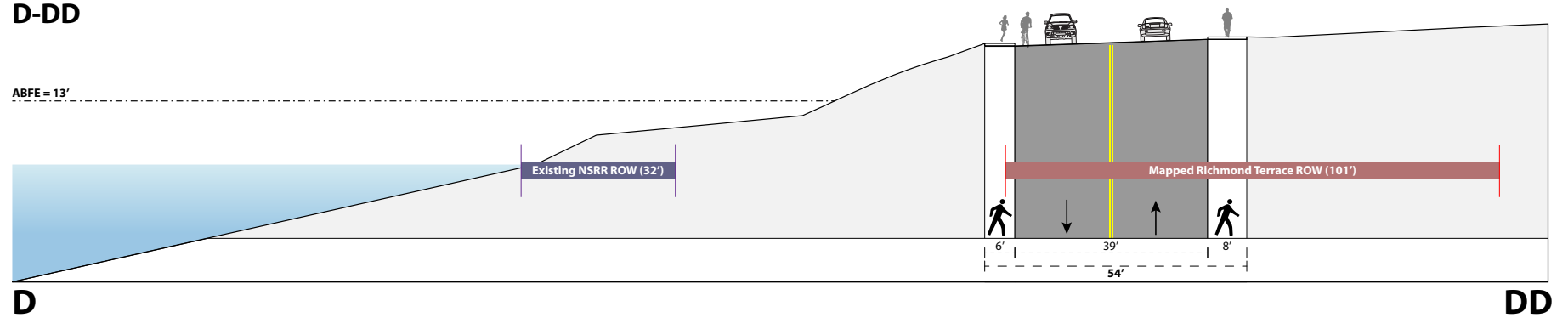


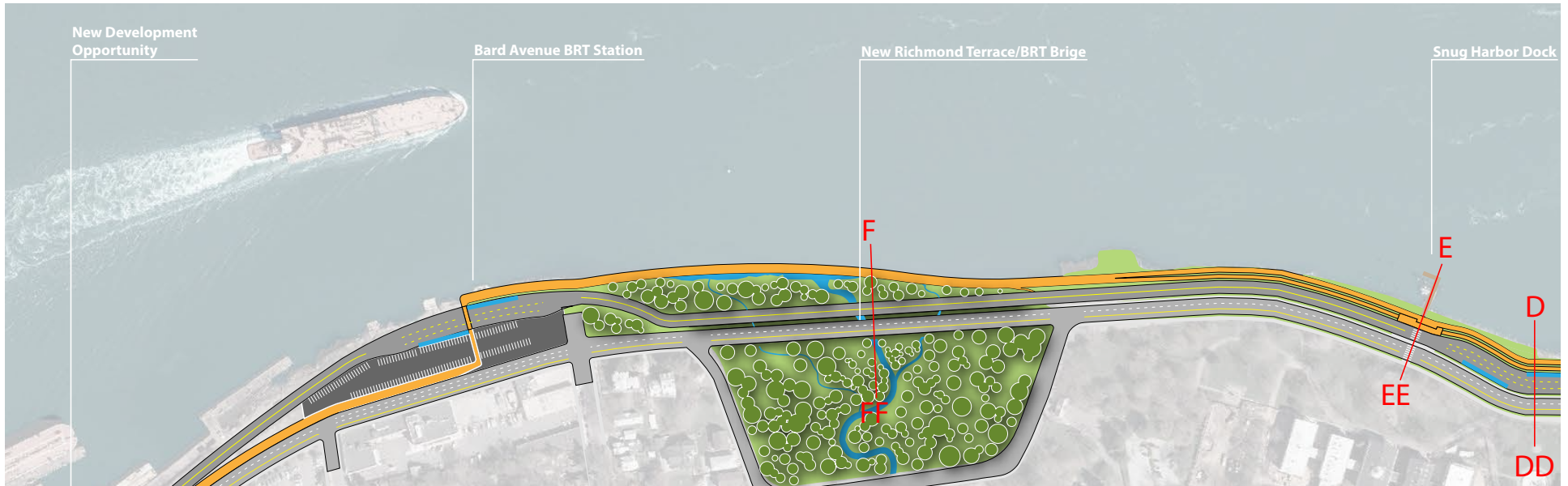
Scenario 1 C-CC



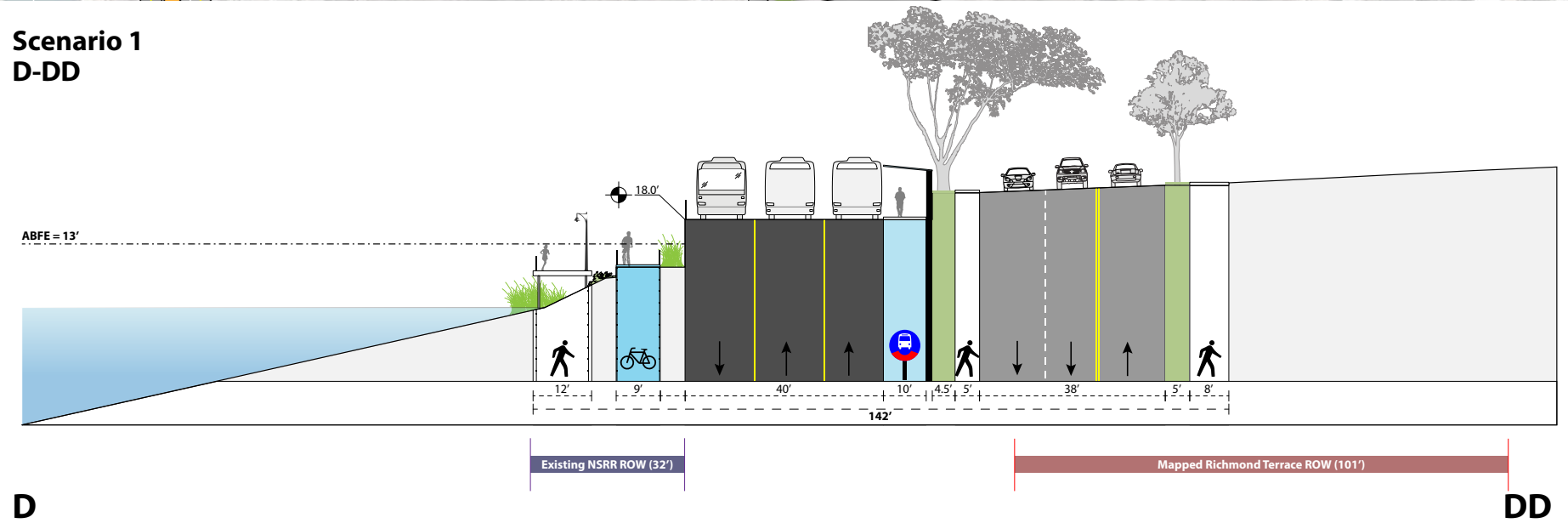


Existing Section D-DD



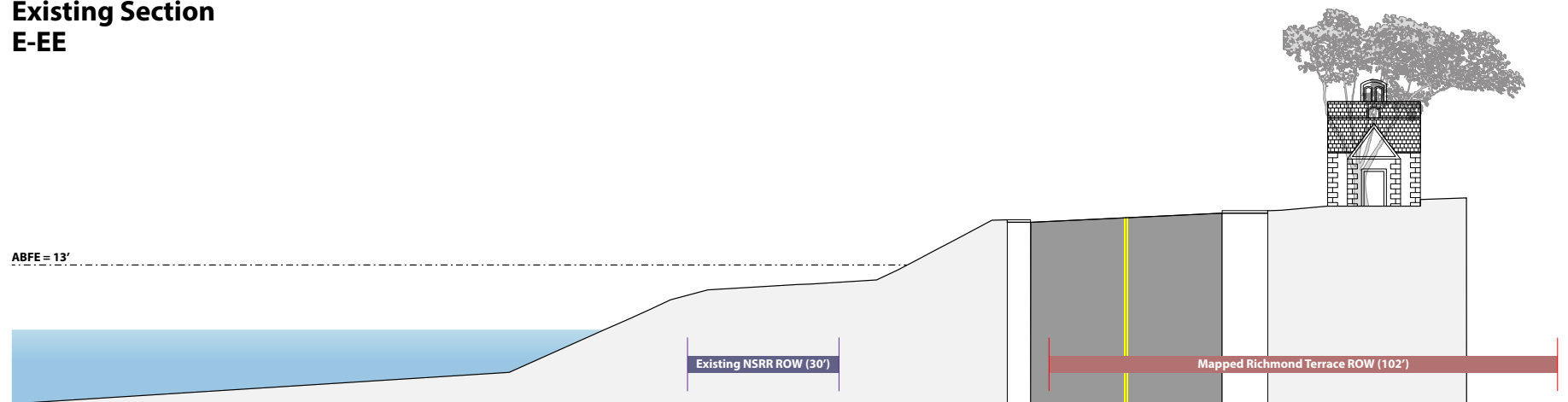


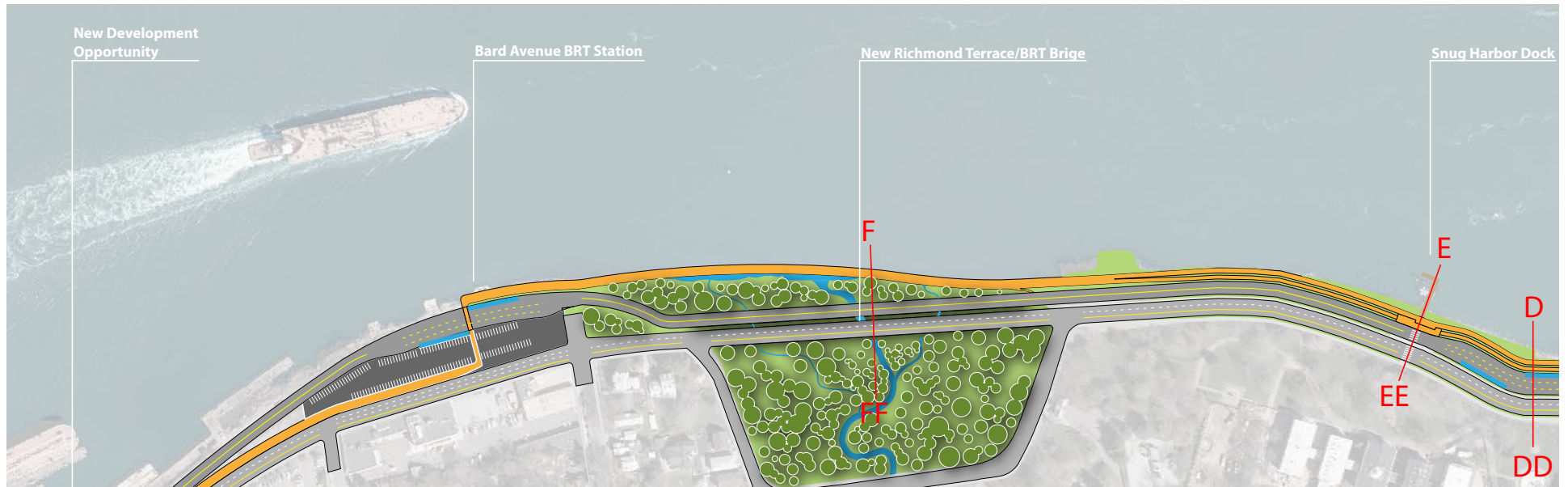
Scenario 1 D-DD



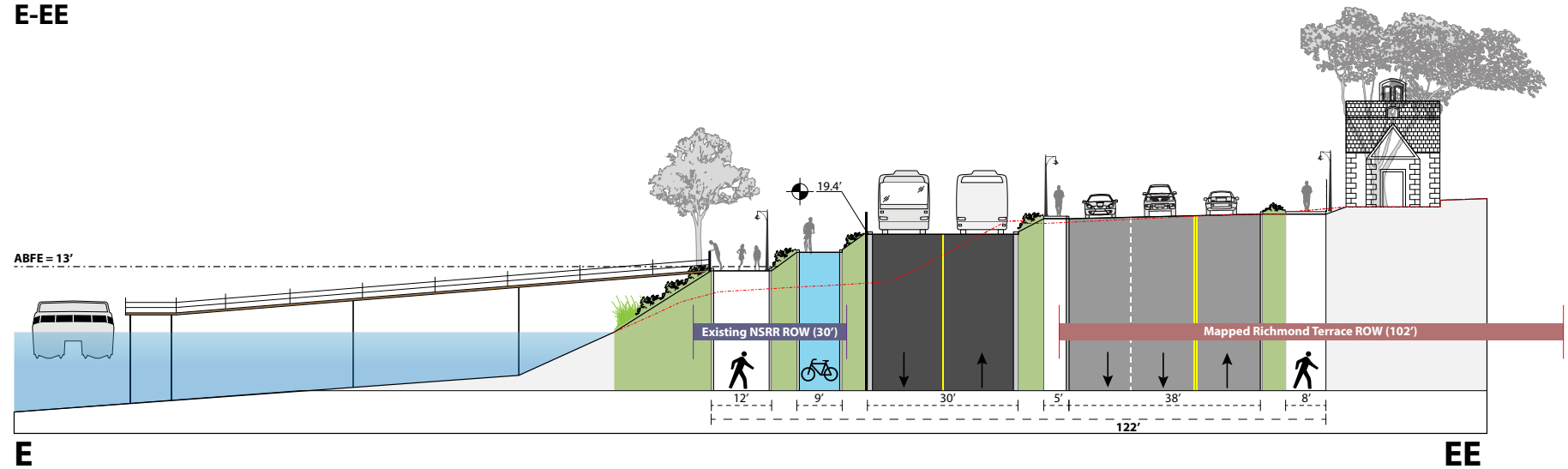


Existing Section E-EE



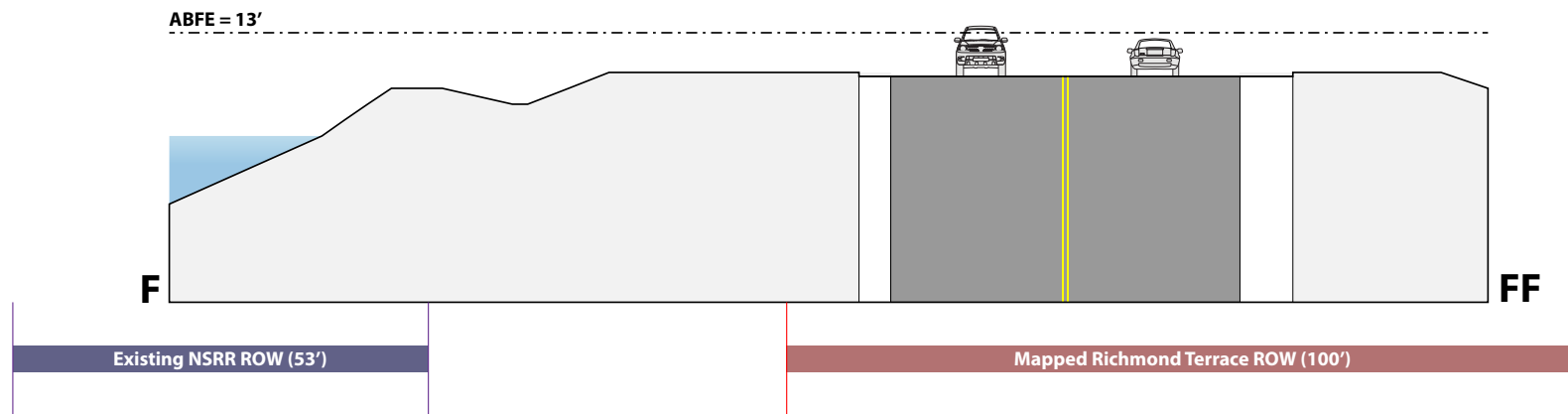


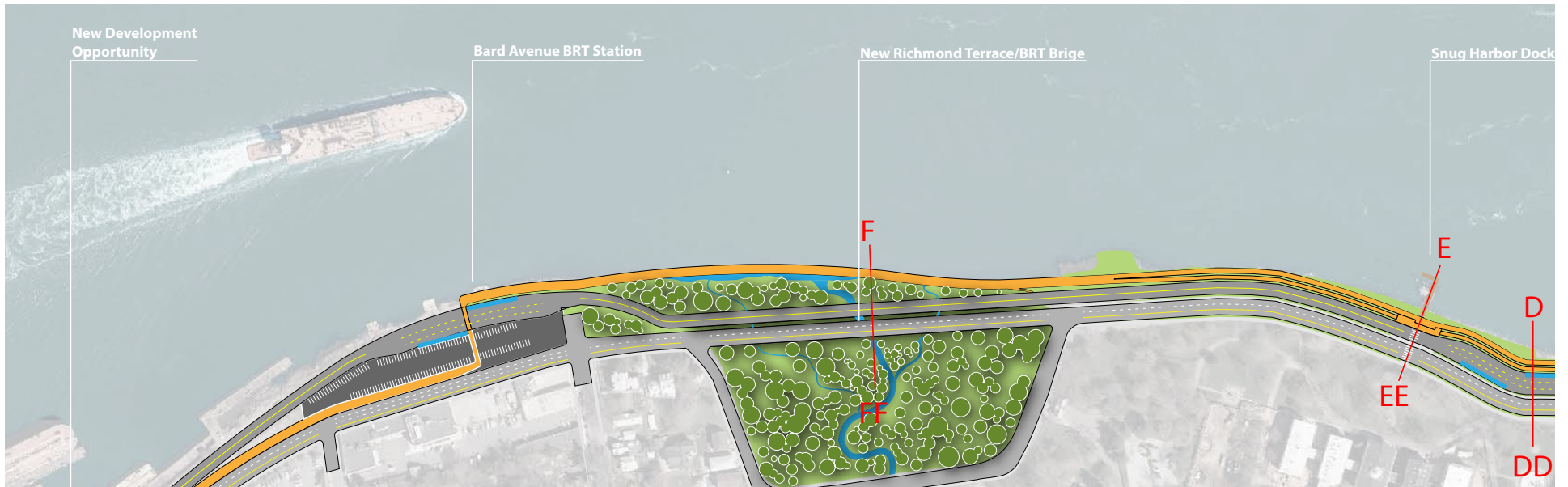
Scenario 1 E-EE



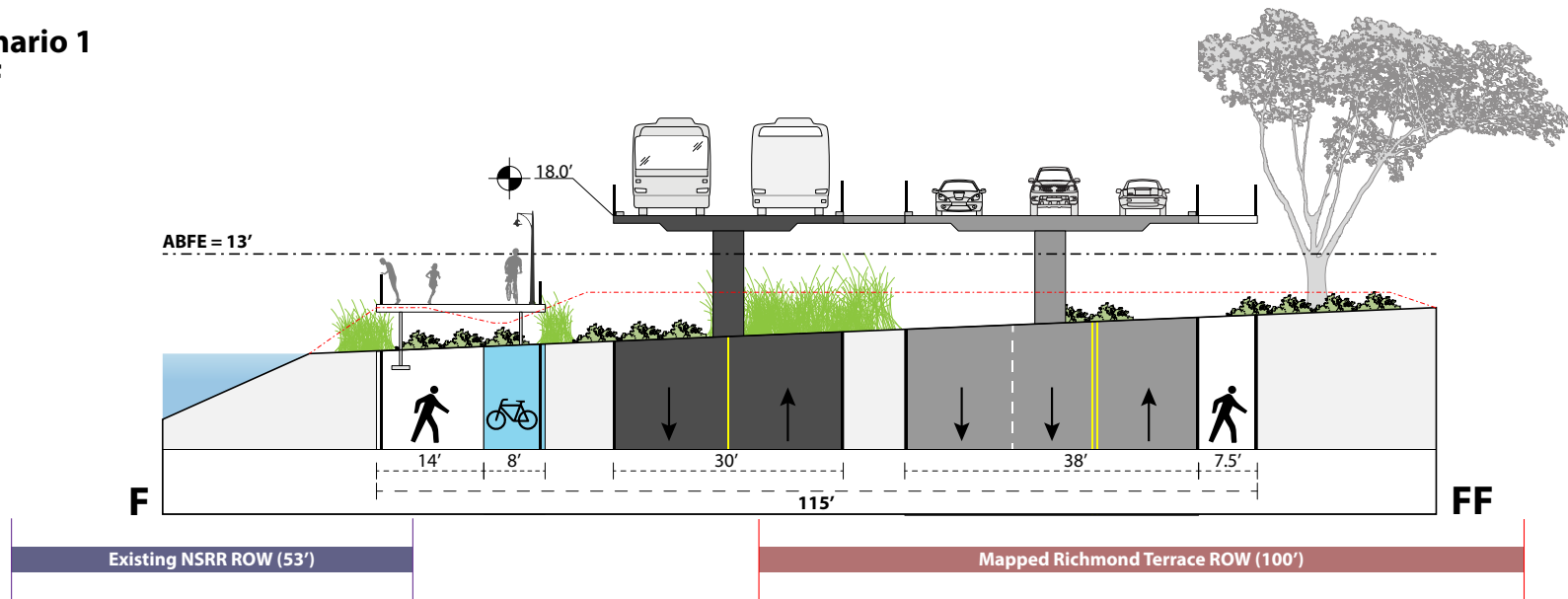


Scenario 1 F-FF



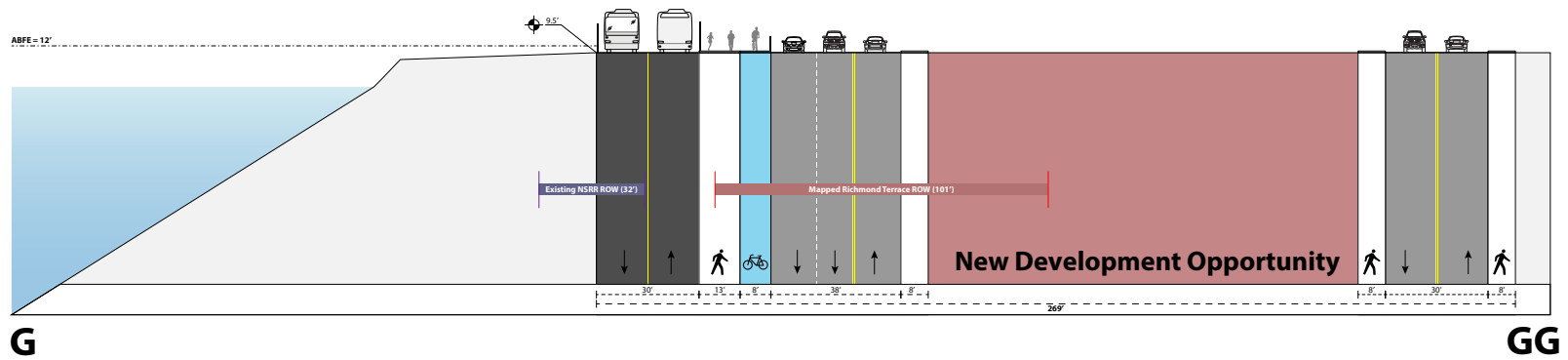


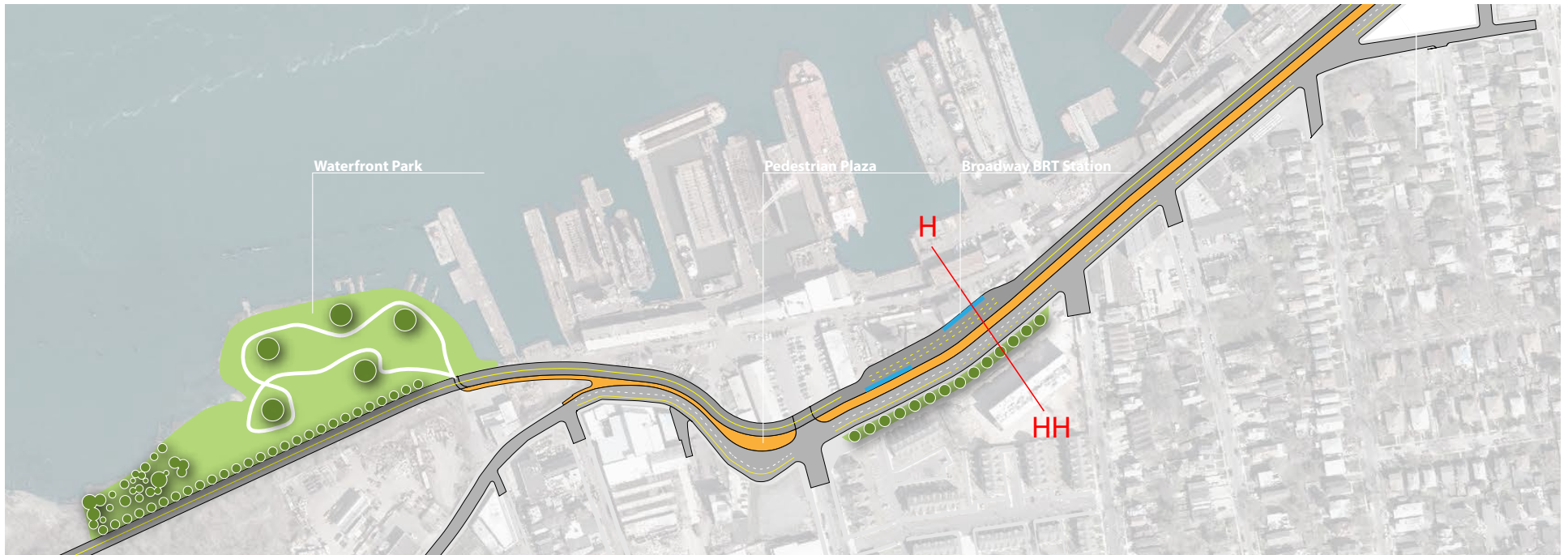
Scenario 1 F-FF



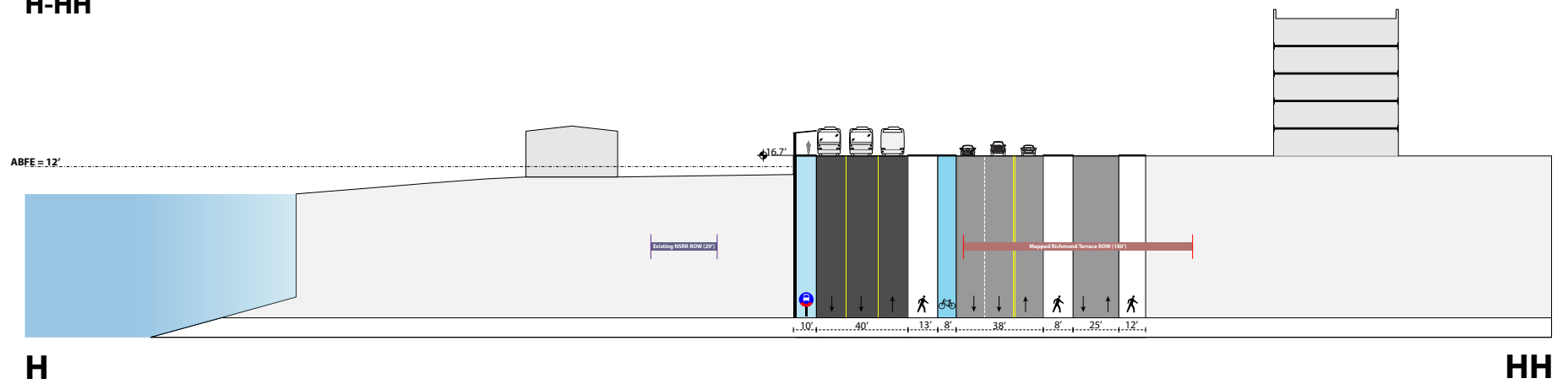


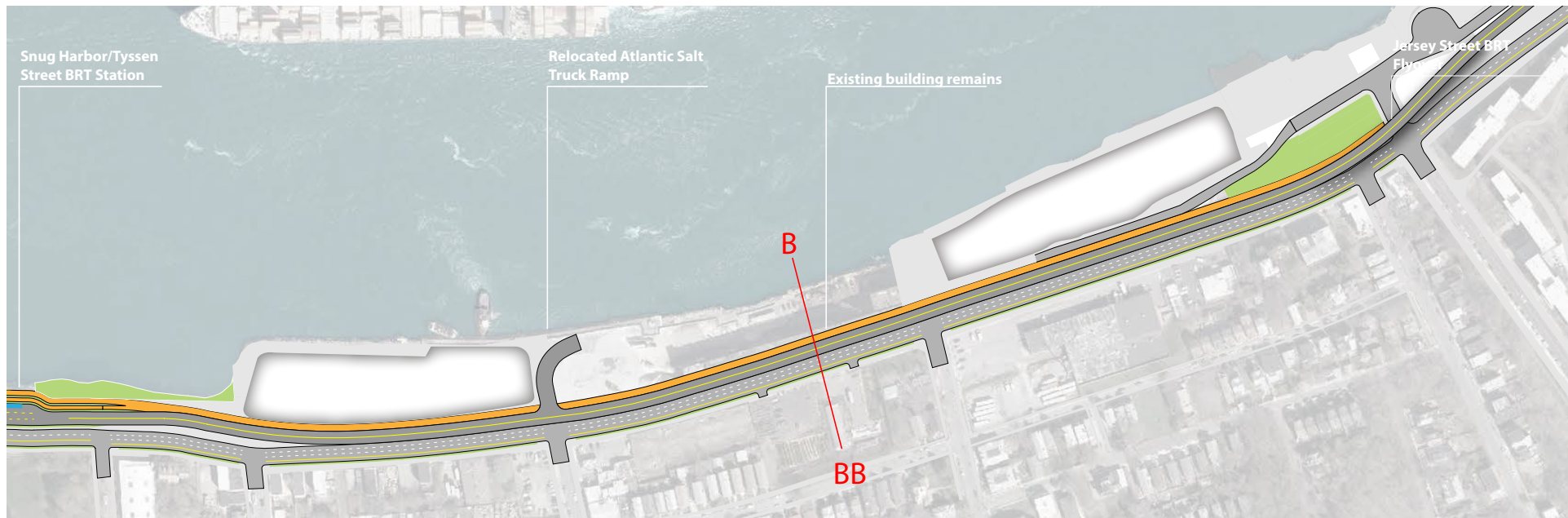
Scenario 1 G-GG



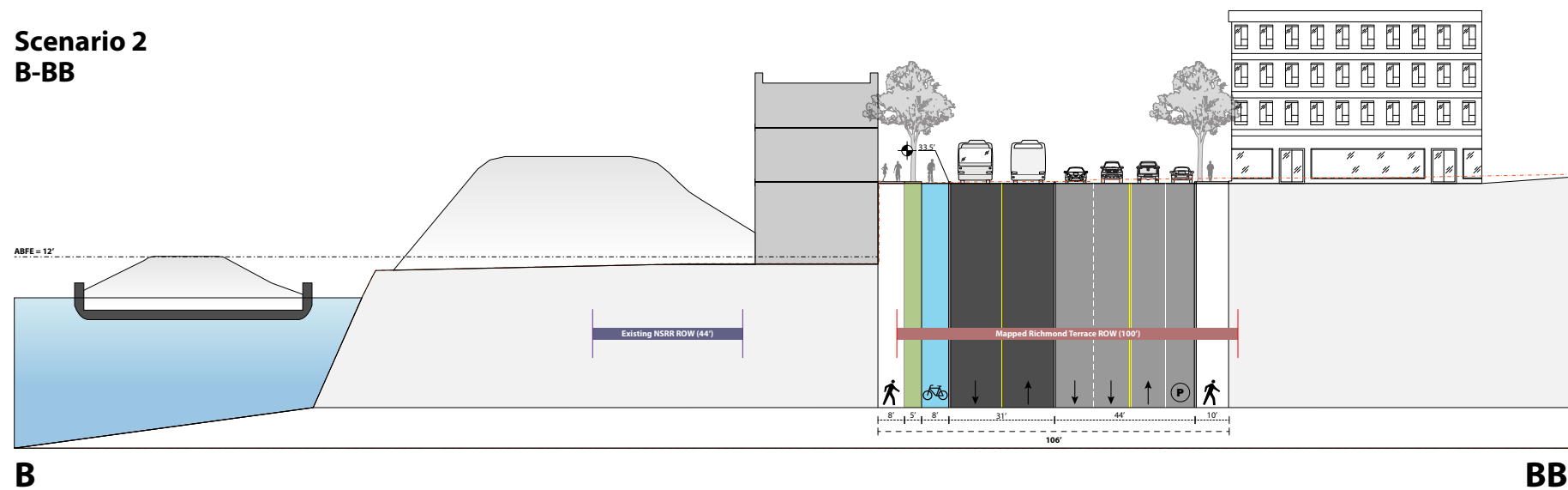


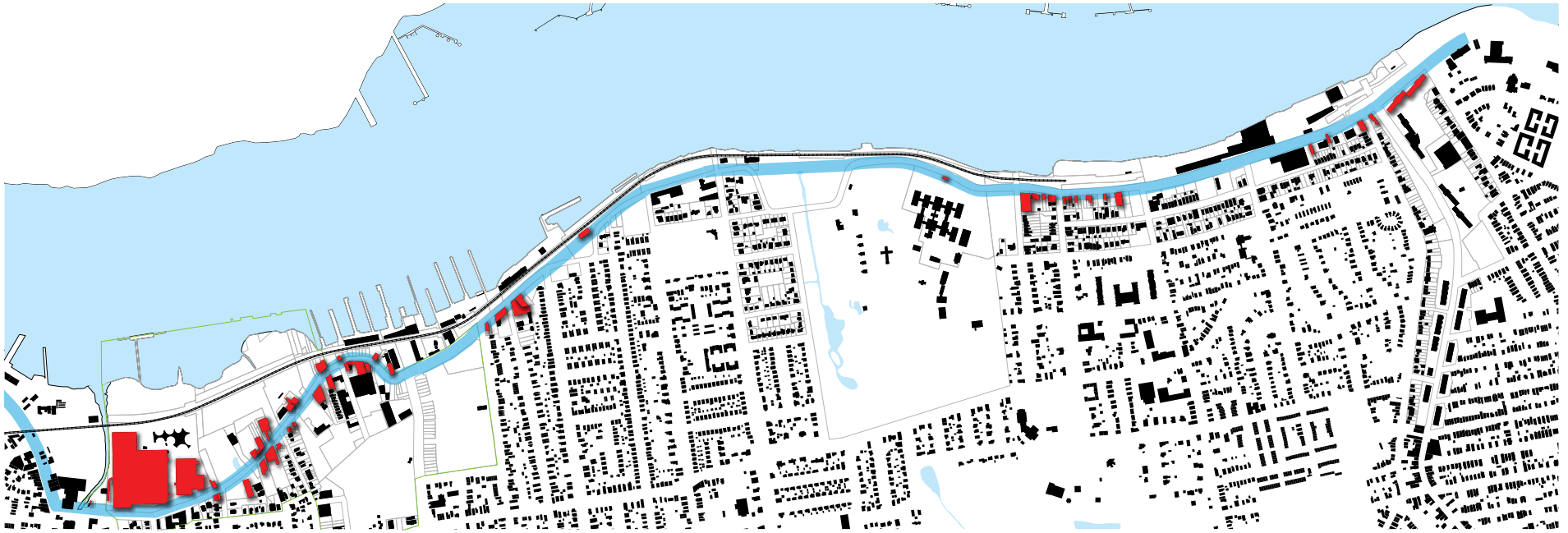
Scenario 1 H-HH





Scenario 2 B-BB



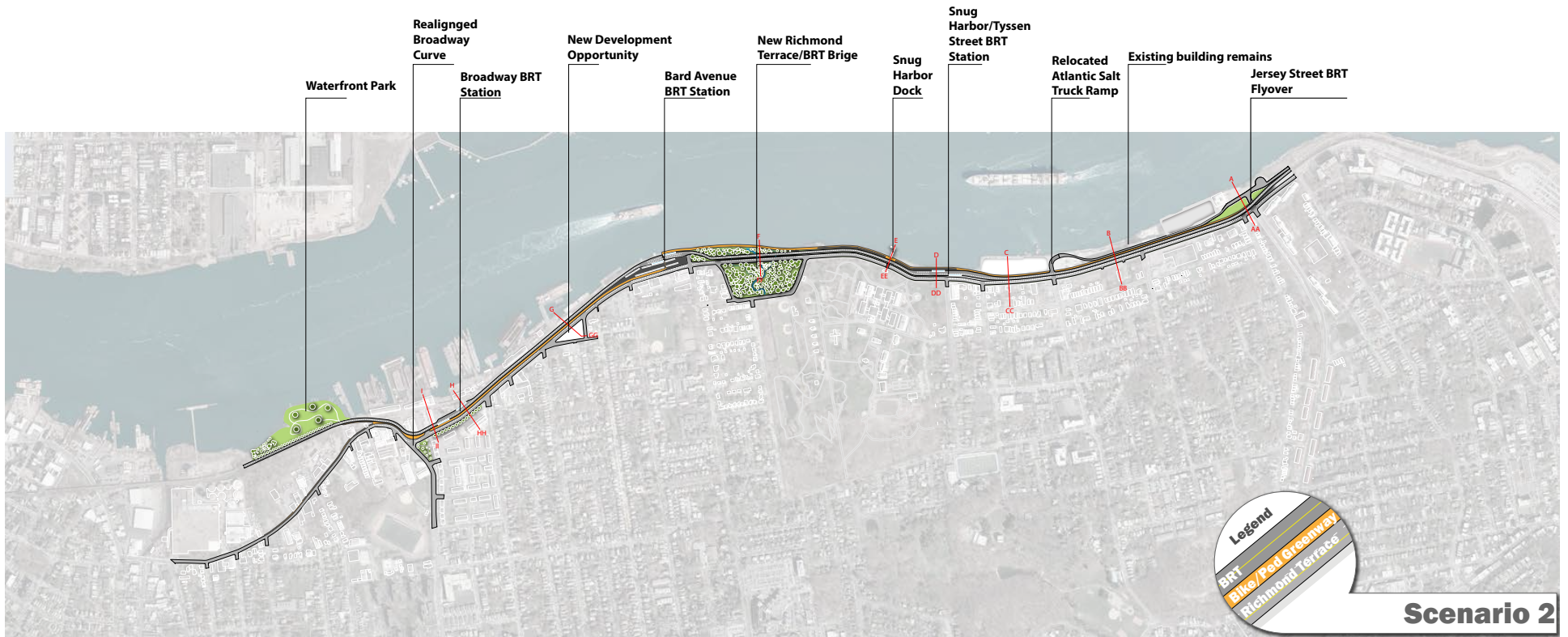


North Shore

Transportation Workshop

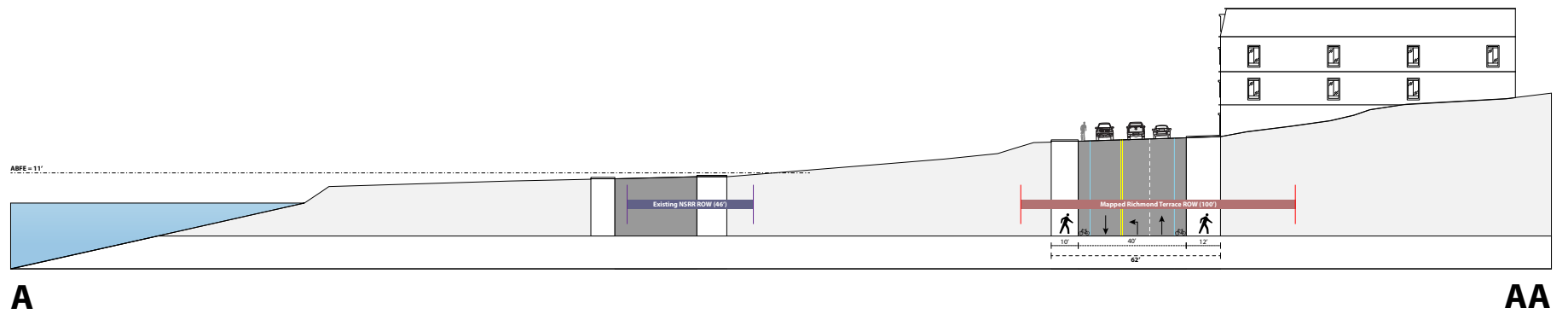
Scenario 2

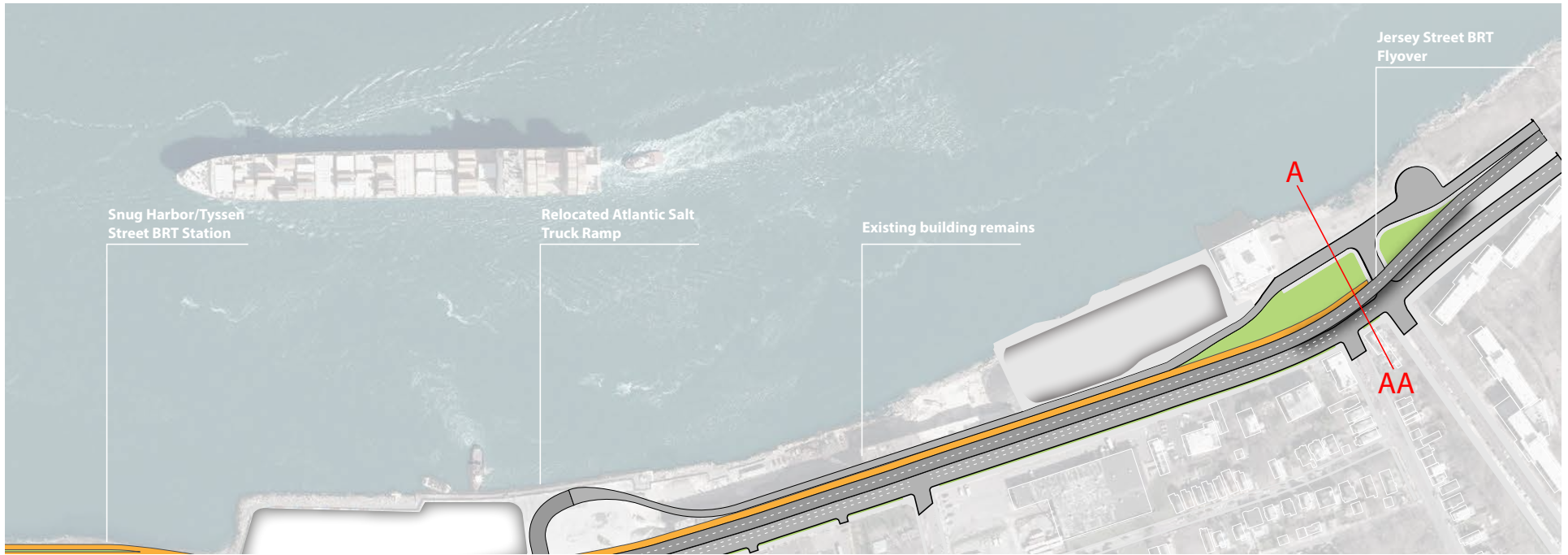




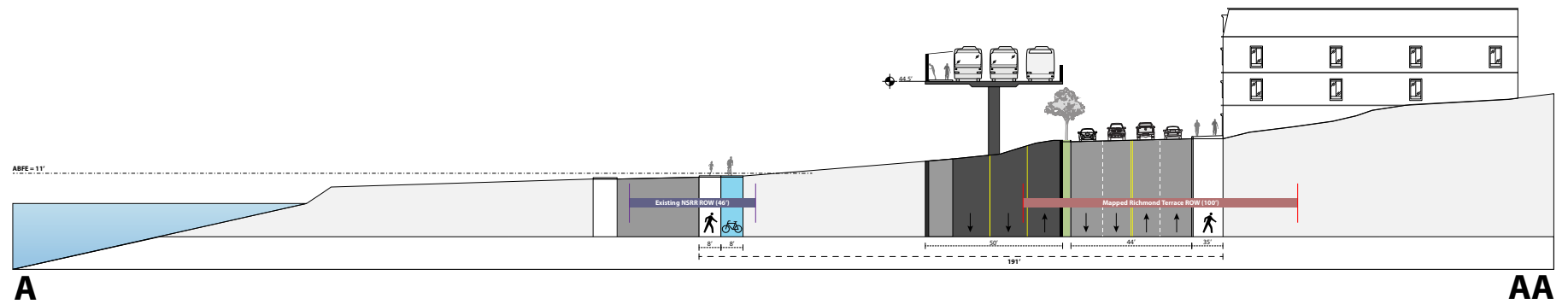


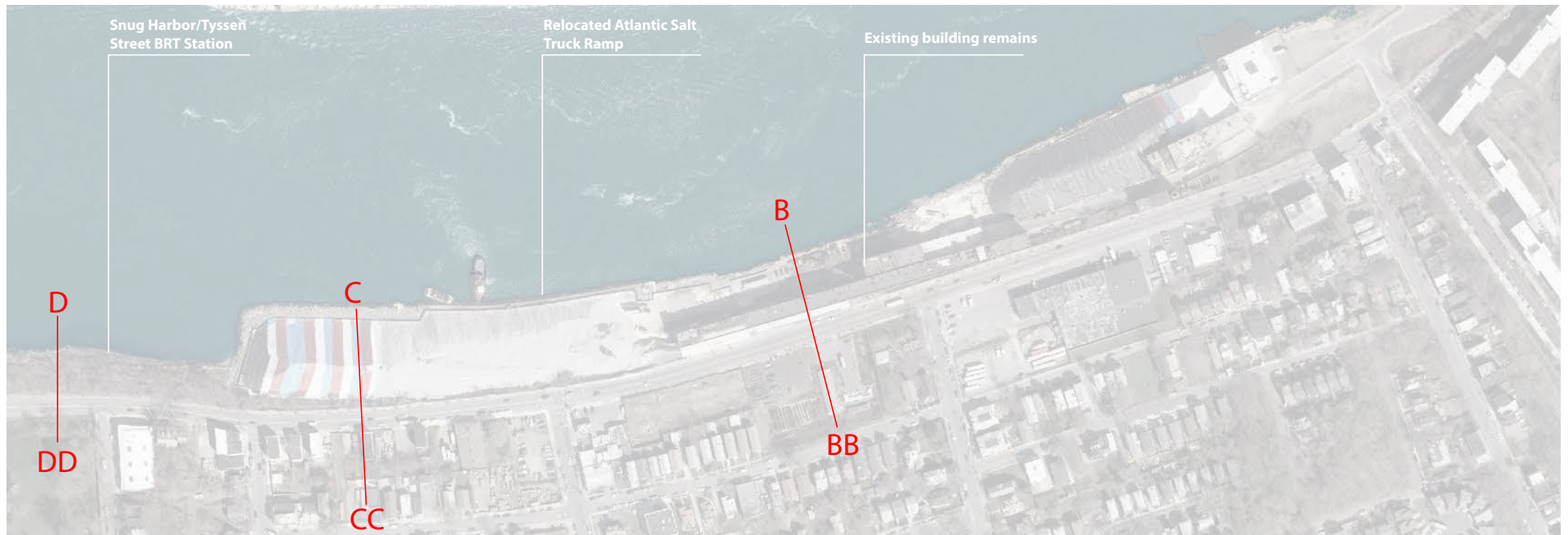
Existing Section A-AA



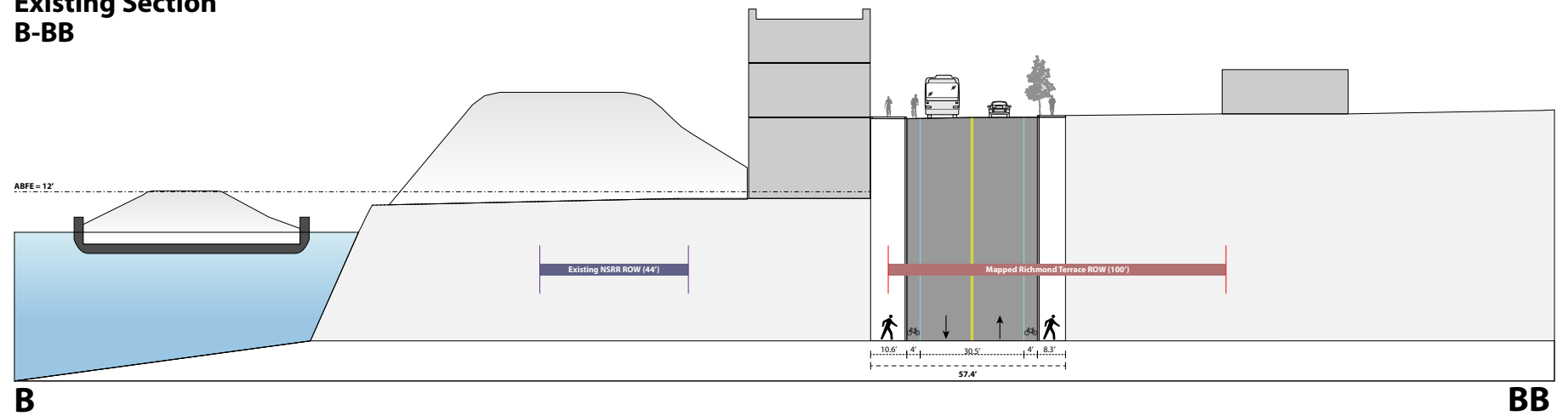


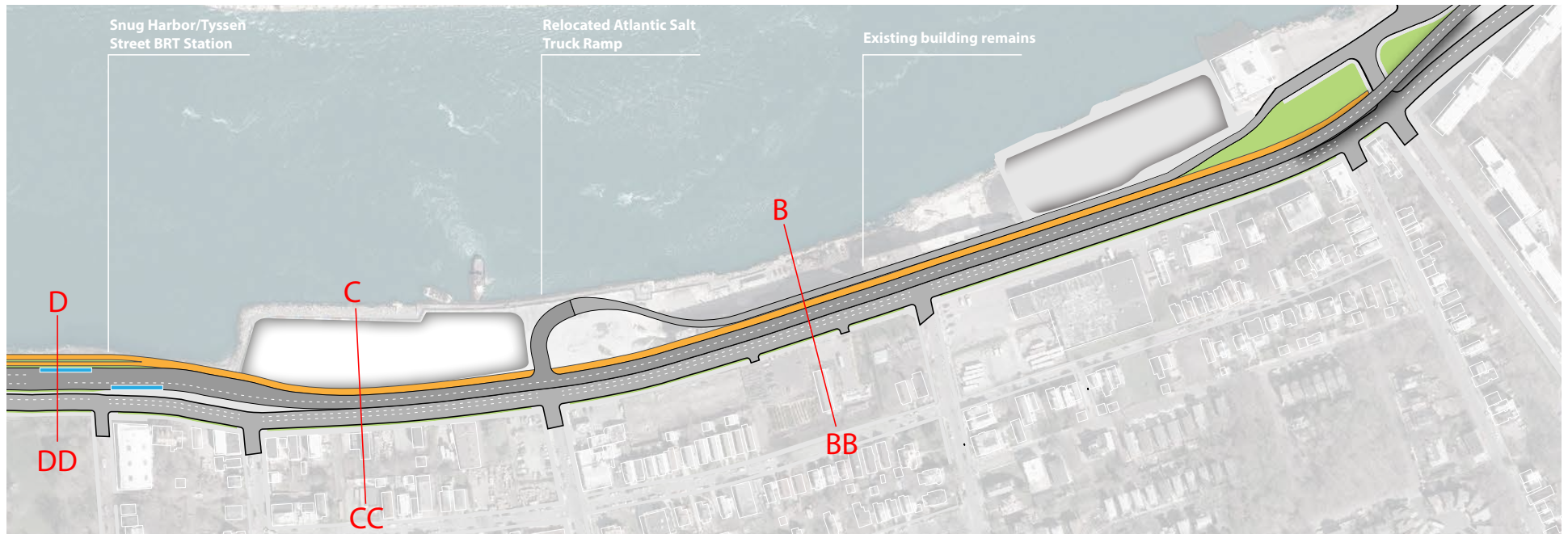
Scenario 2 A-AA



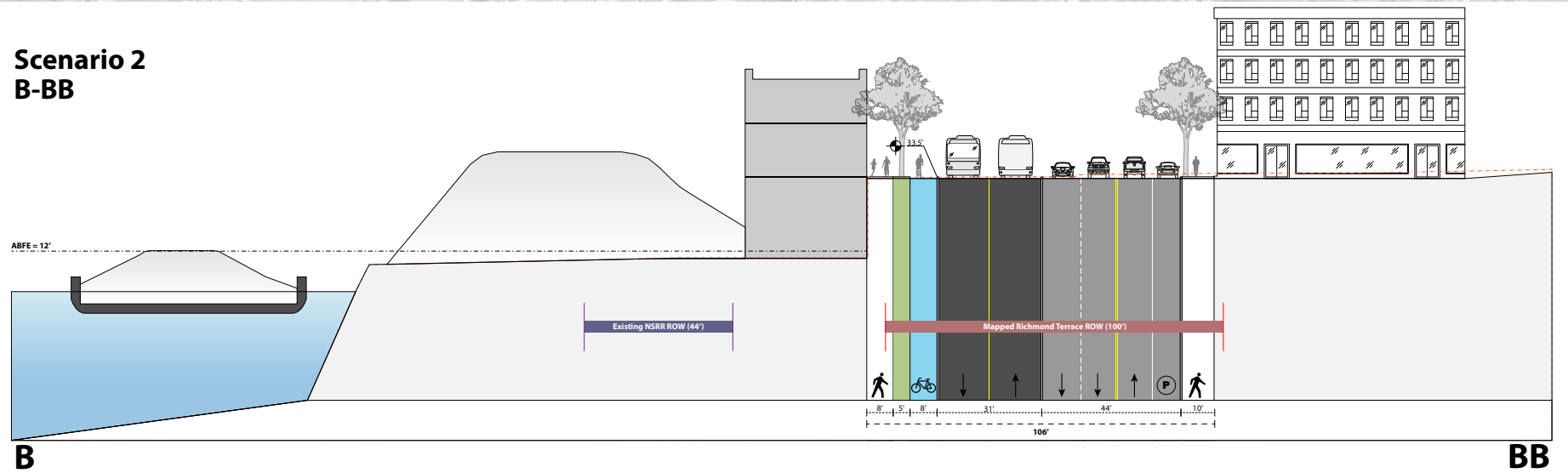


Existing Section B-BB



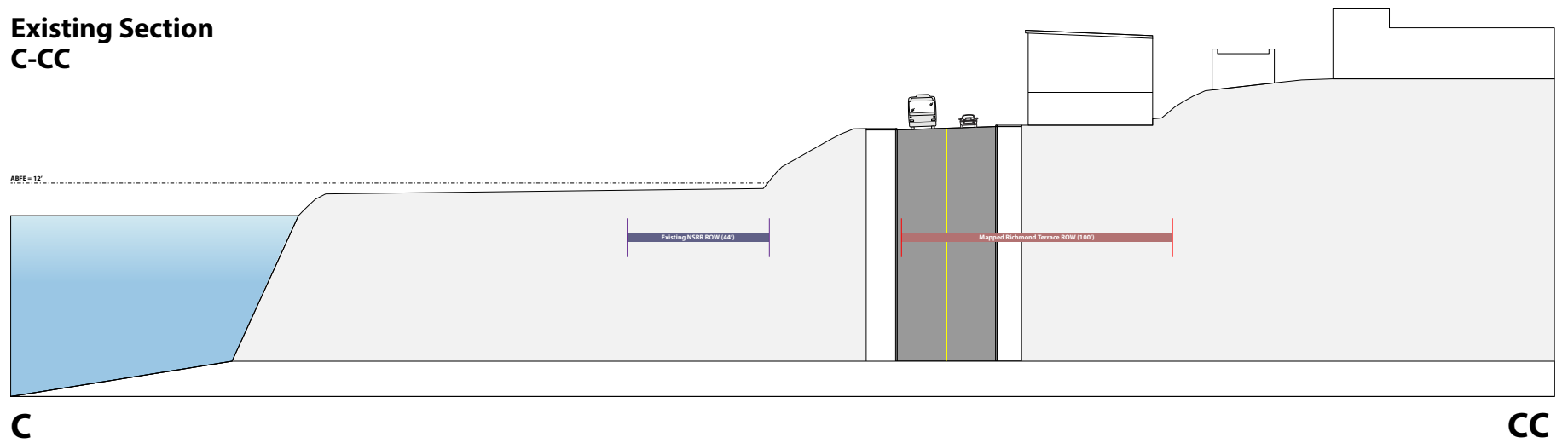


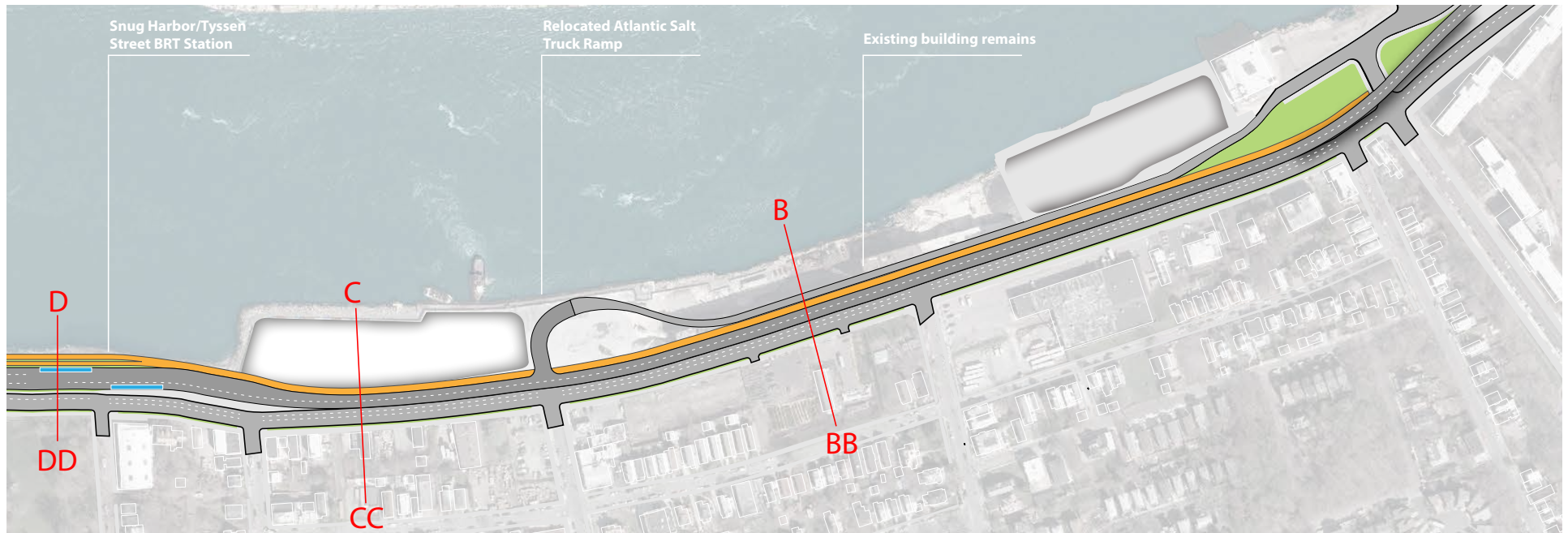
Scenario 2 B-BB



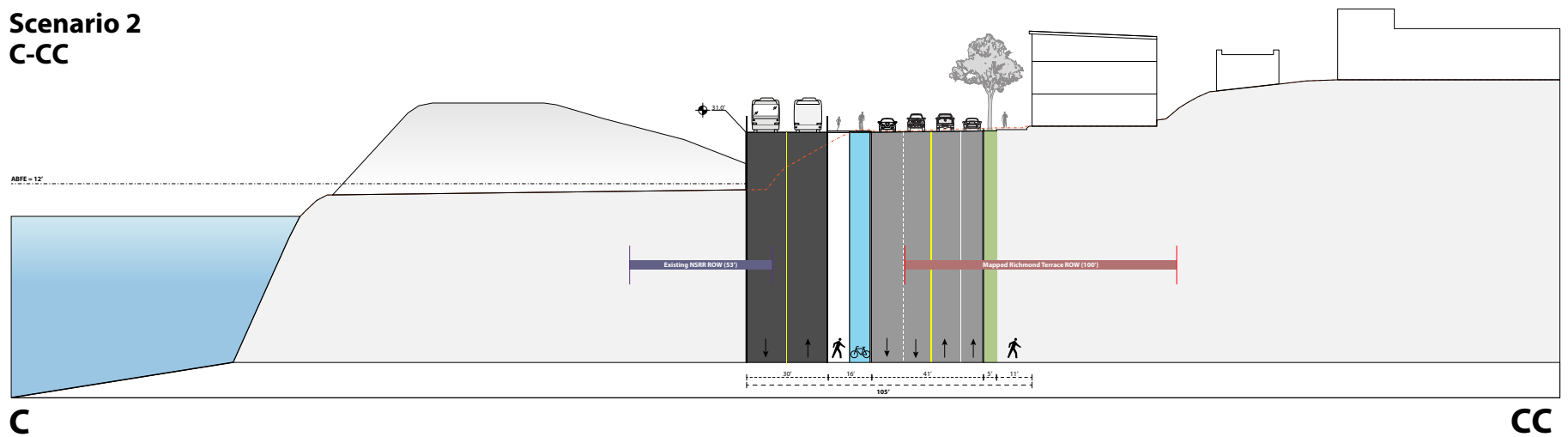


Existing Section C-CC





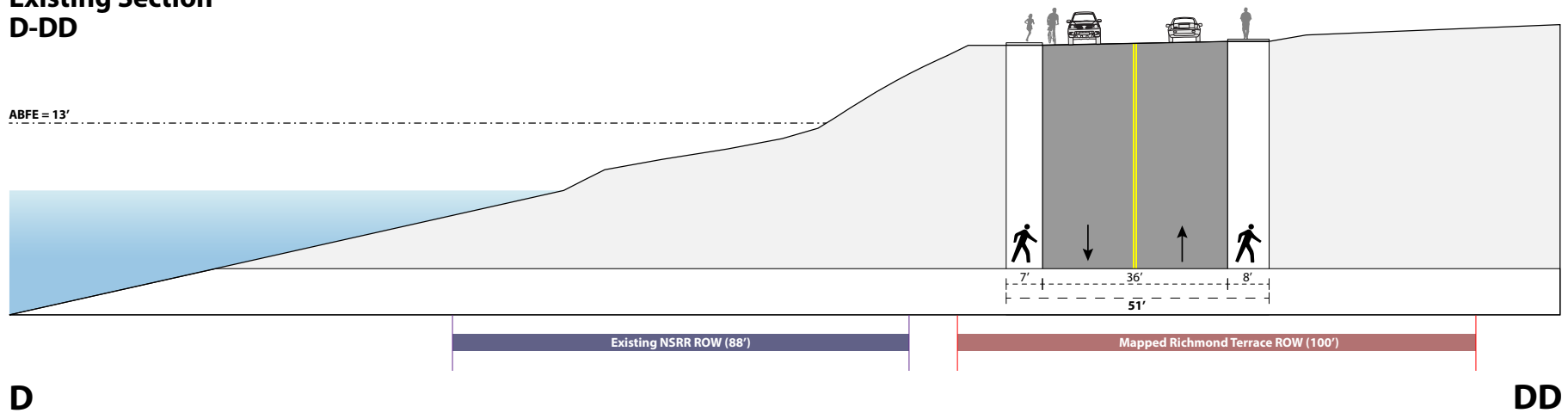
Scenario 2 C-CC

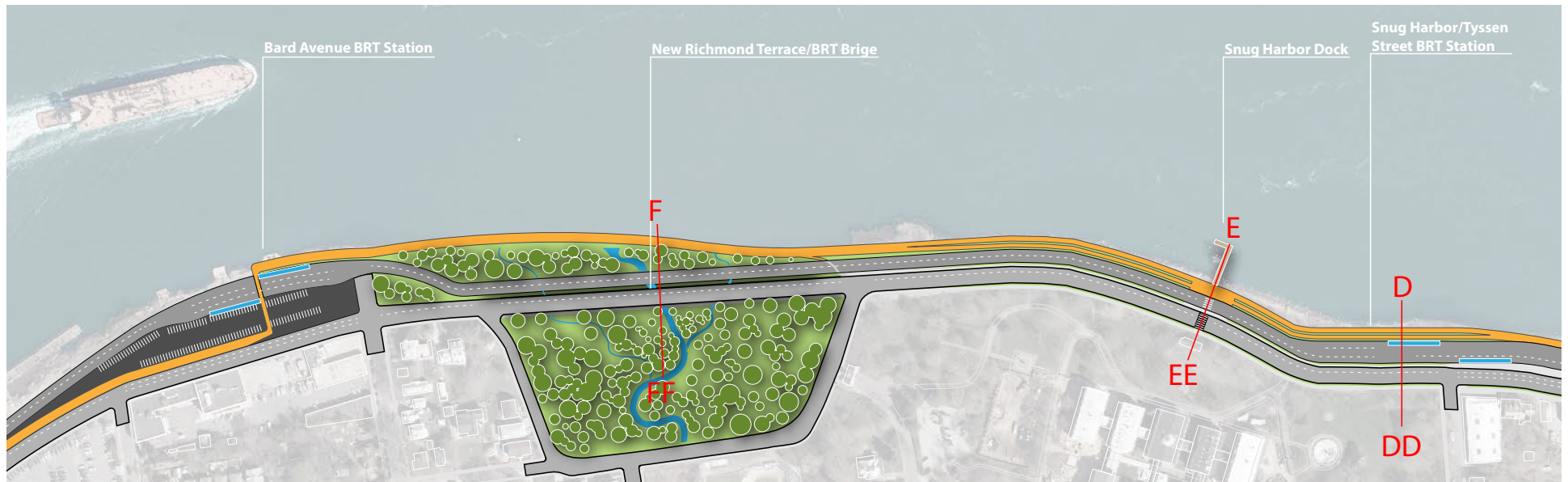




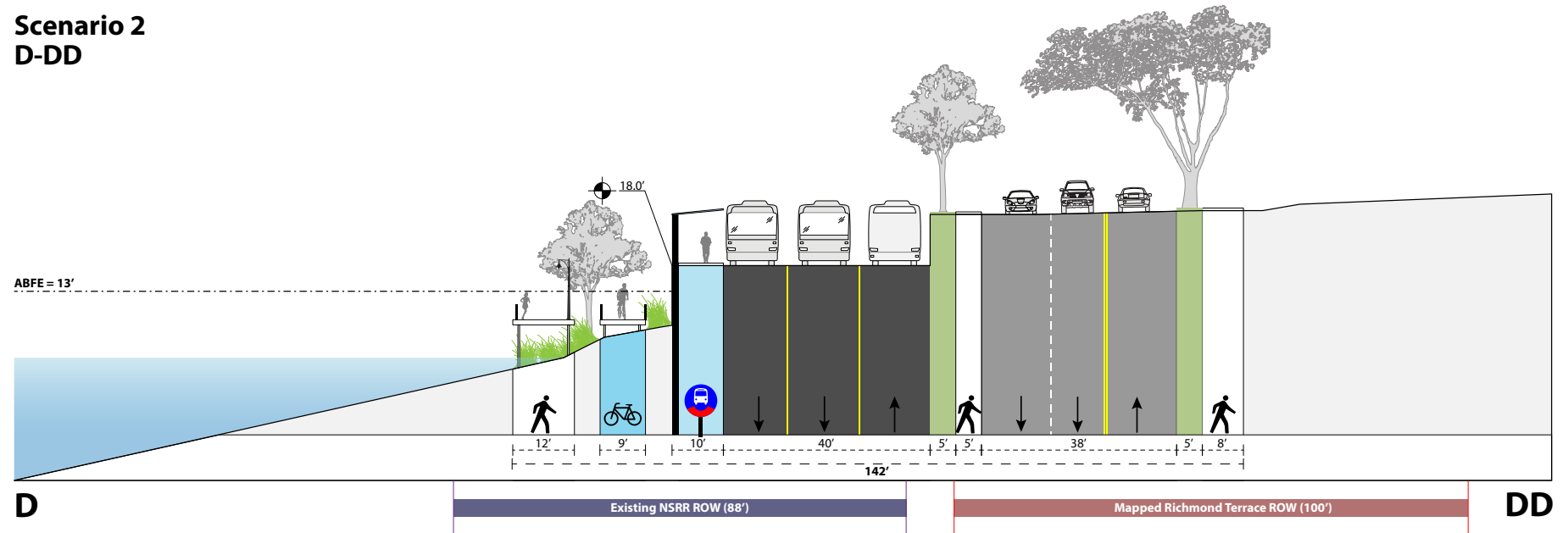
Existing Section D-DD

ABFE = 13'



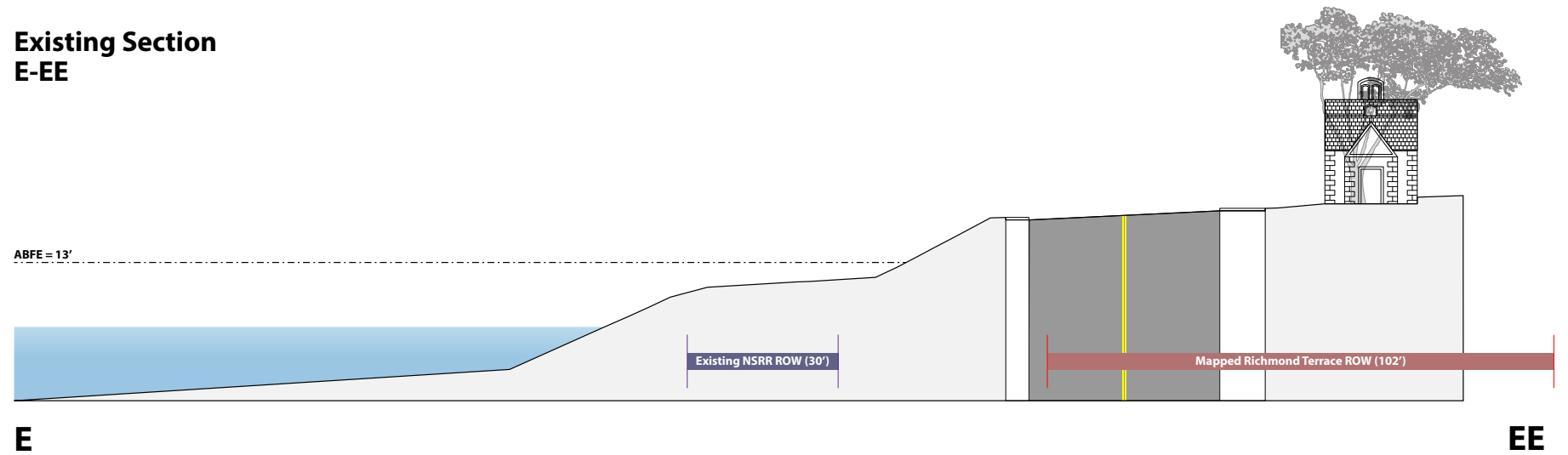


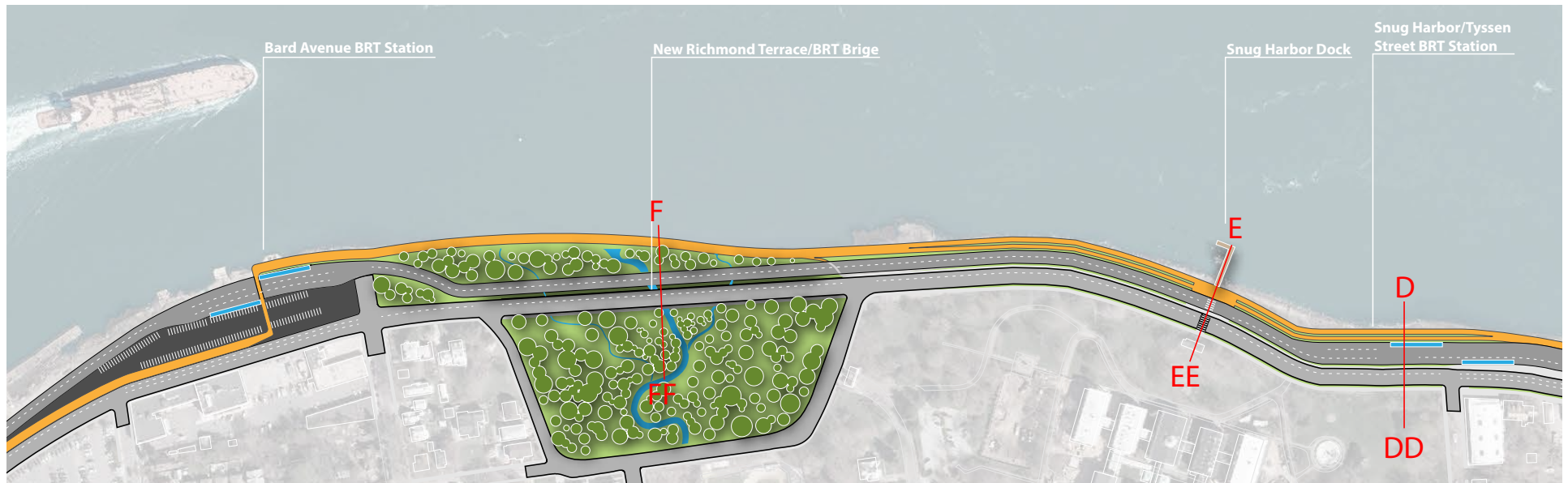
Scenario 2 D-DD



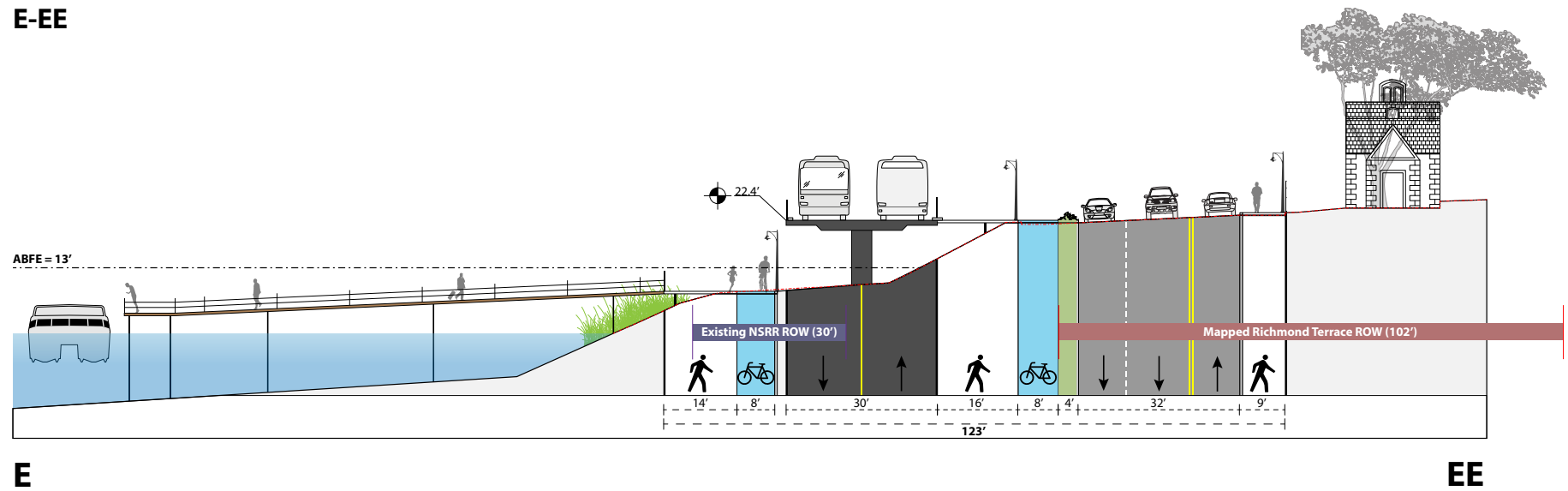


Existing Section E-EE



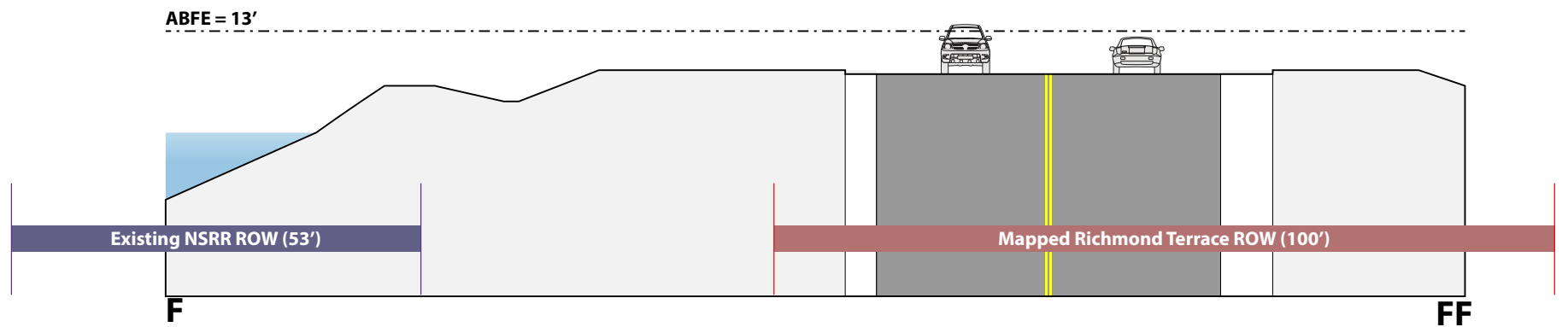


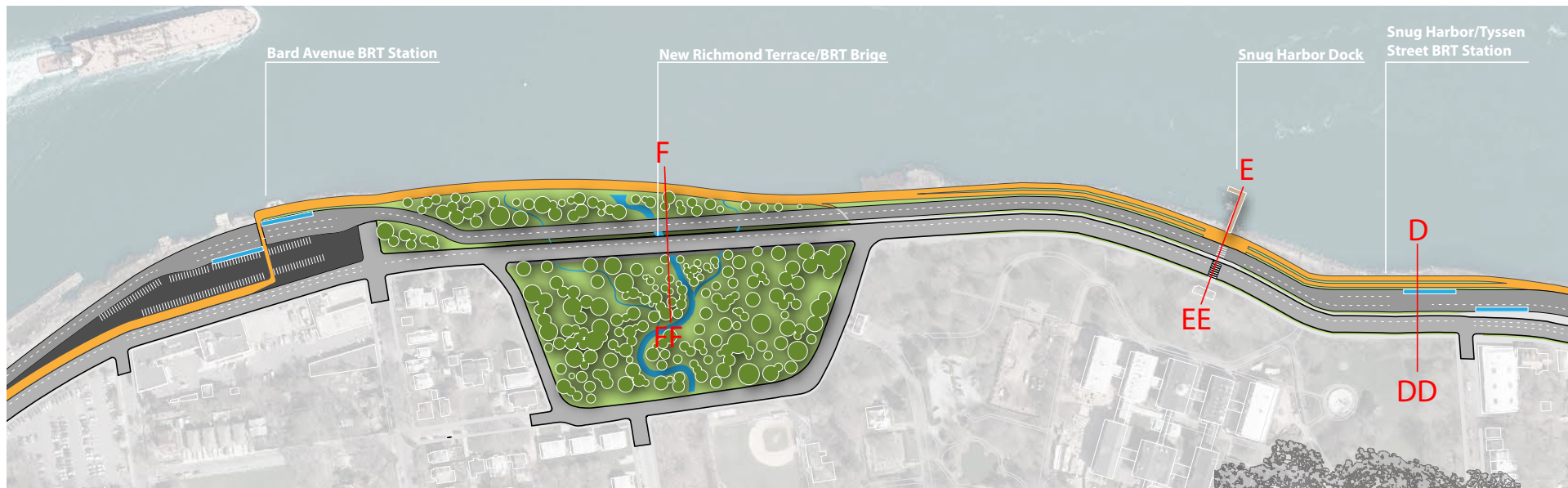
Scenario 2 E-EE



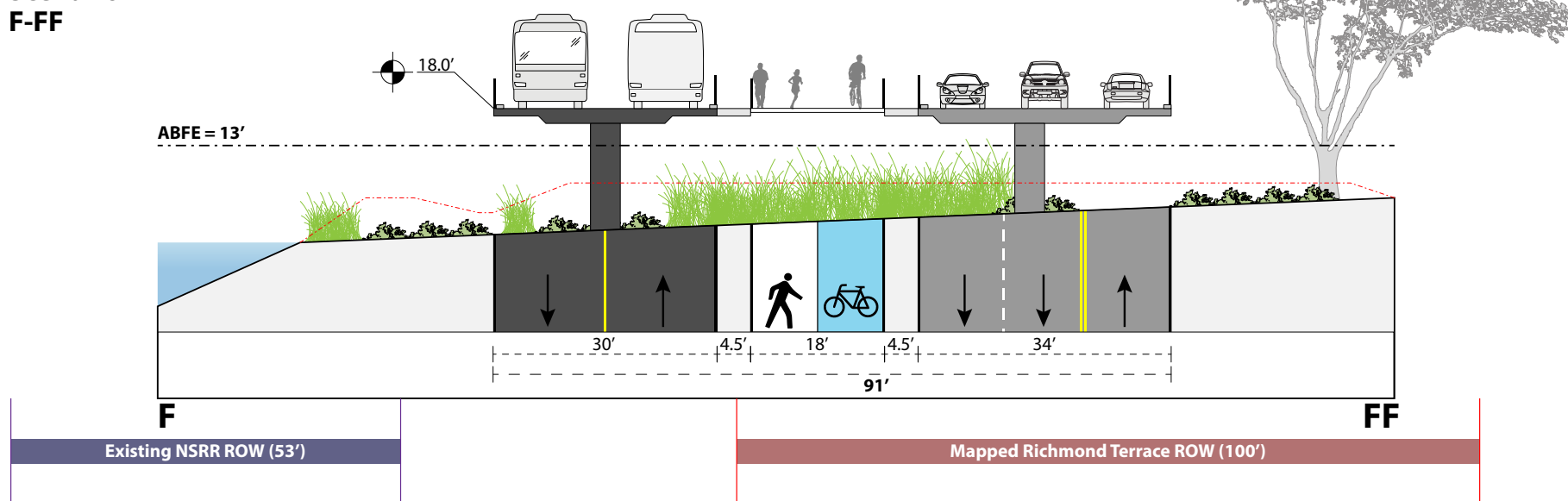


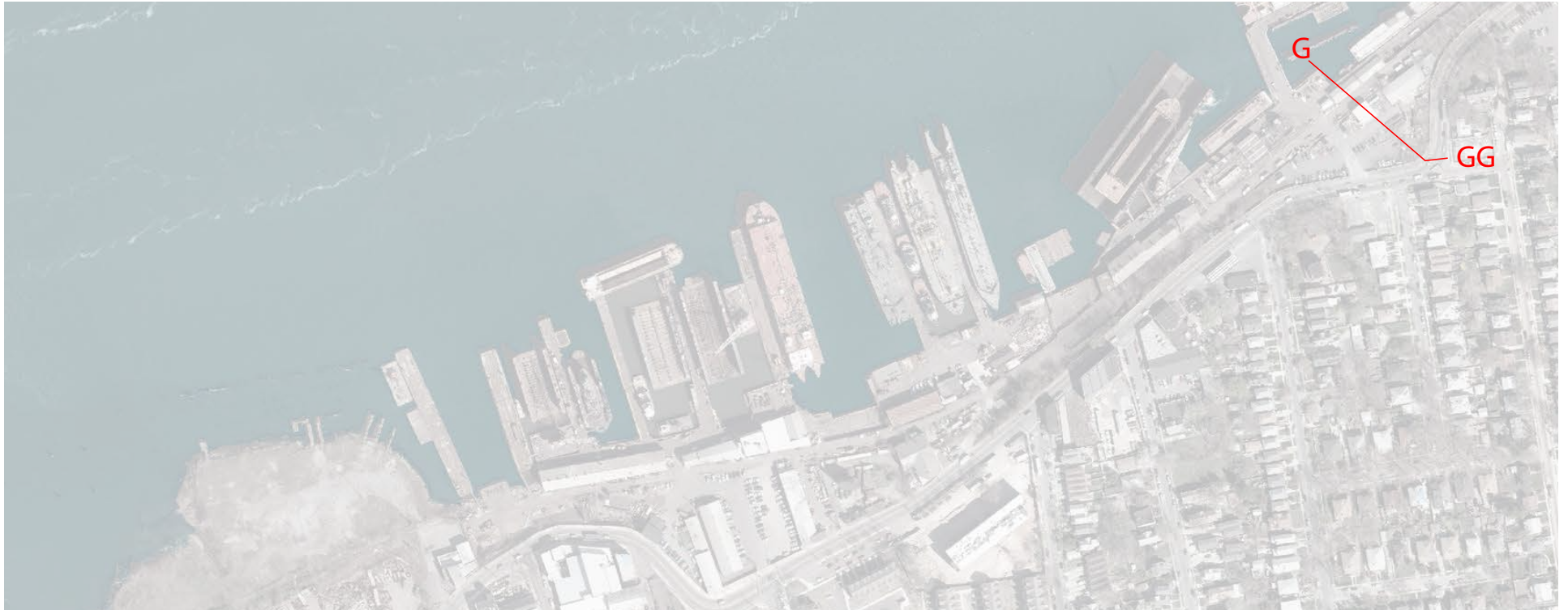
Existing Section F-FF





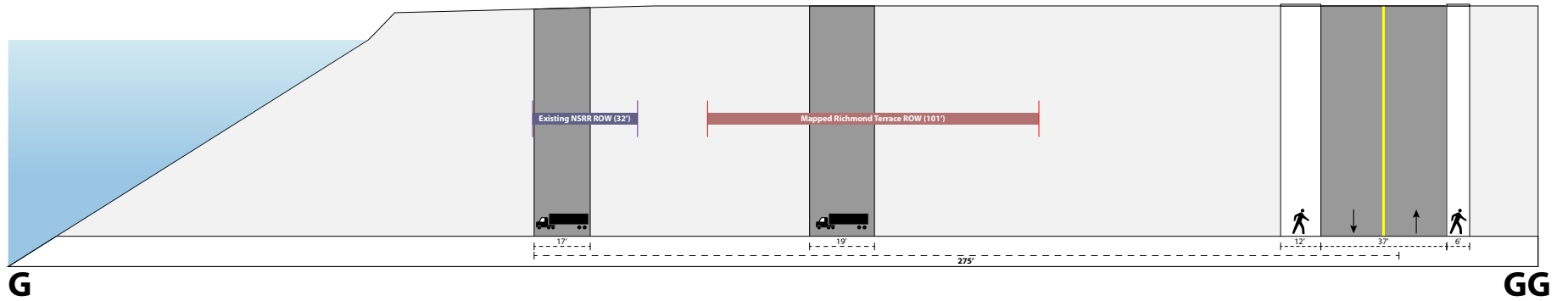
Scenario 2 F-FF

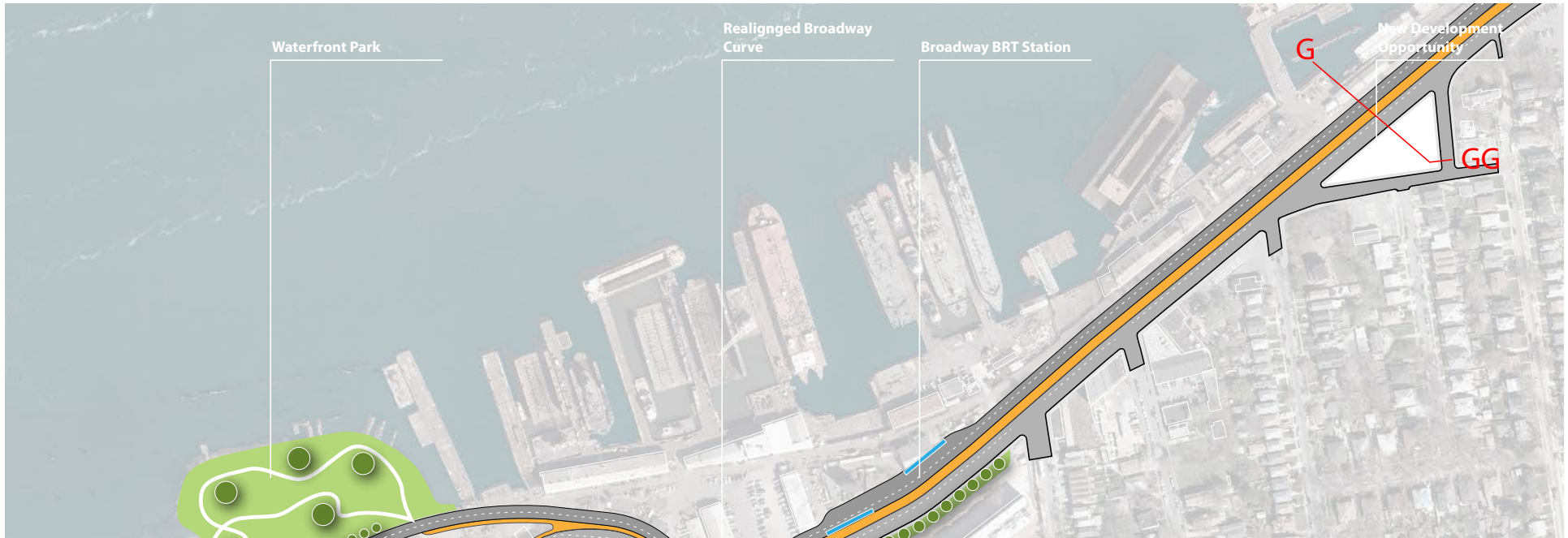




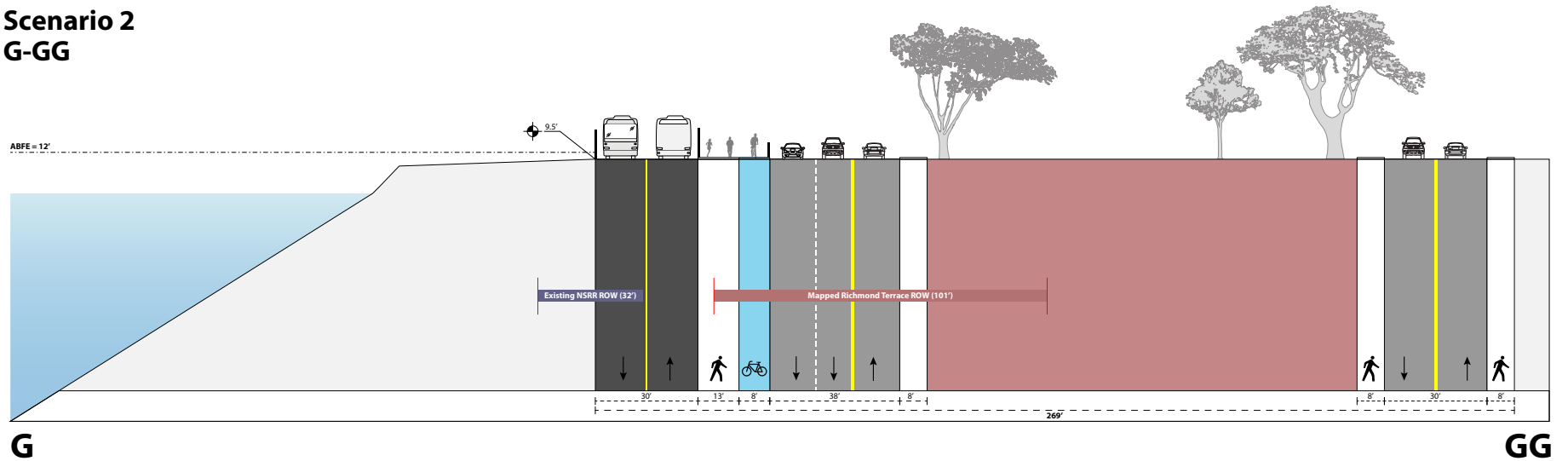
Existing Section G-GG

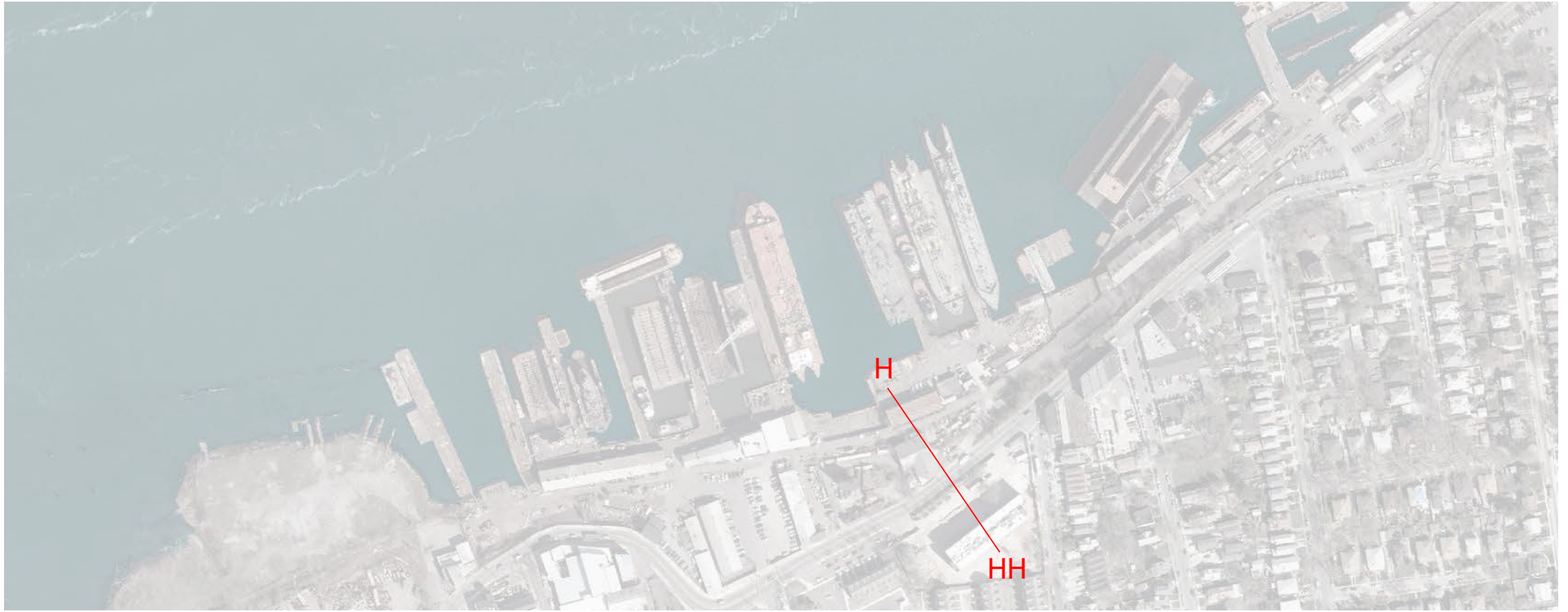
ABFE = 12'



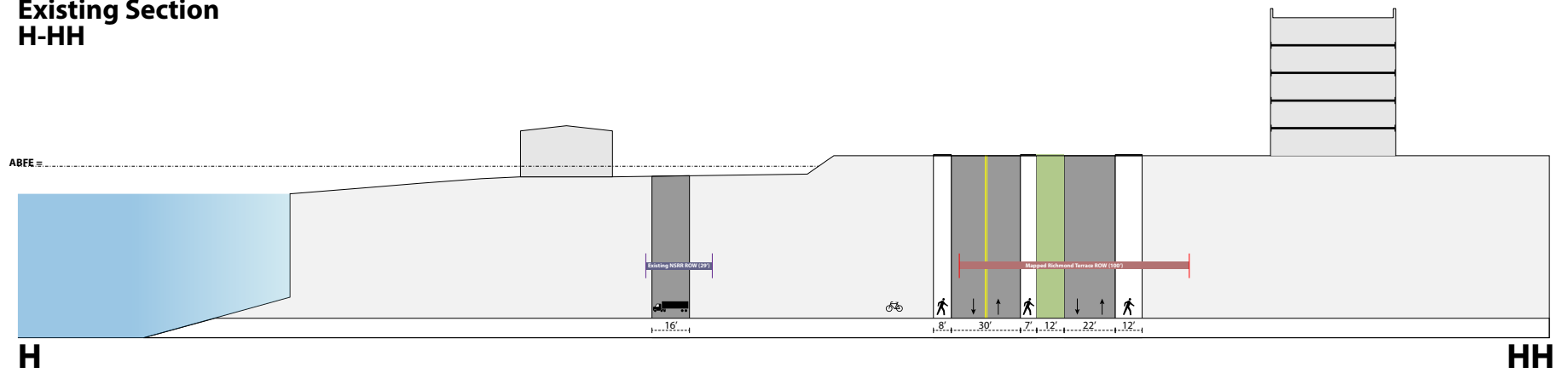


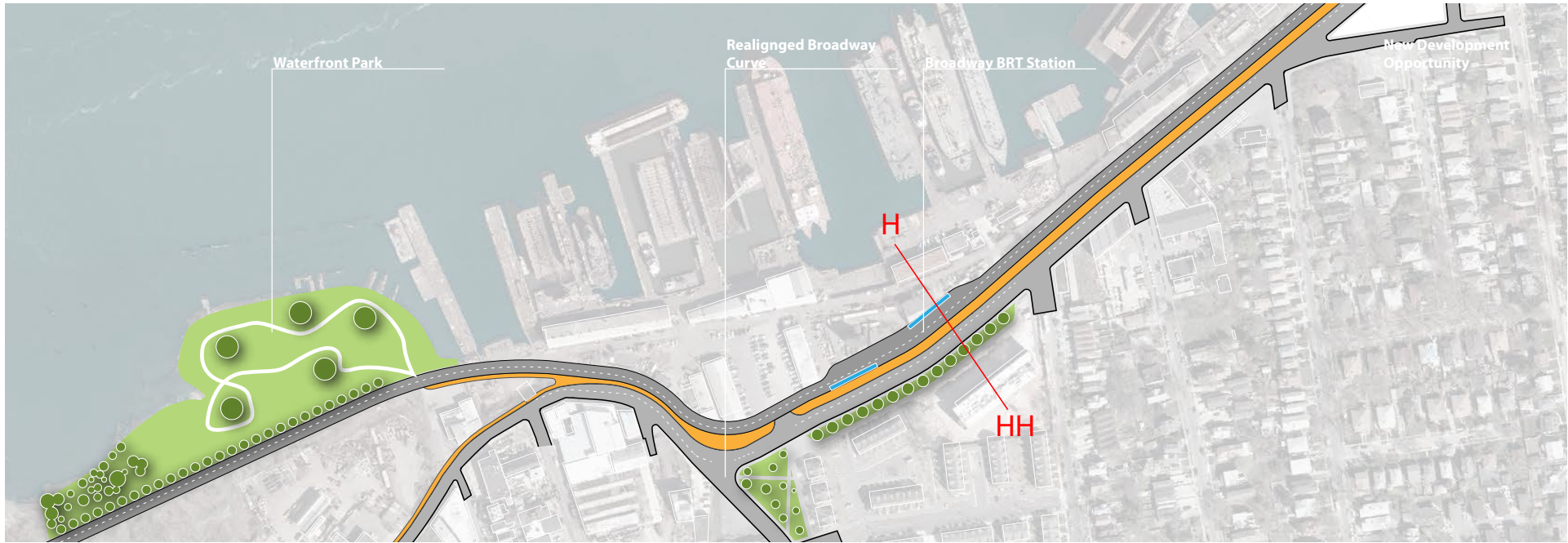
Scenario 2 G-GG



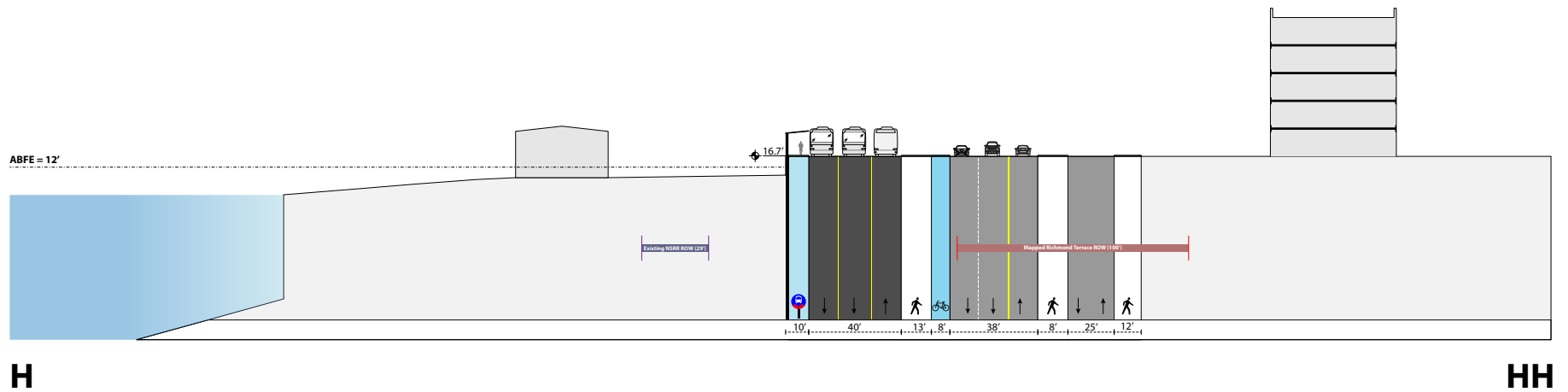


**Existing Section
H-HH**



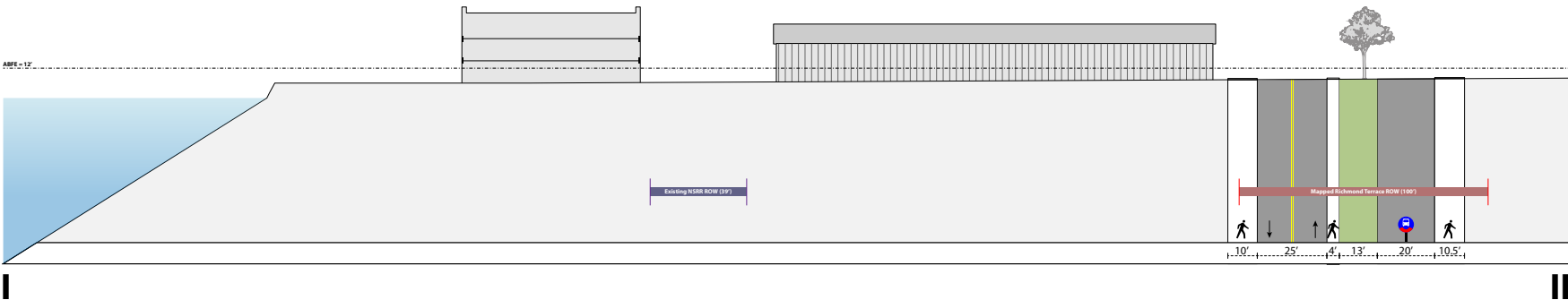


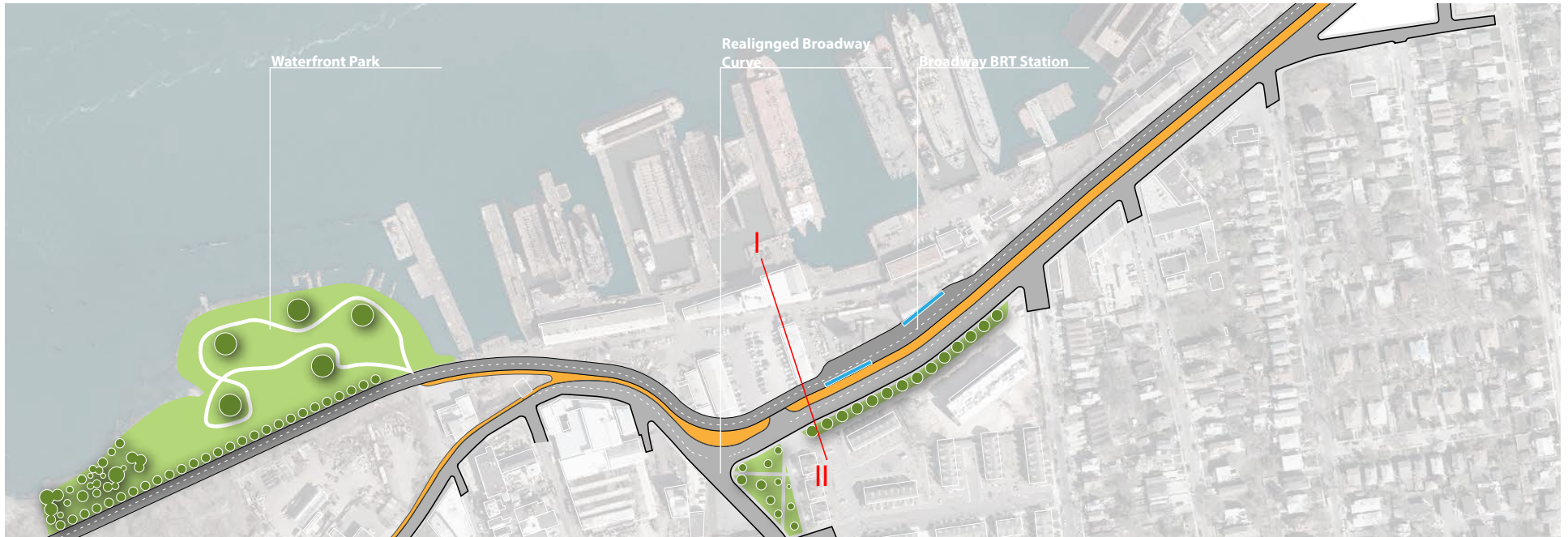
**Scenario 2
H-HH**



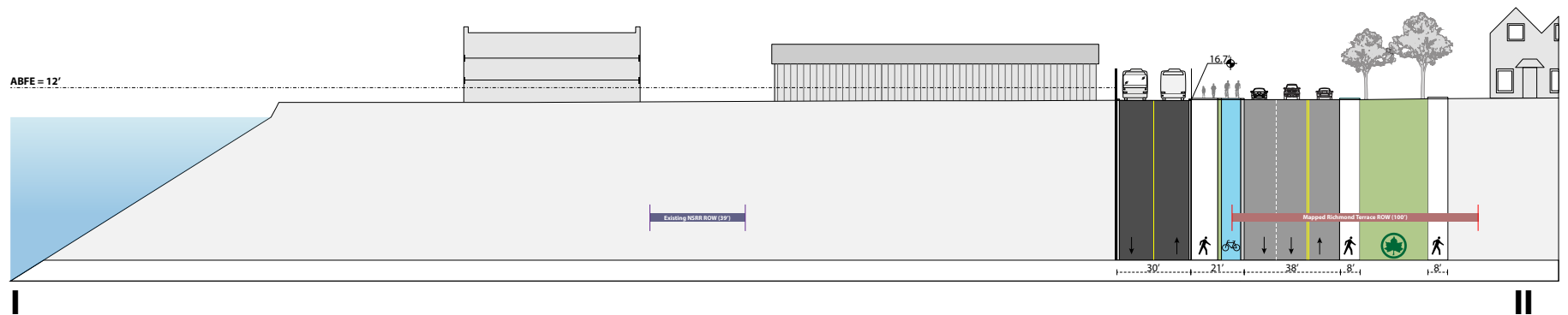


**Existing Section
I-II**





Scenario 2 I-II



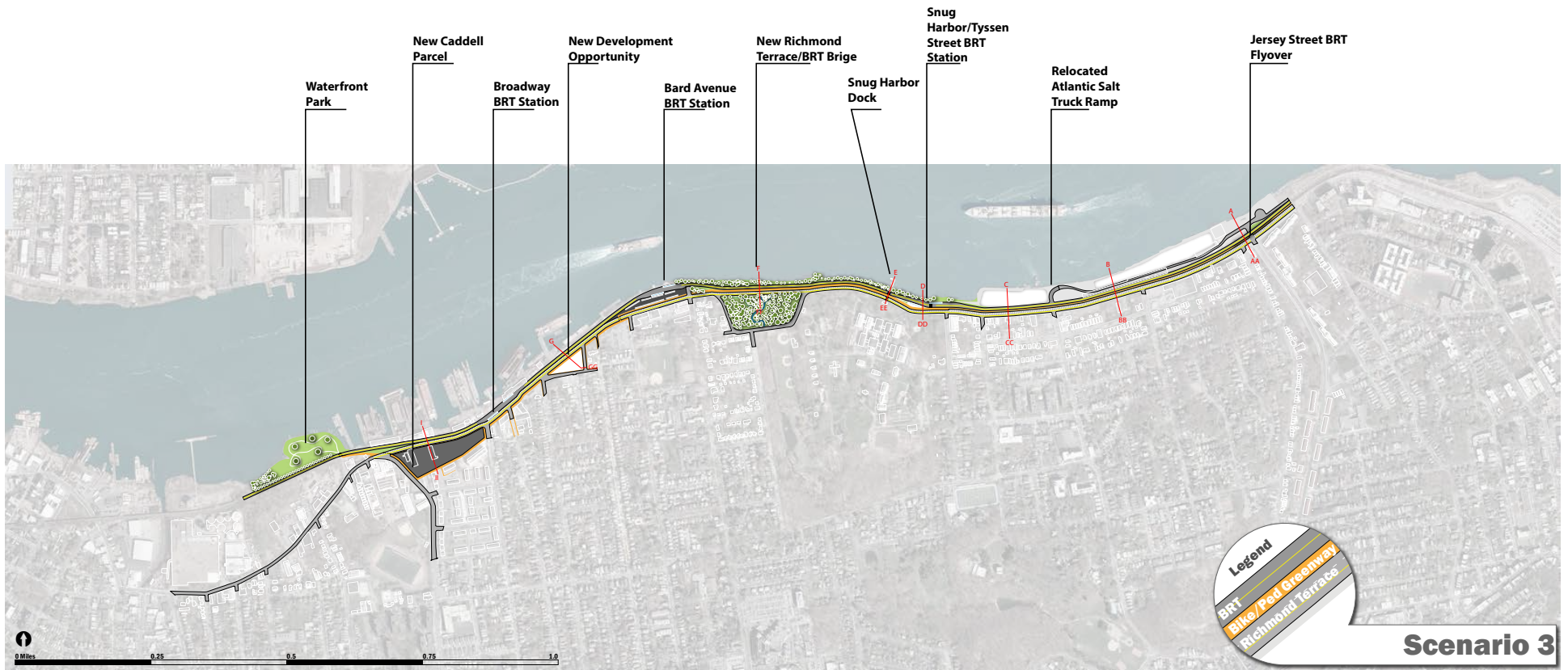


North Shore

Transportation Workshop

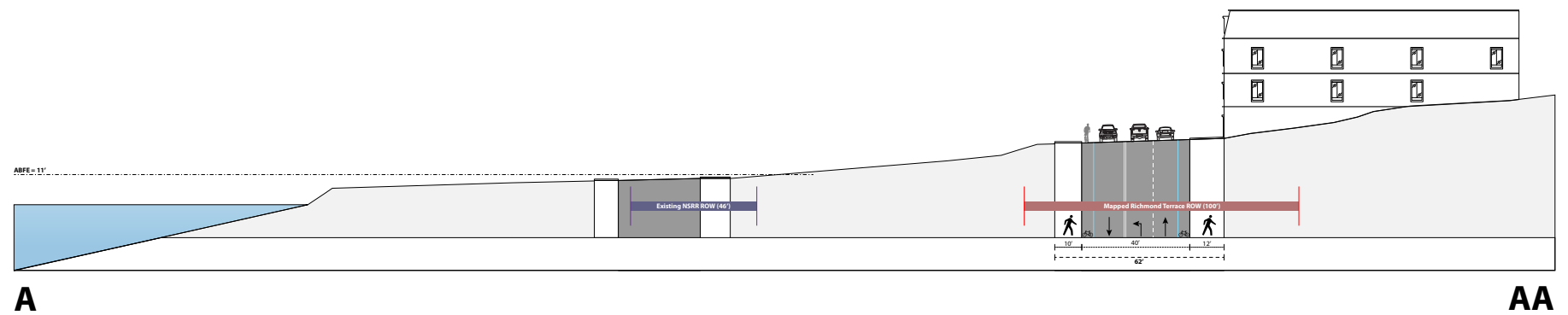
Scenario 3

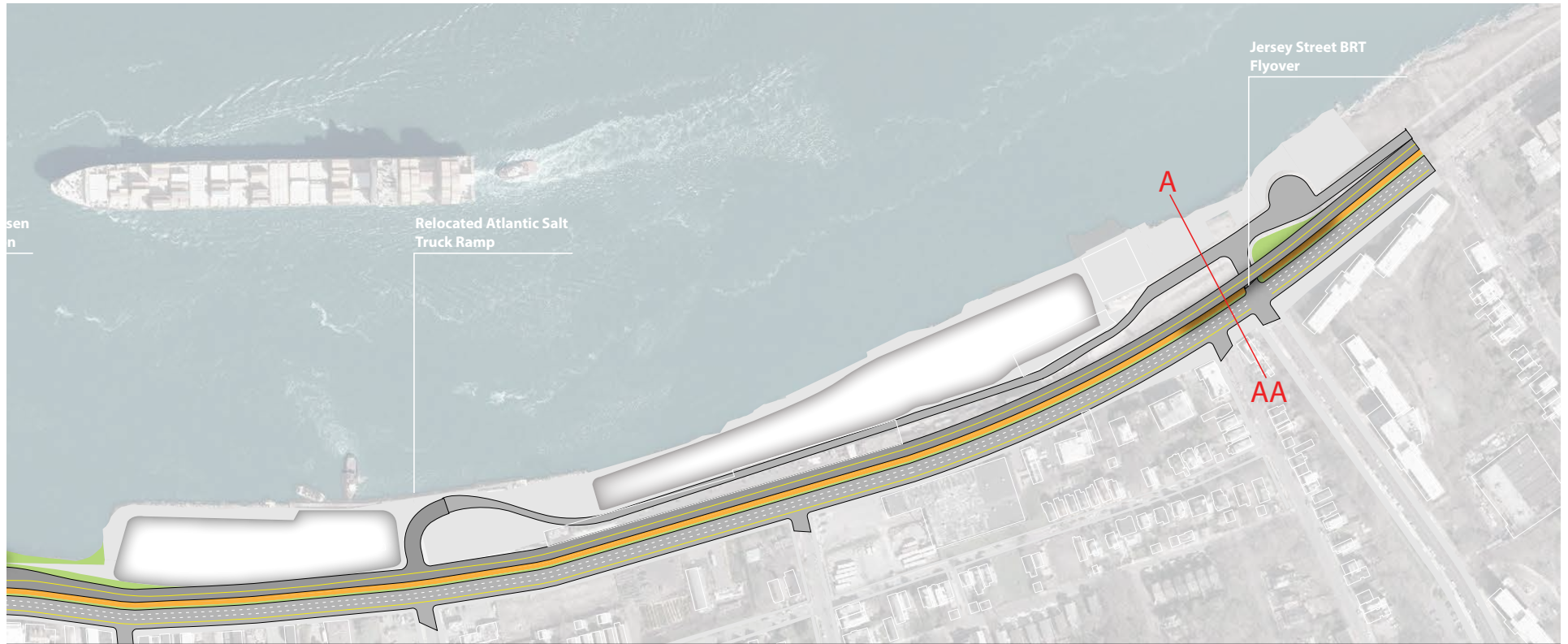




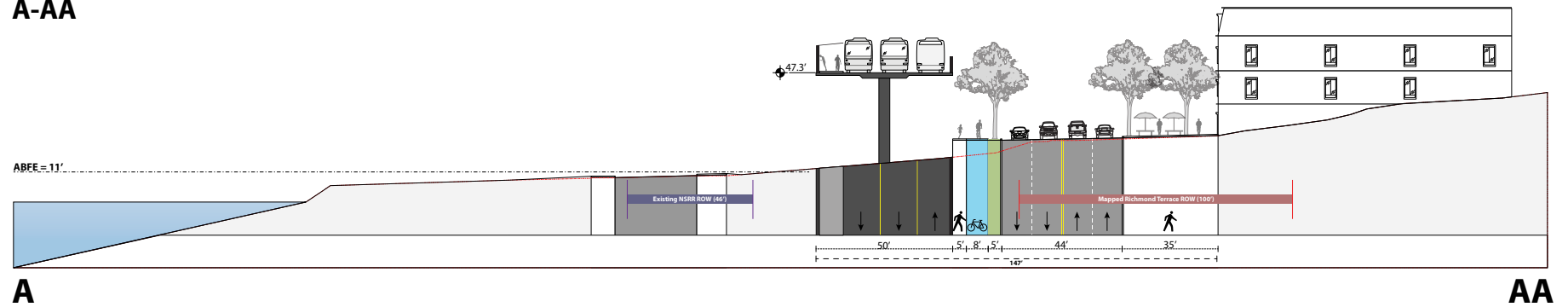


**Existing Section
A-AA**



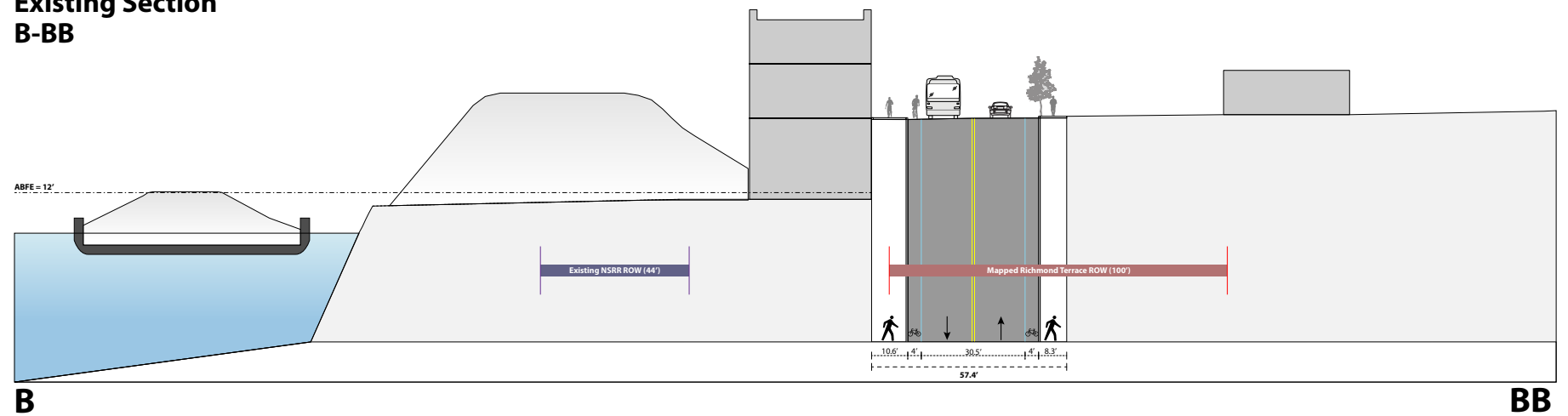


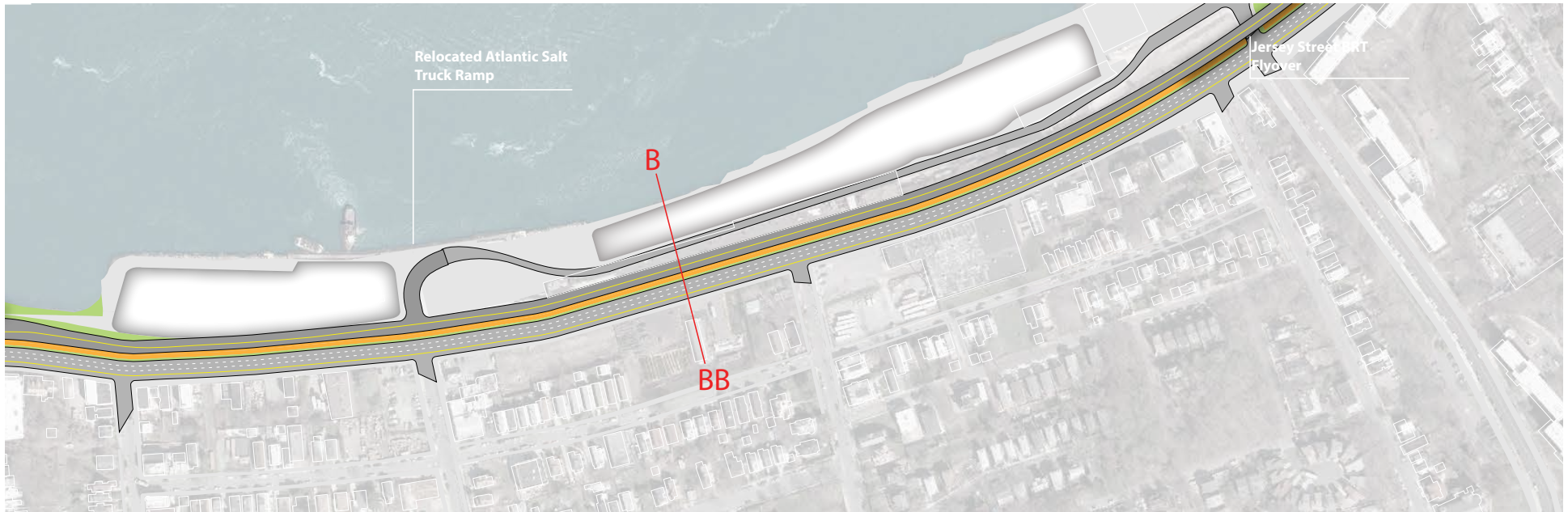
Scenario 3 A-AA



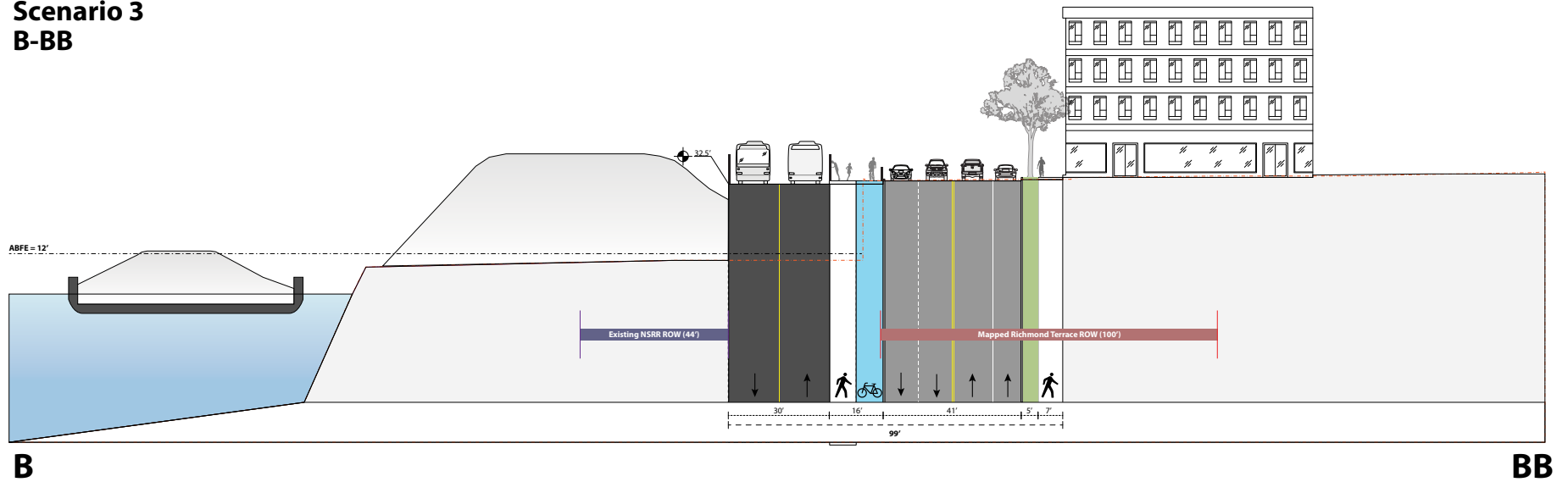


Existing Section B-BB



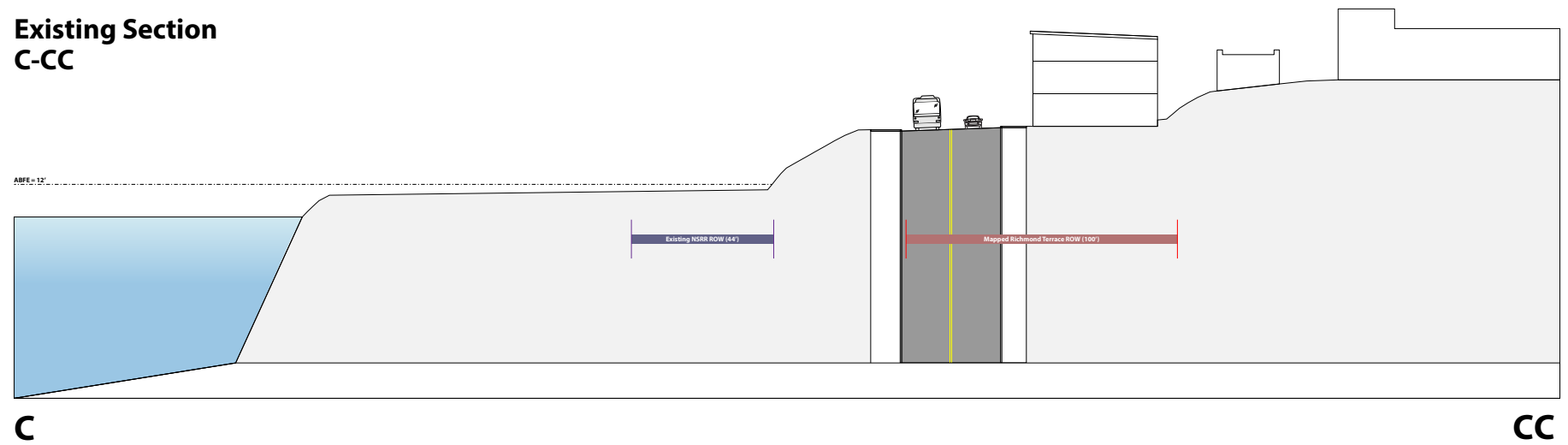


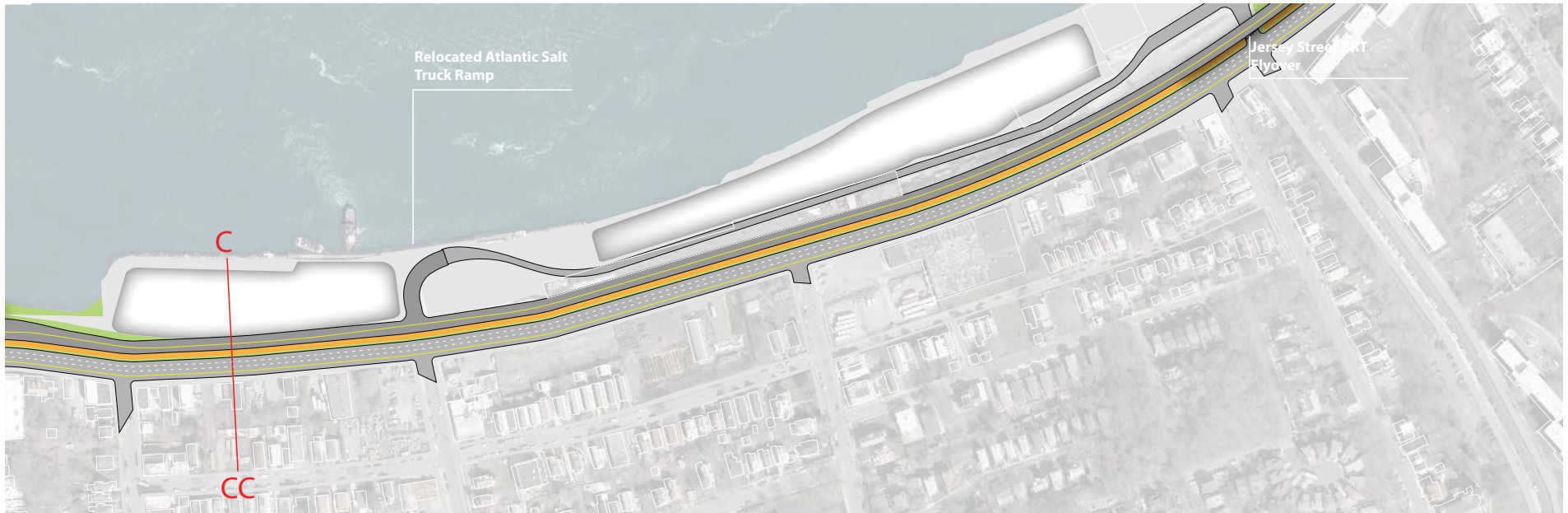
Scenario 3 B-BB



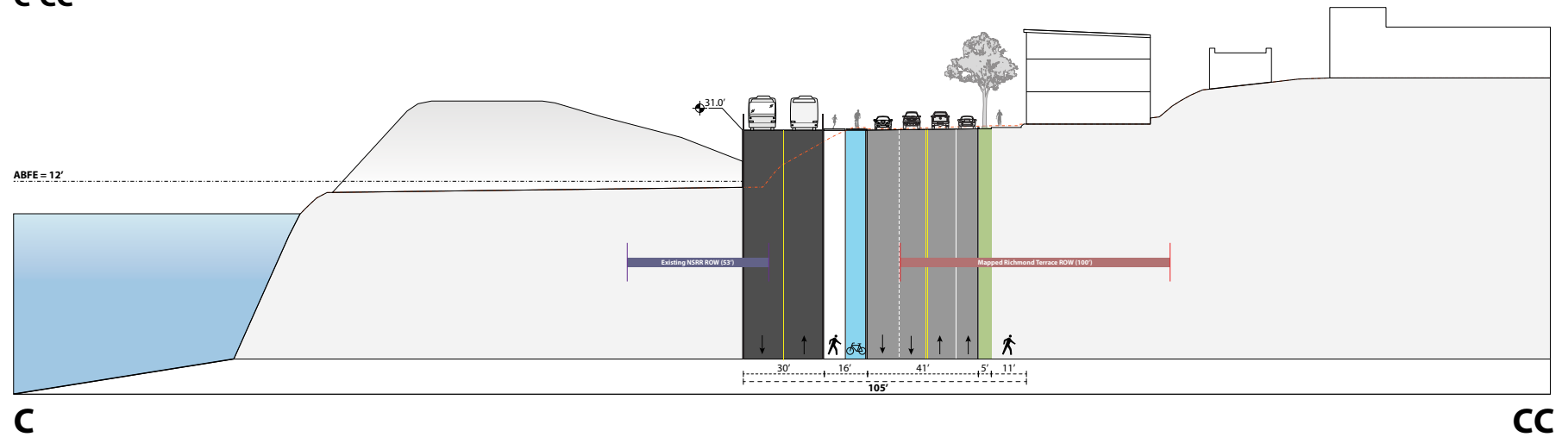


Existing Section C-CC





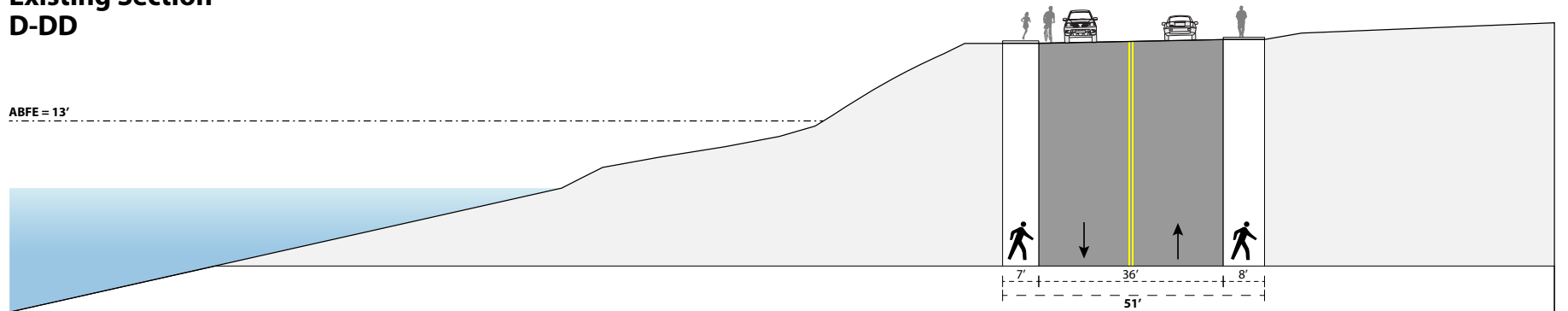
Scenario 3 C-CC





Existing Section D-DD

ABFE = 13'



Existing NSRR ROW (88')

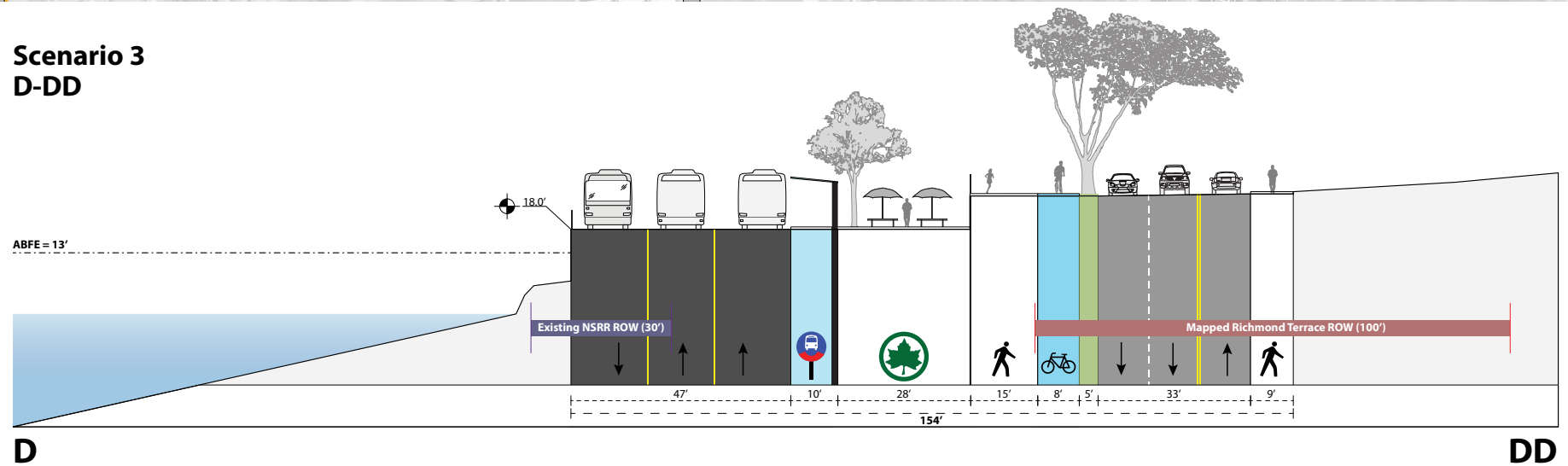
Mapped Richmond Terrace ROW (100')

D

DD

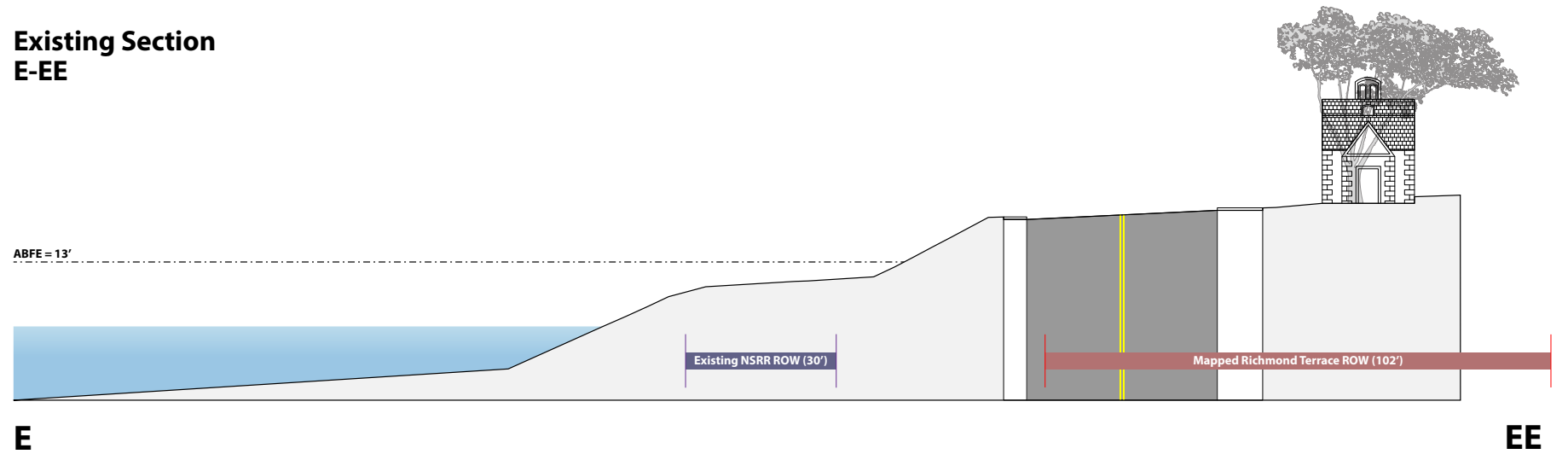


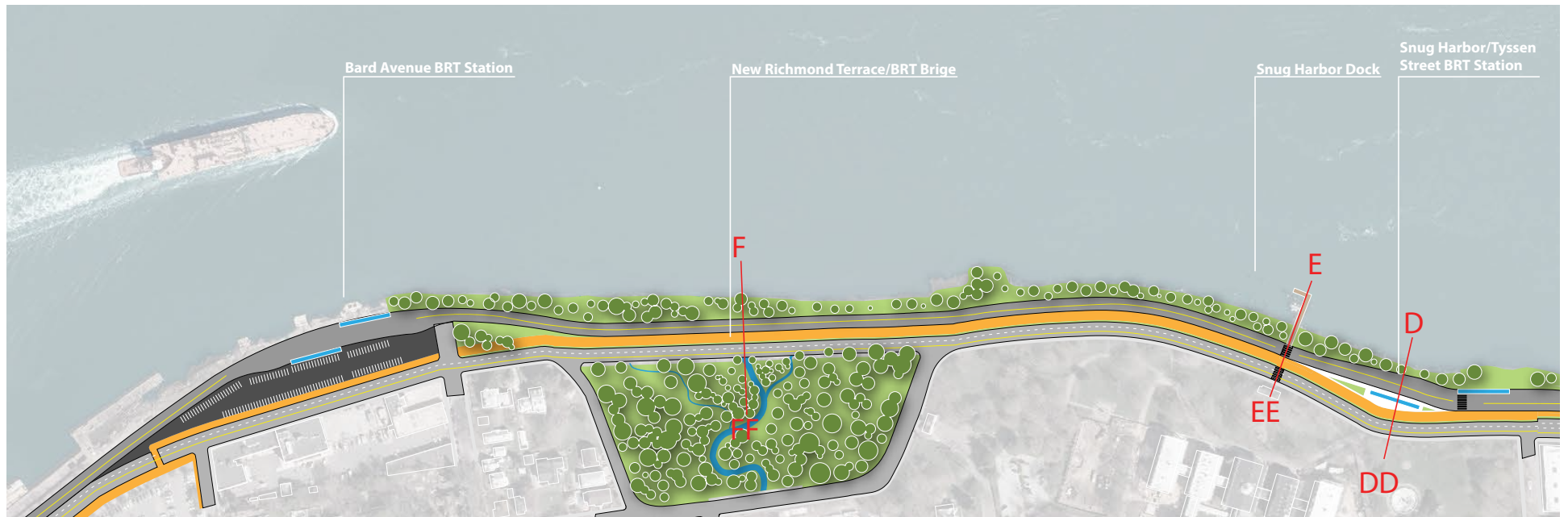
Scenario 3 D-DD



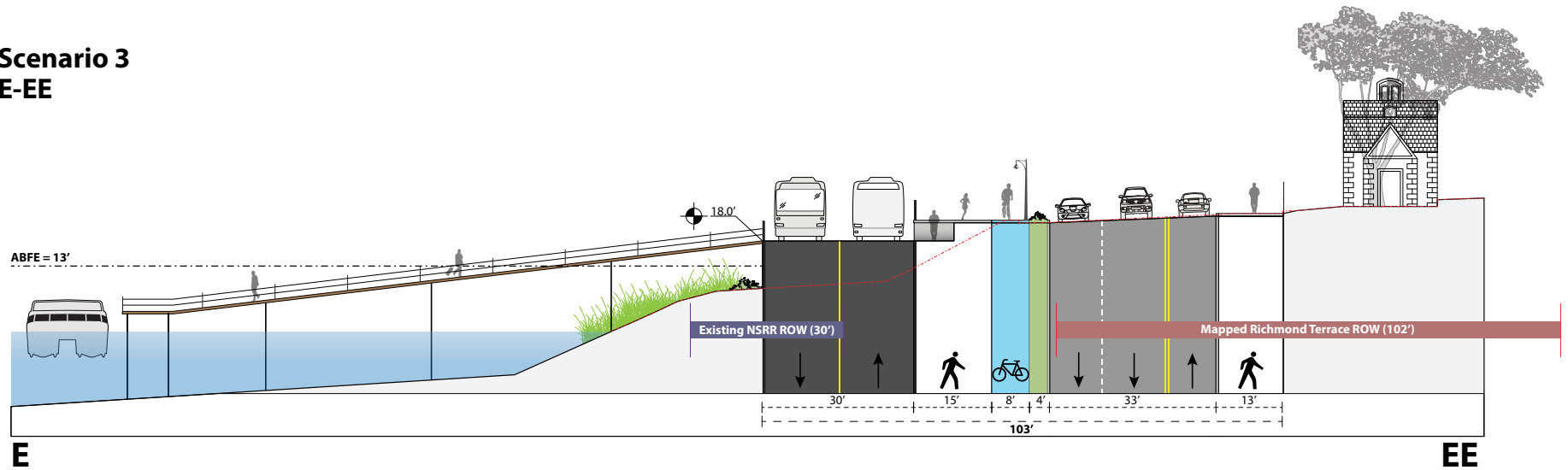


Existing Section E-EE



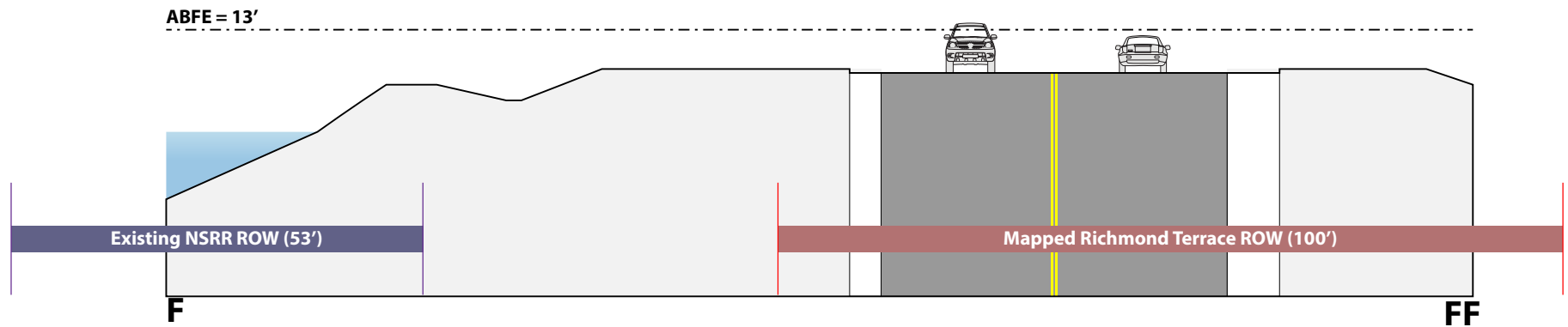


Scenario 3 E-EE



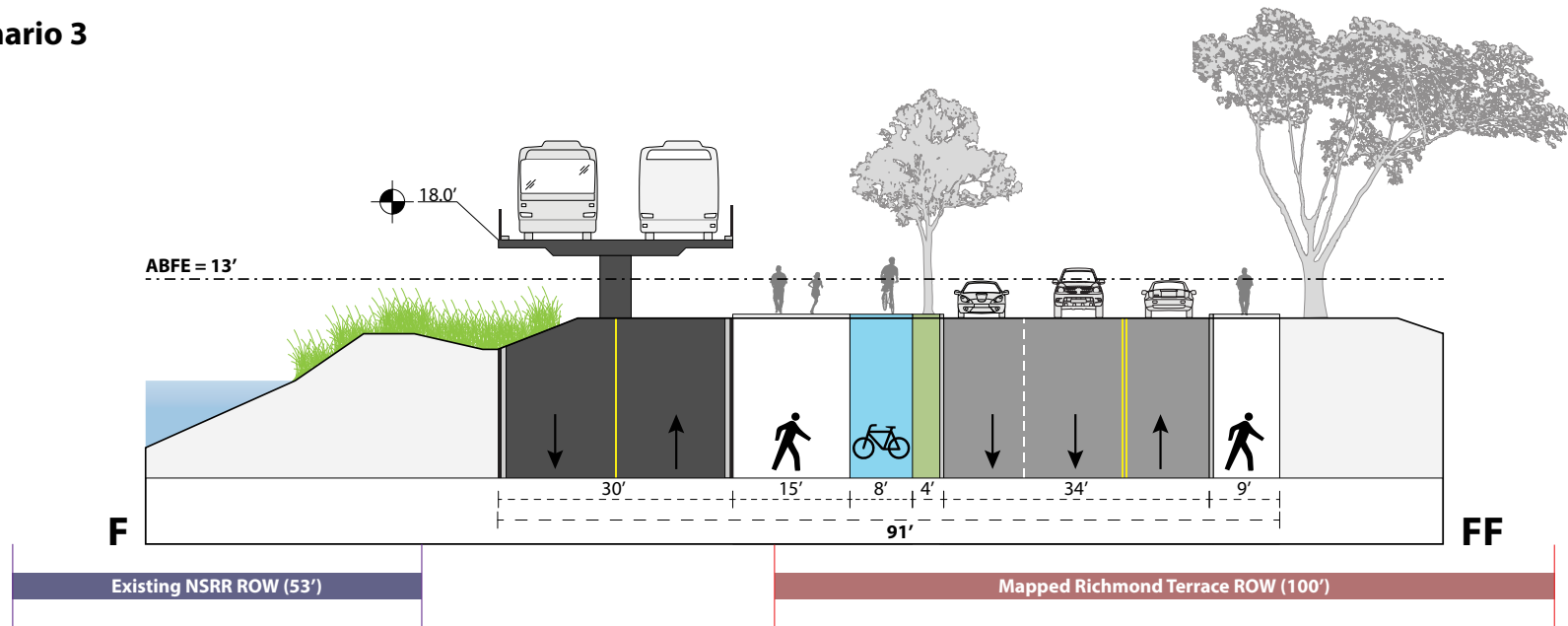


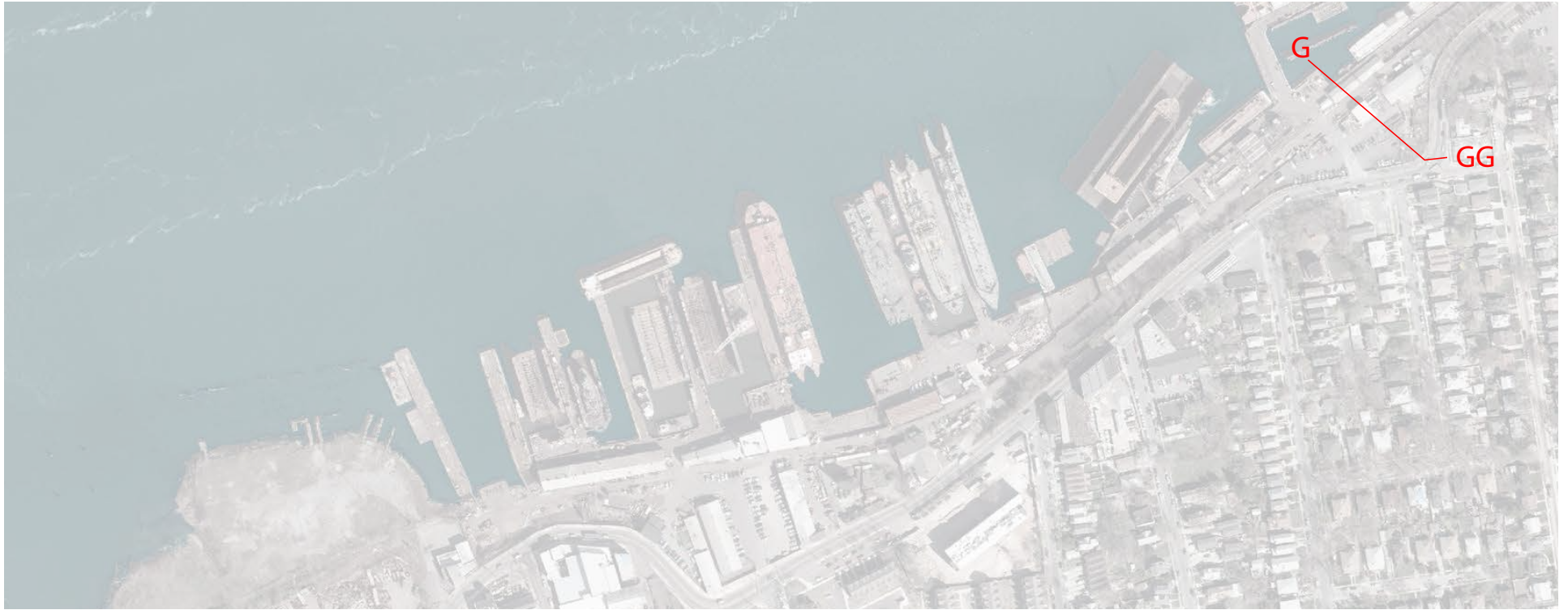
Existing Section F-FF





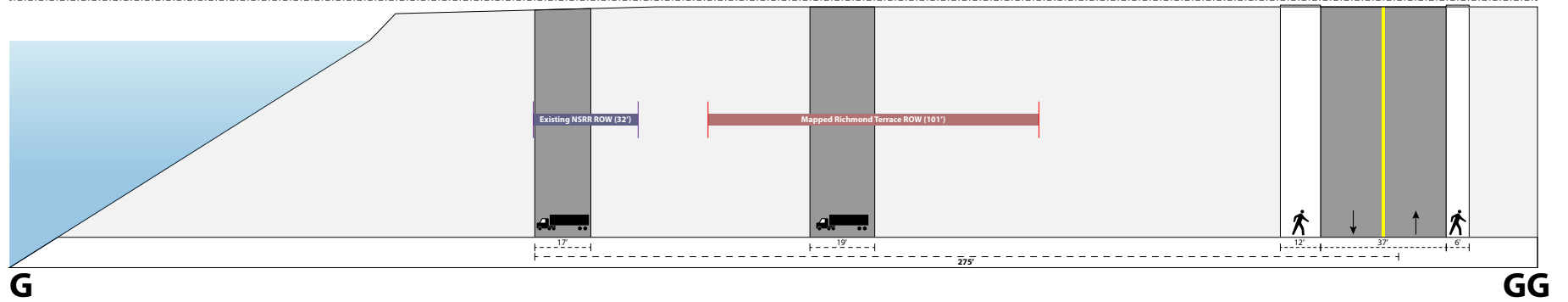
Scenario 3 F-FF





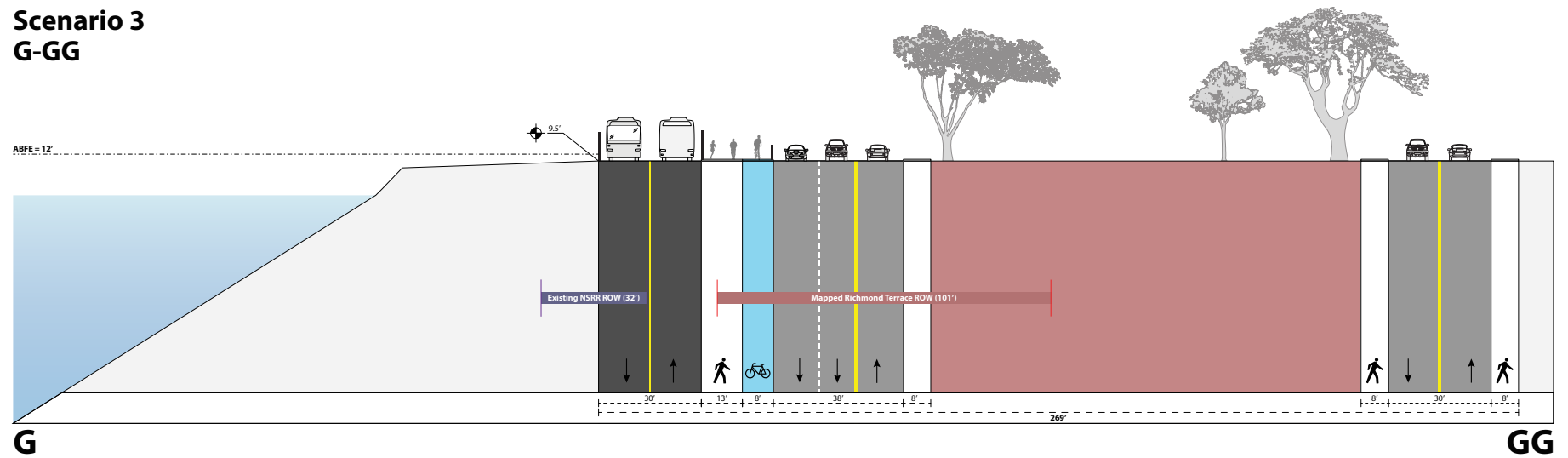
Existing Section G-GG

ABFE = 12'



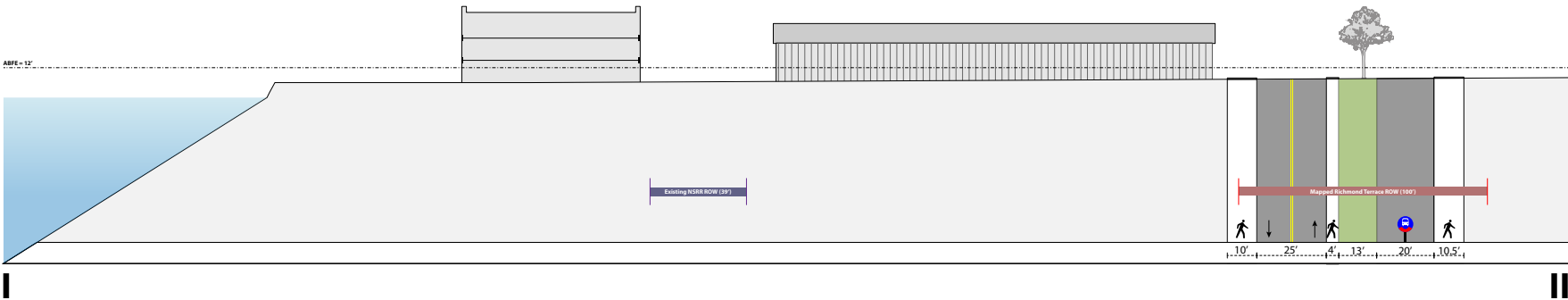


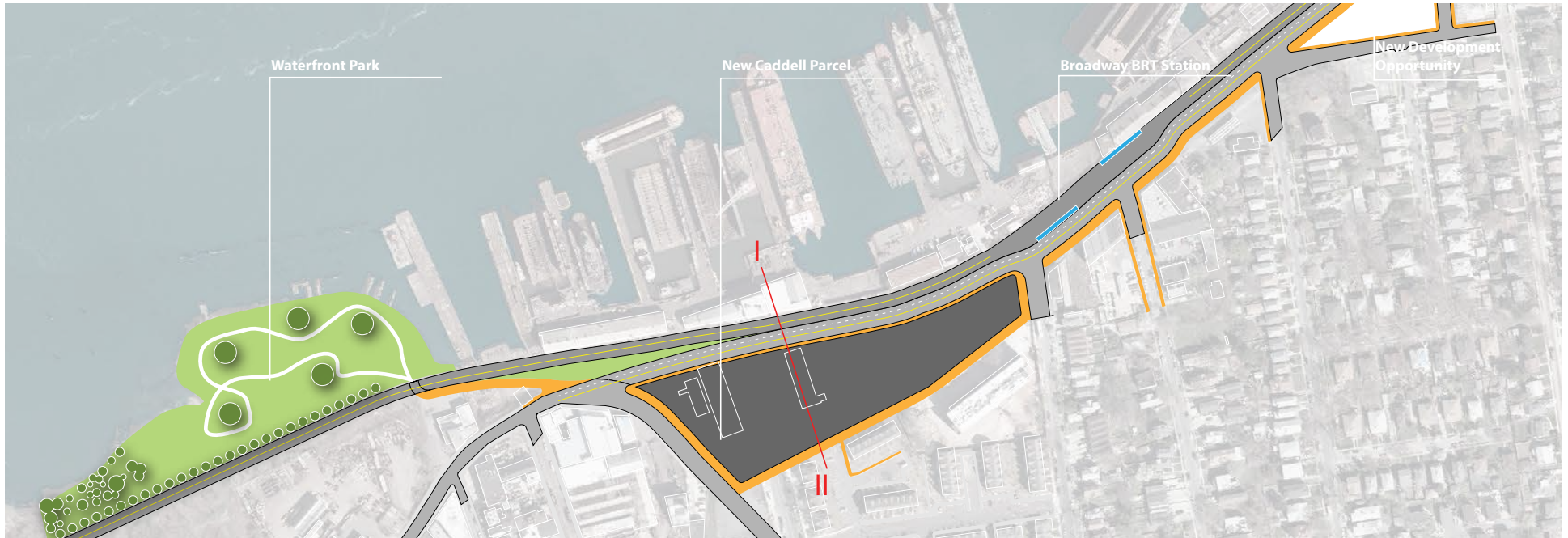
Scenario 3 G-GG



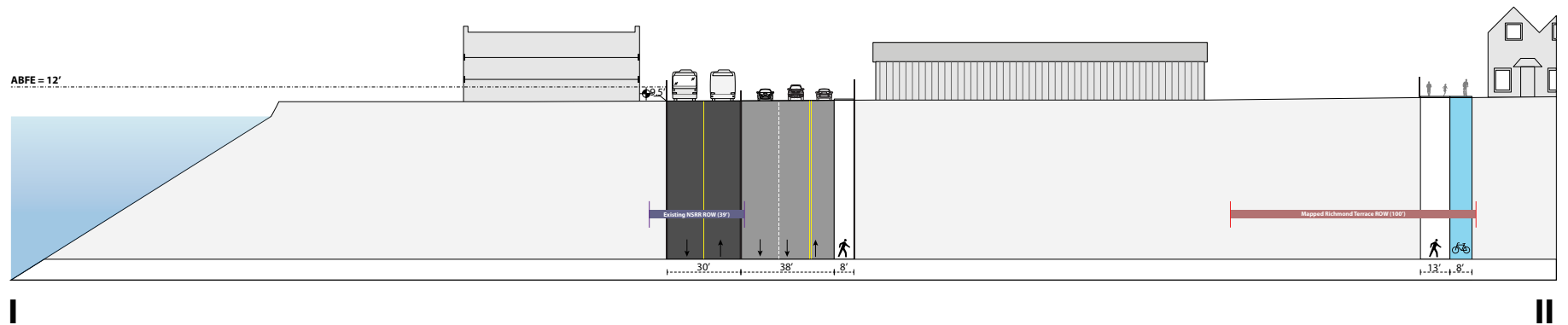


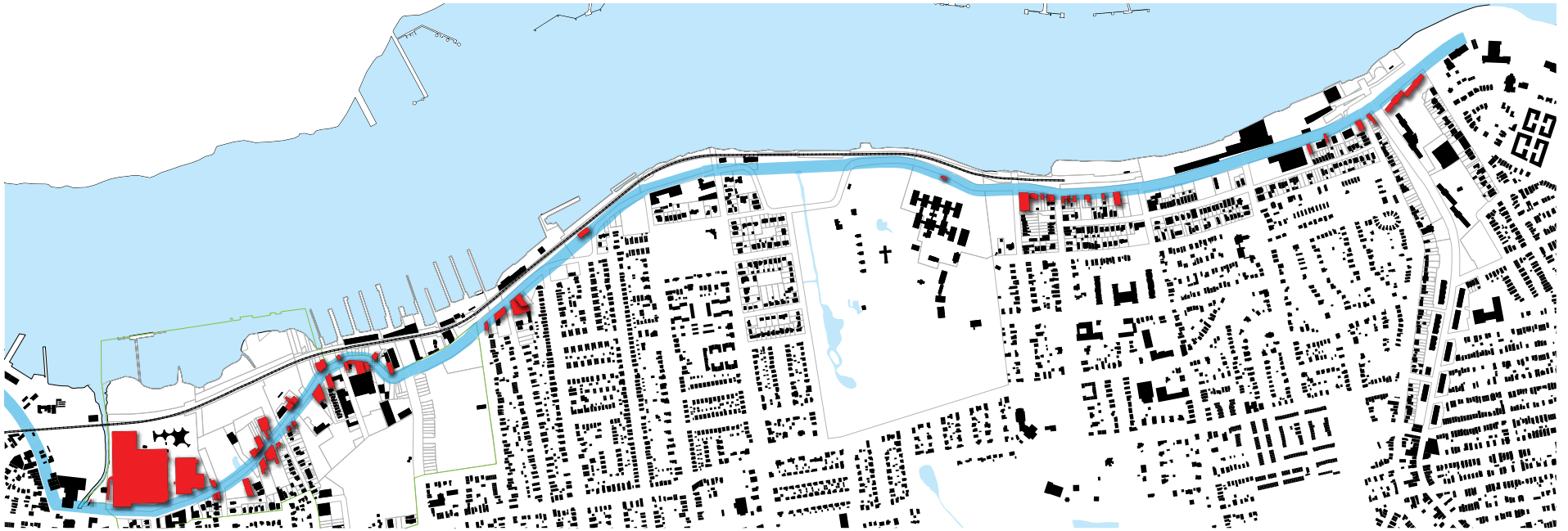
**Existing Section
I-II**





Scenario 3 I-II



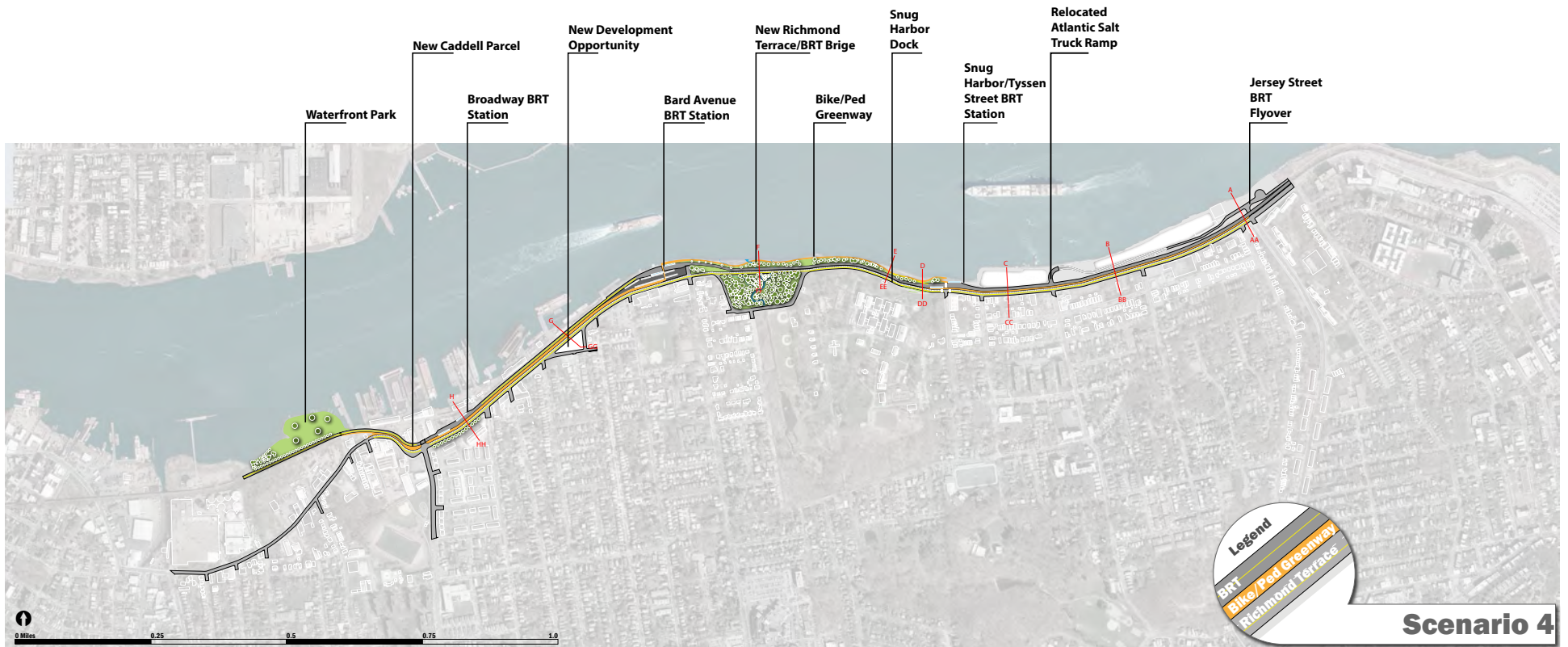


North Shore

Transportation Workshop

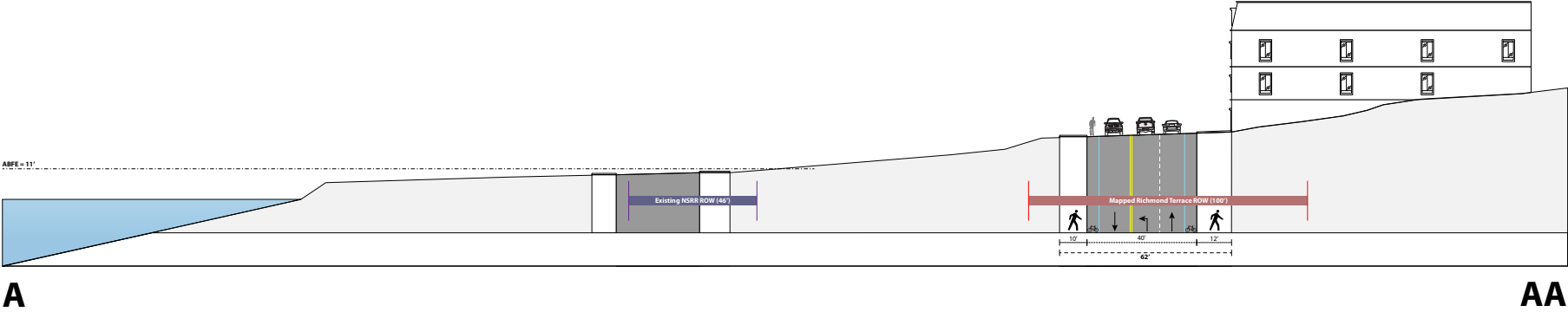
Scenario 4

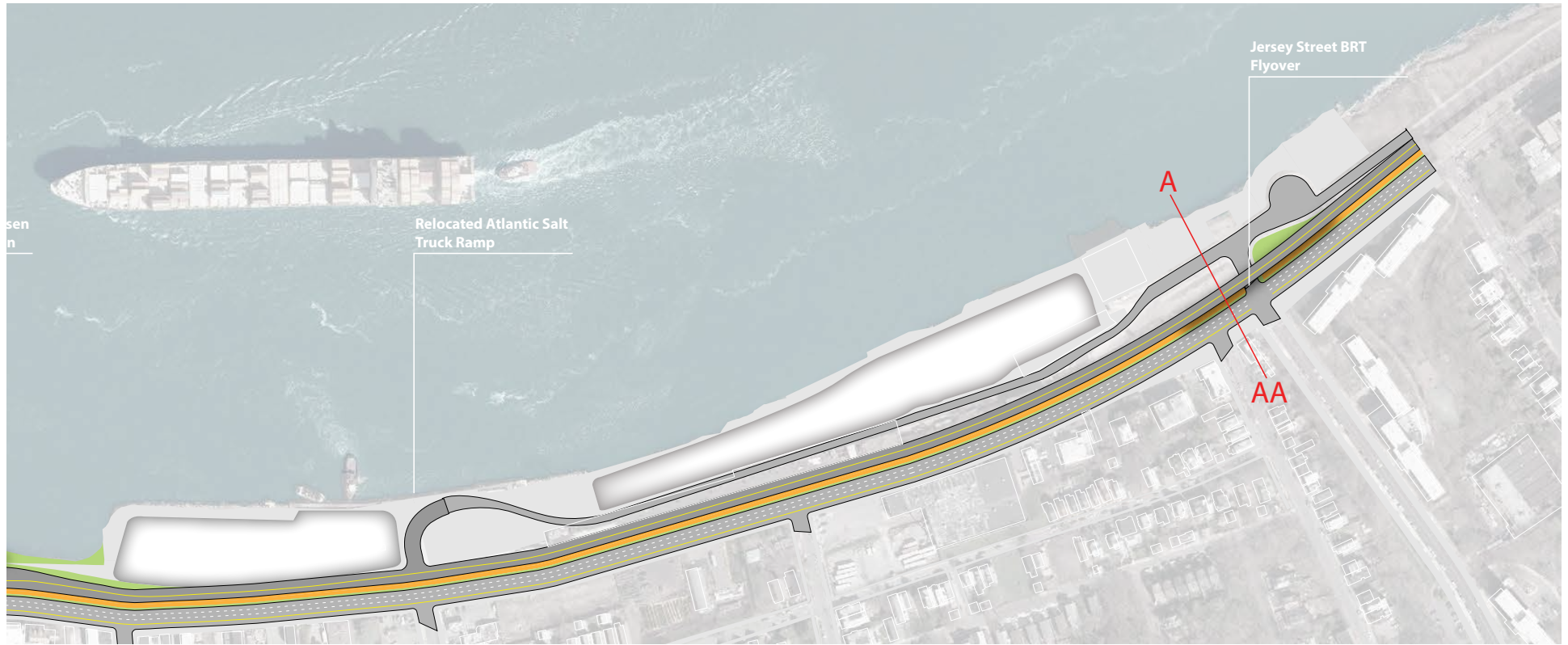




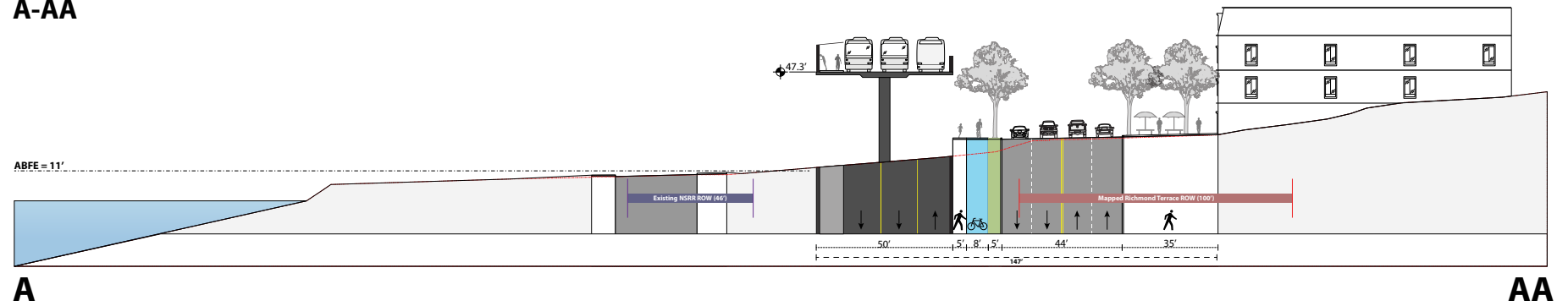


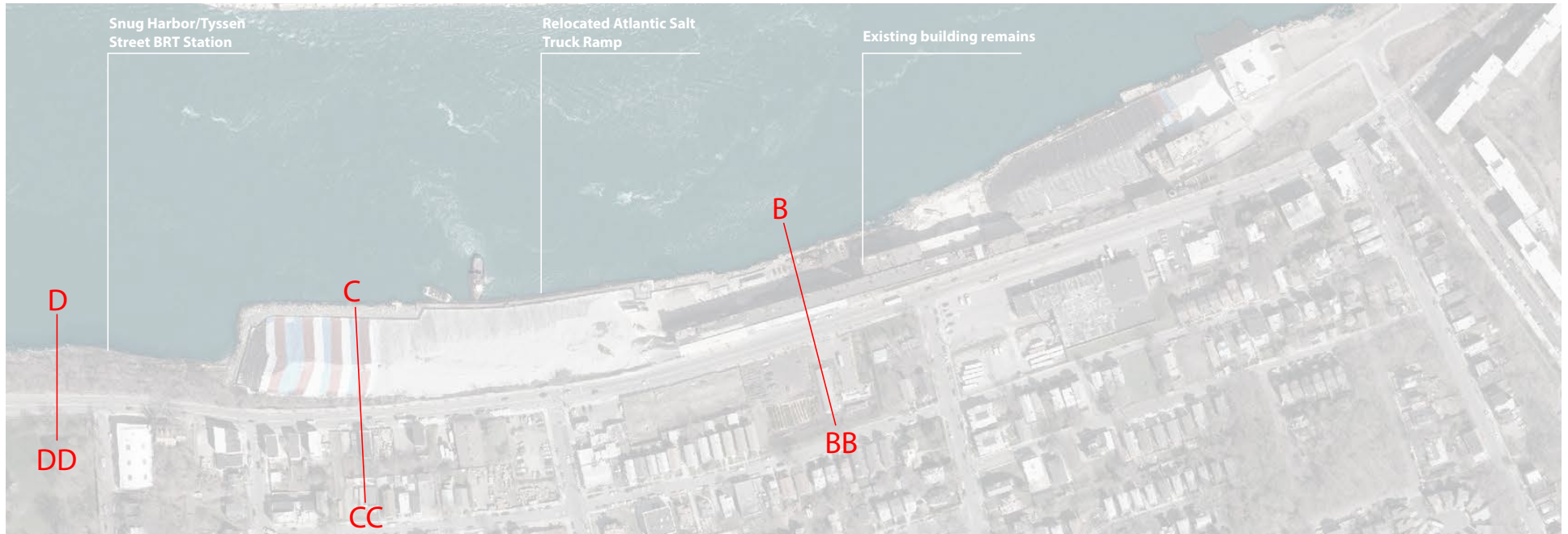
**Existing Section
A-AA**



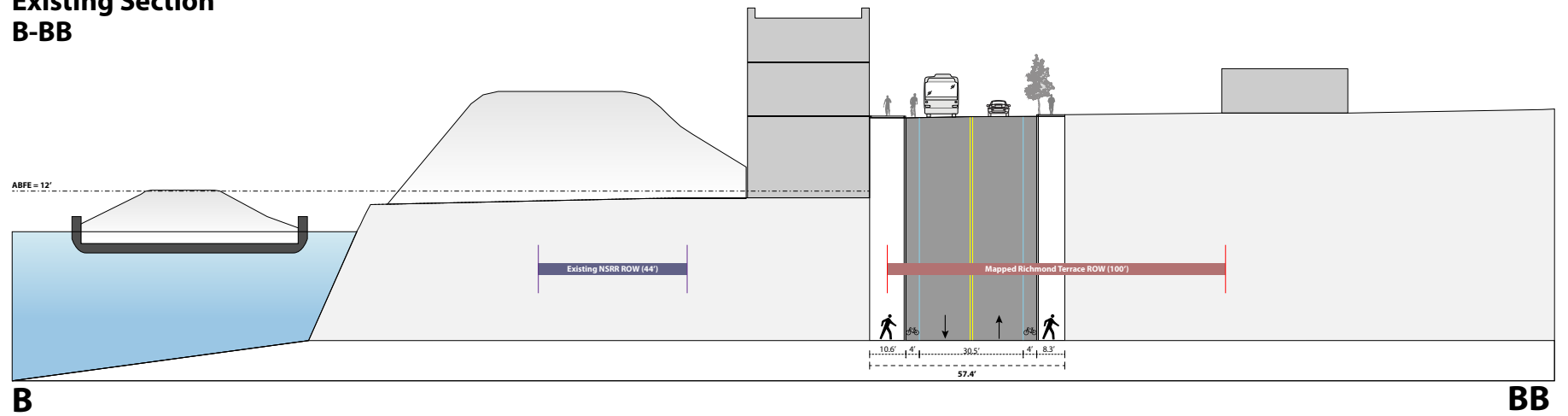


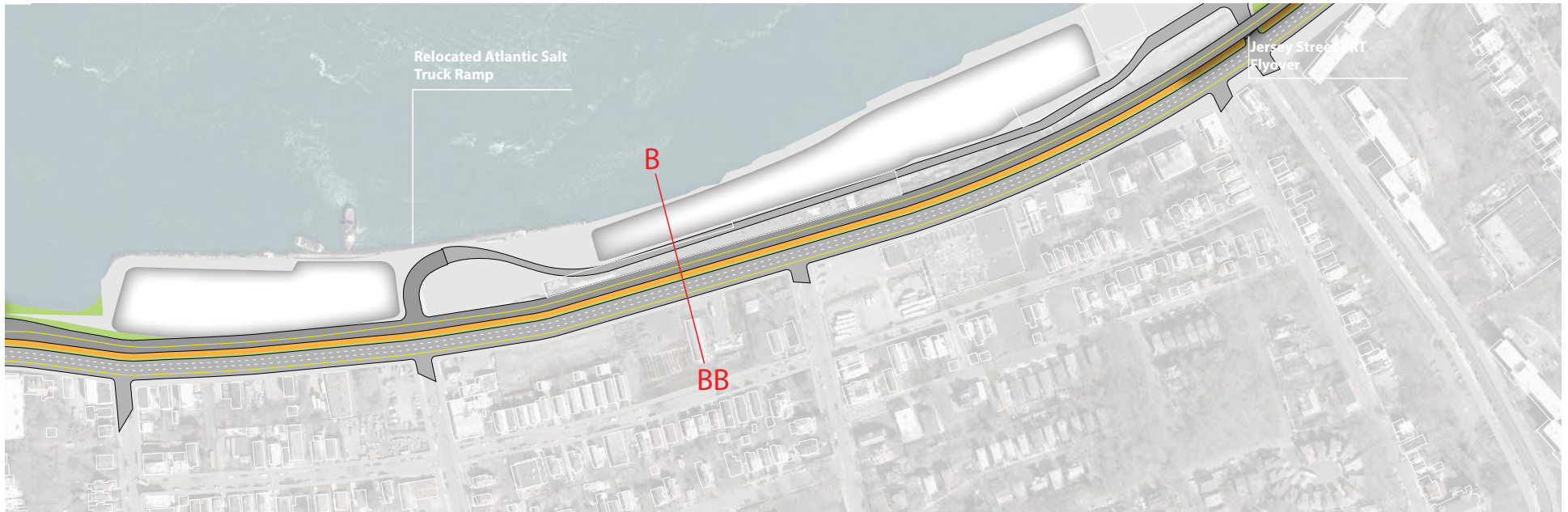
Scenario 4 A-AA



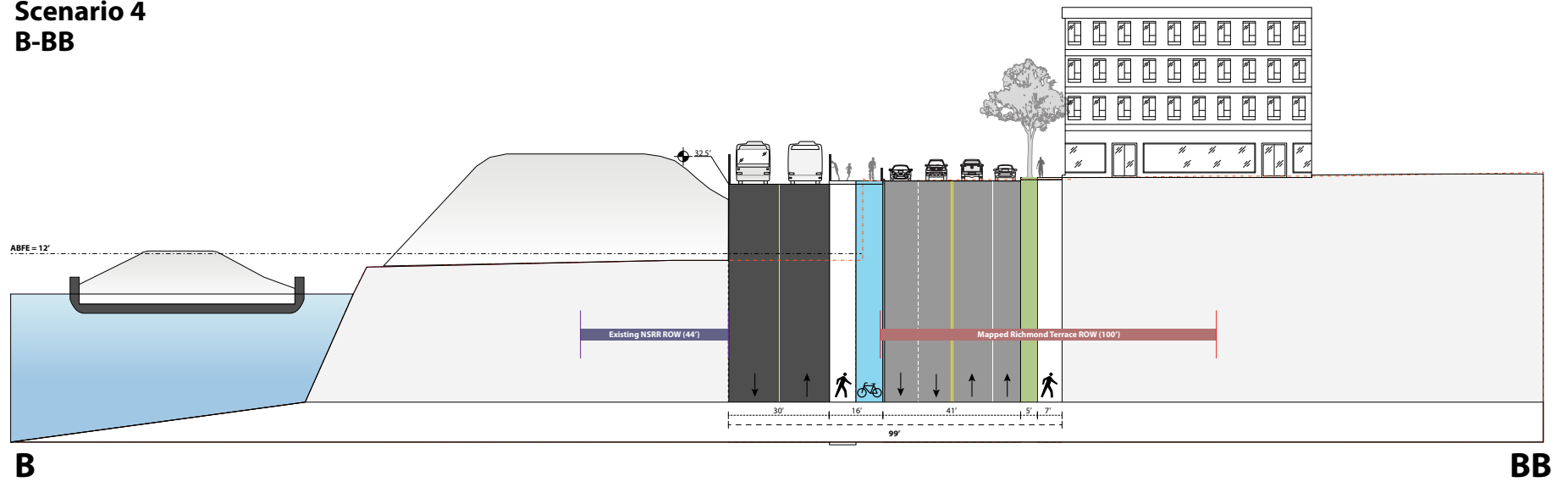


Existing Section B-BB



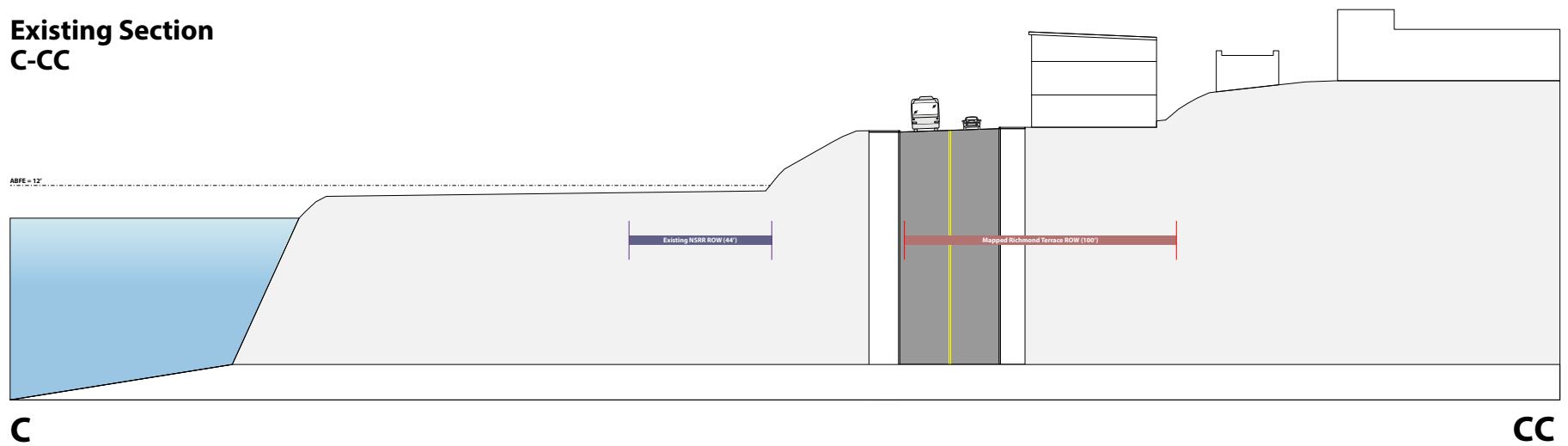


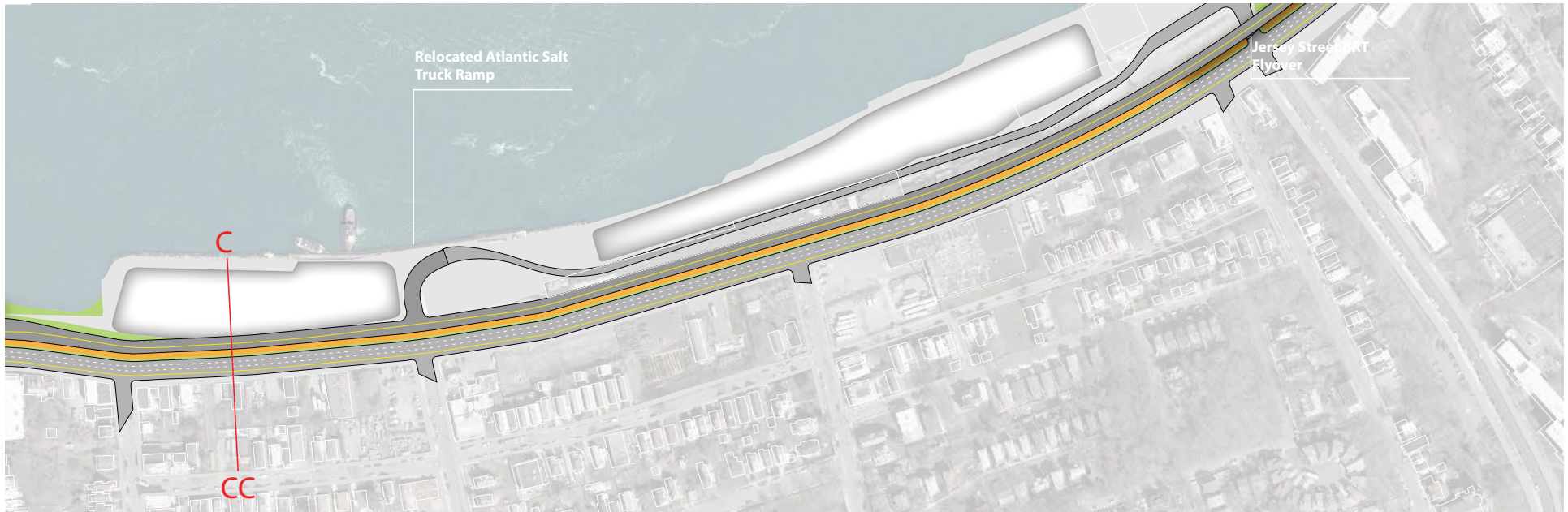
Scenario 4 B-BB



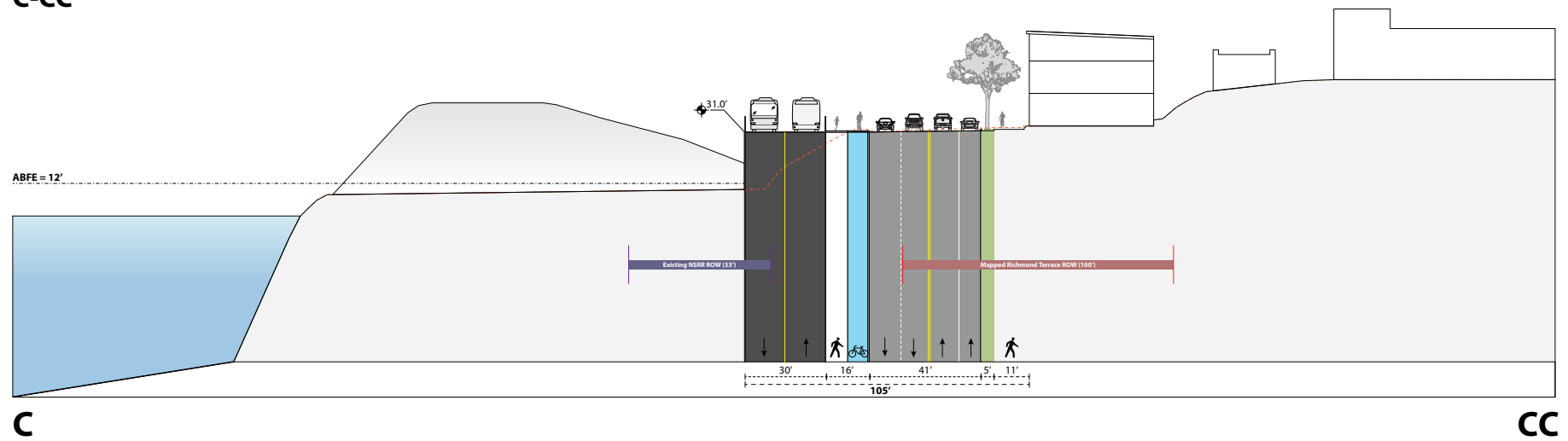


Existing Section C-CC





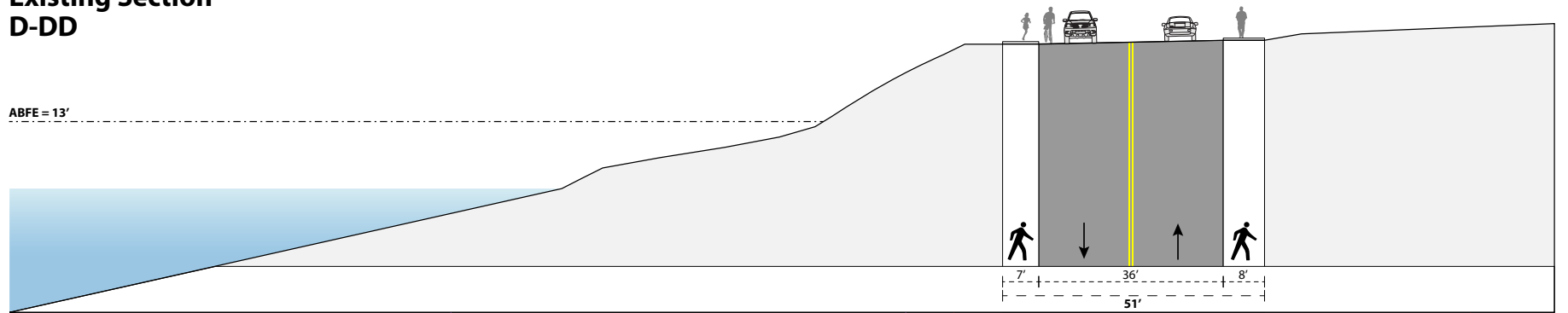
Scenario 4 C-CC





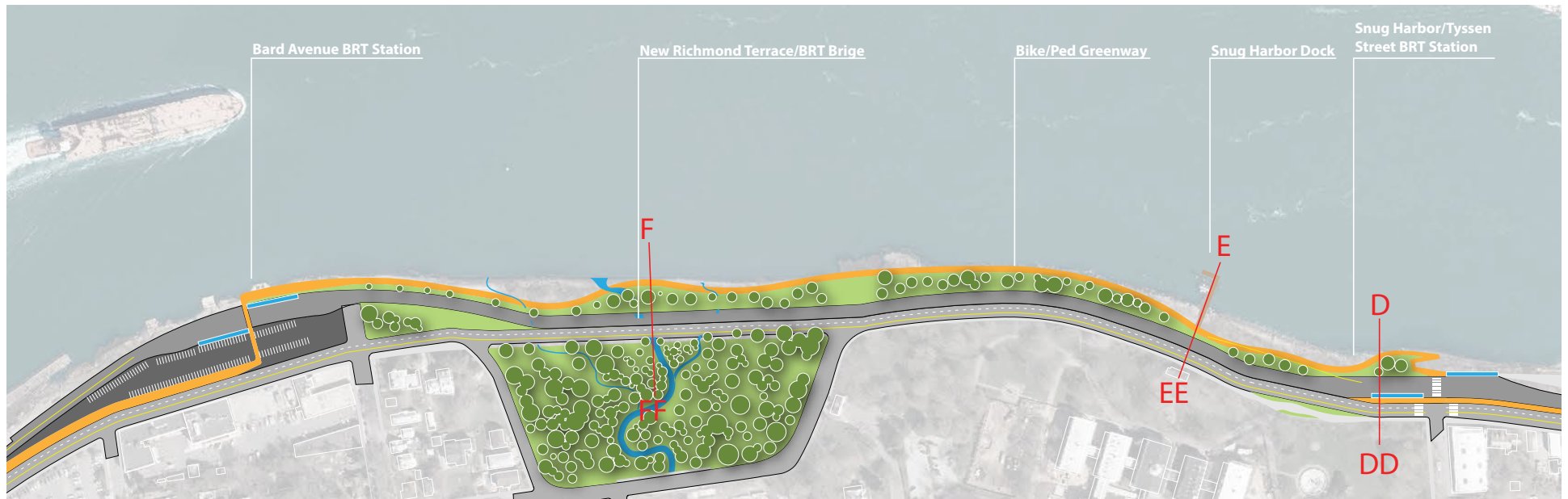
Existing Section D-DD

ABFE = 13'

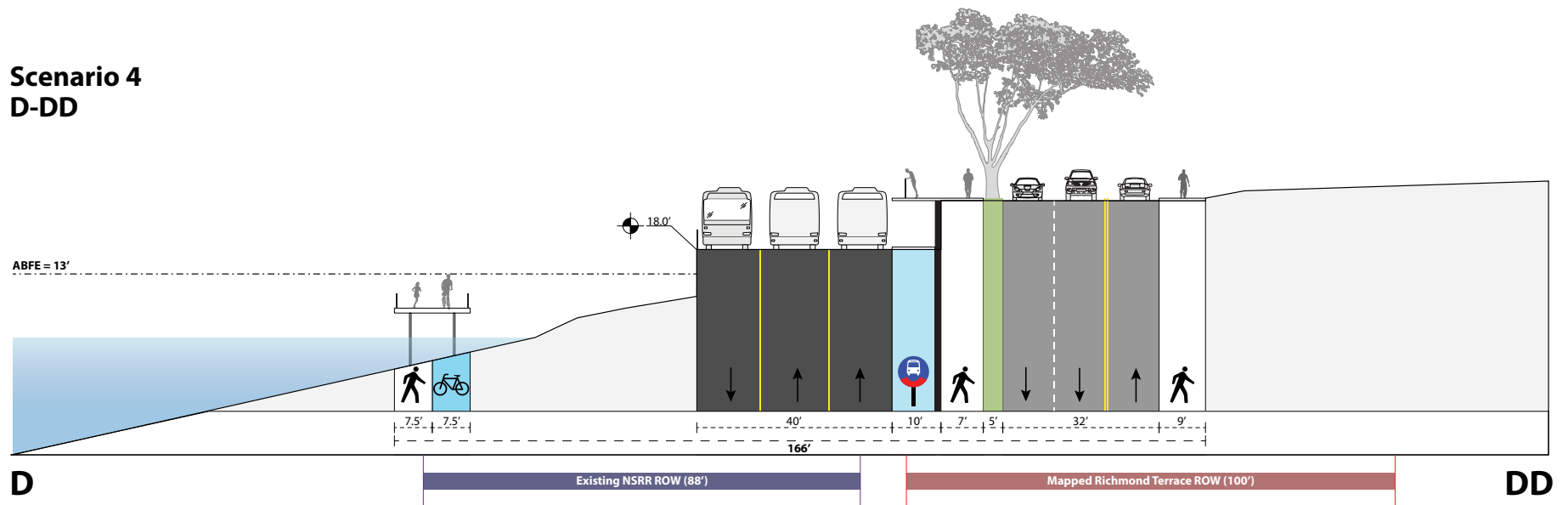


D

DD

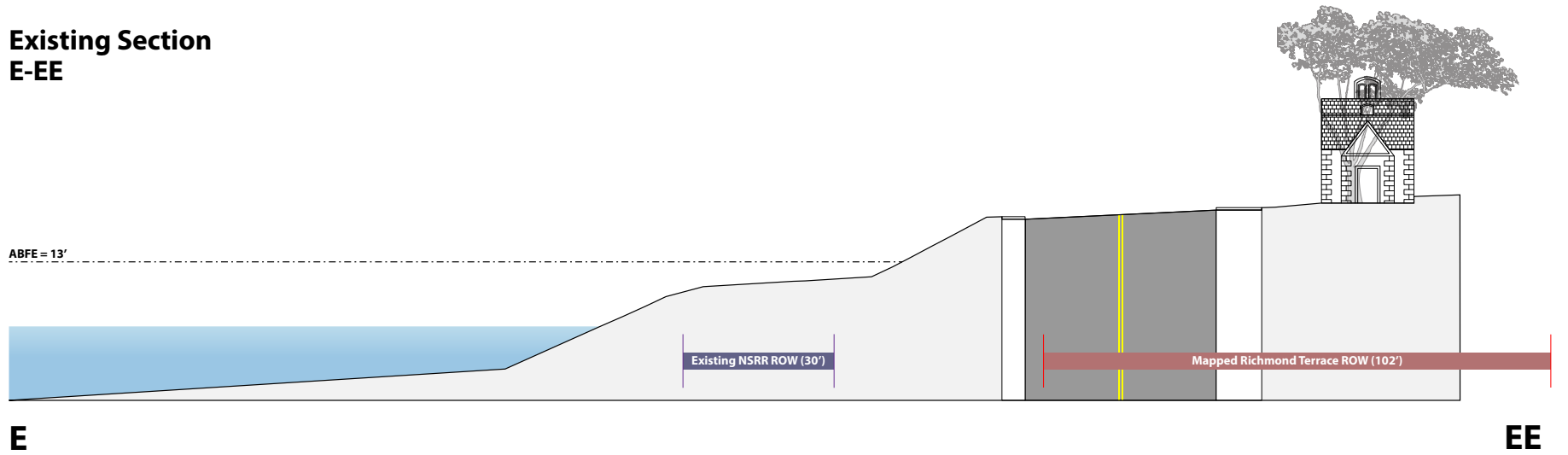


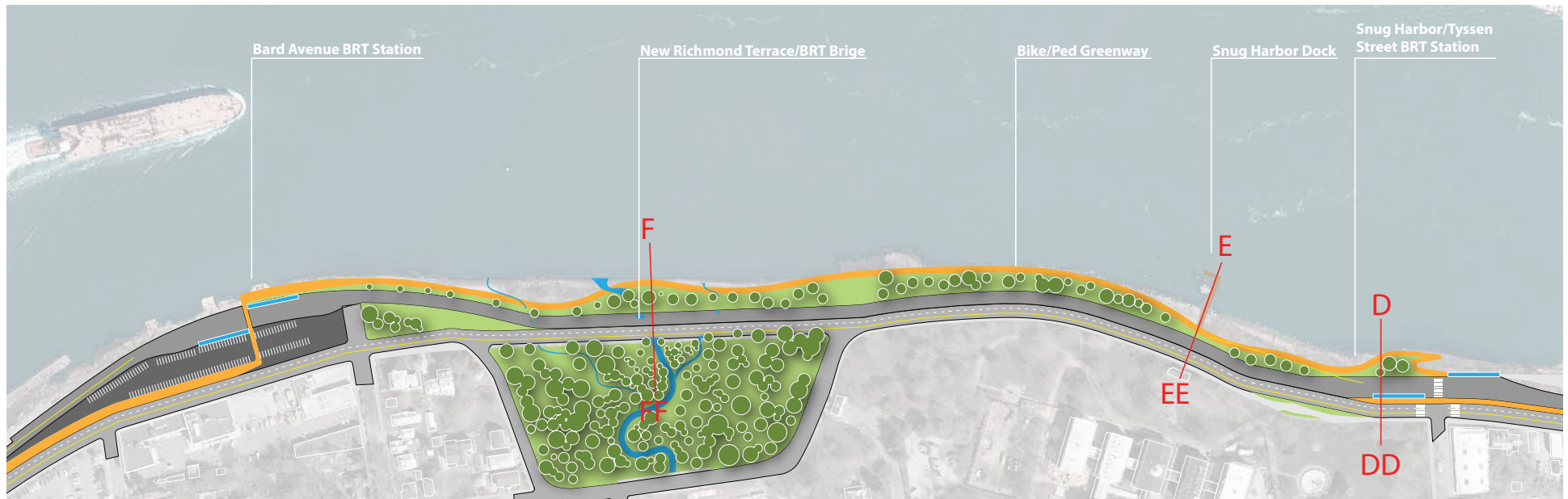
Scenario 4 D-DD



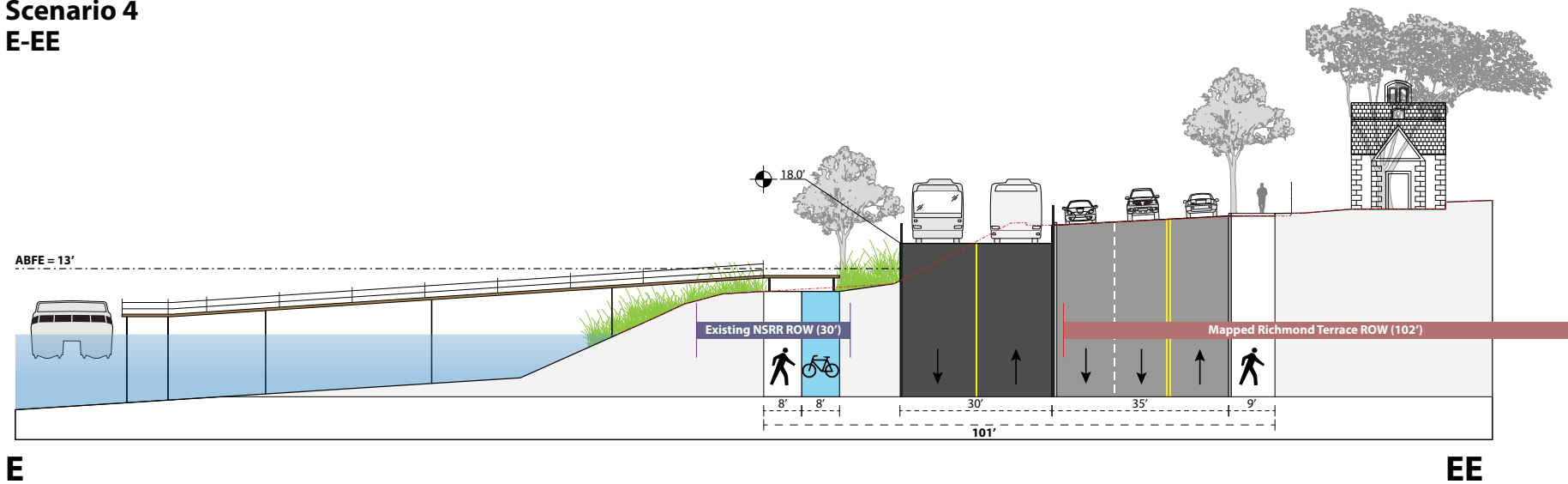


**Existing Section
E-EE**



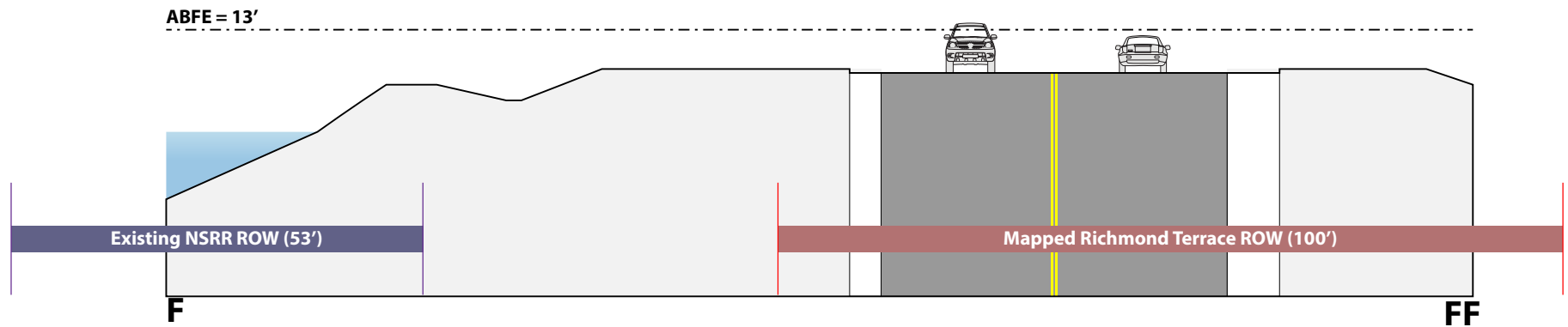


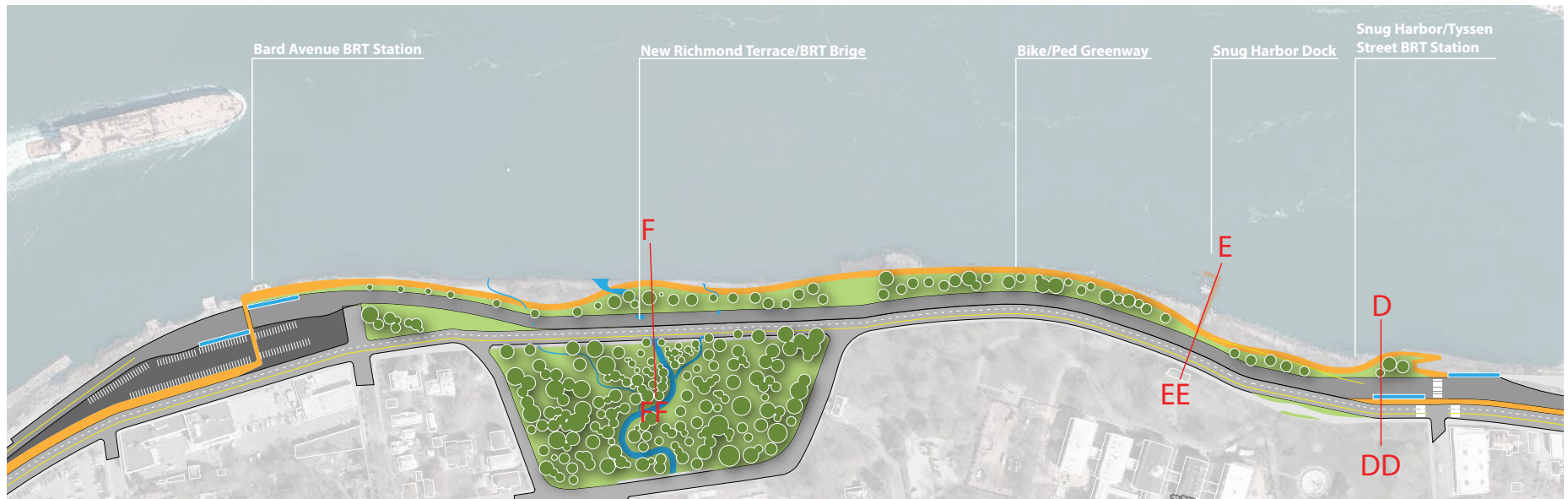
Scenario 4 E-EE



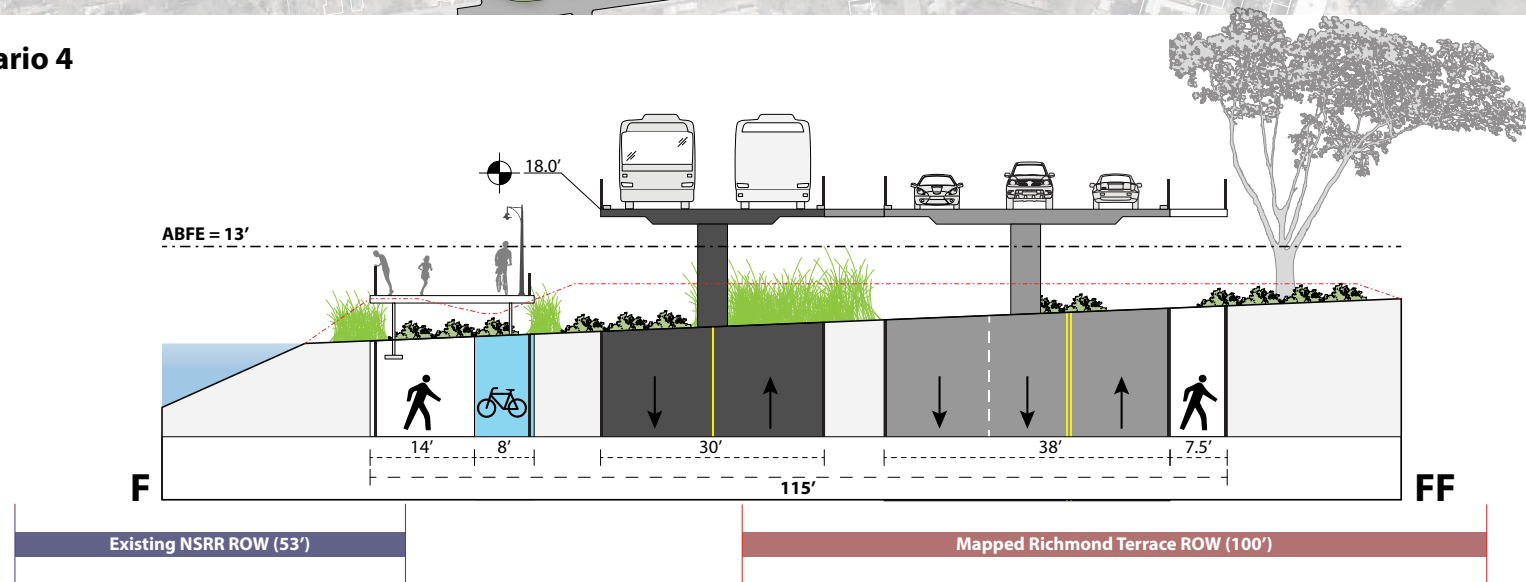


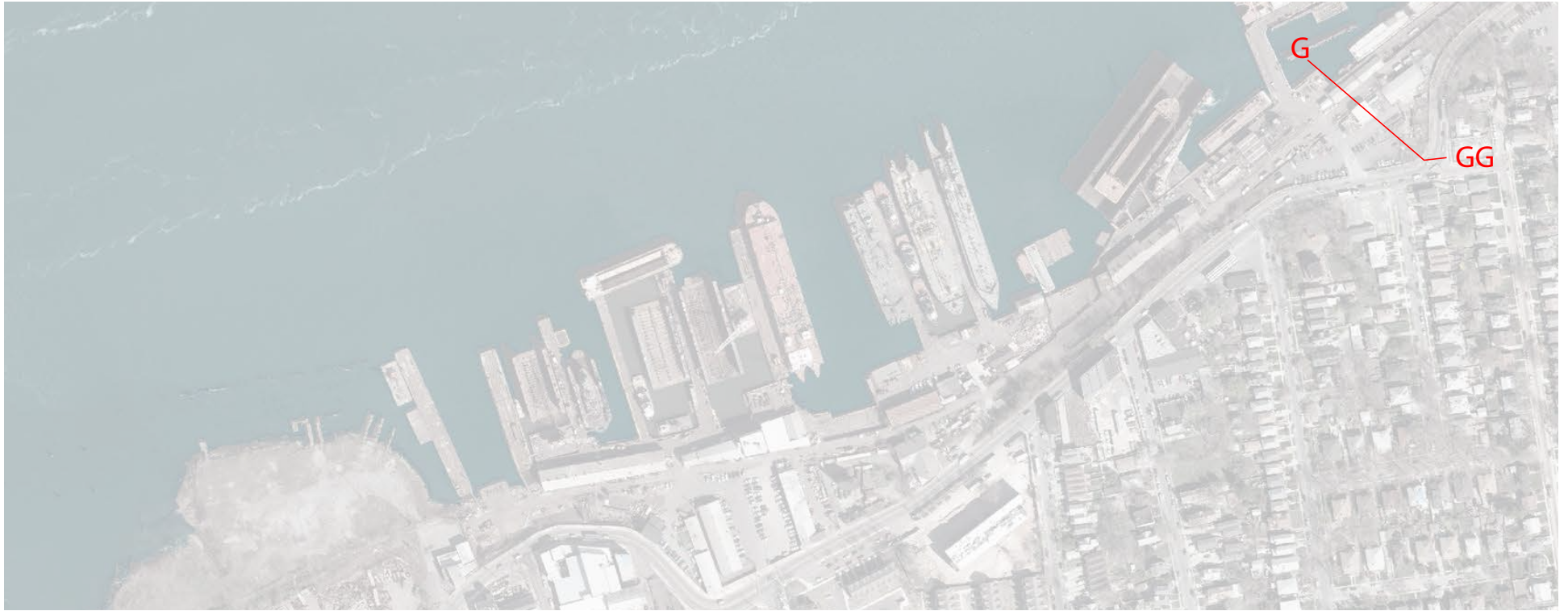
Existing Section F-FF





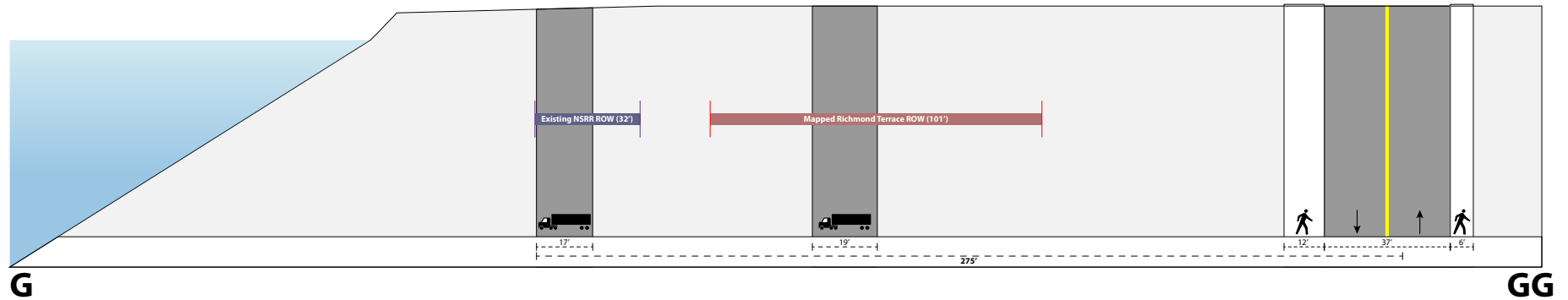
Scenario 4 F-FF





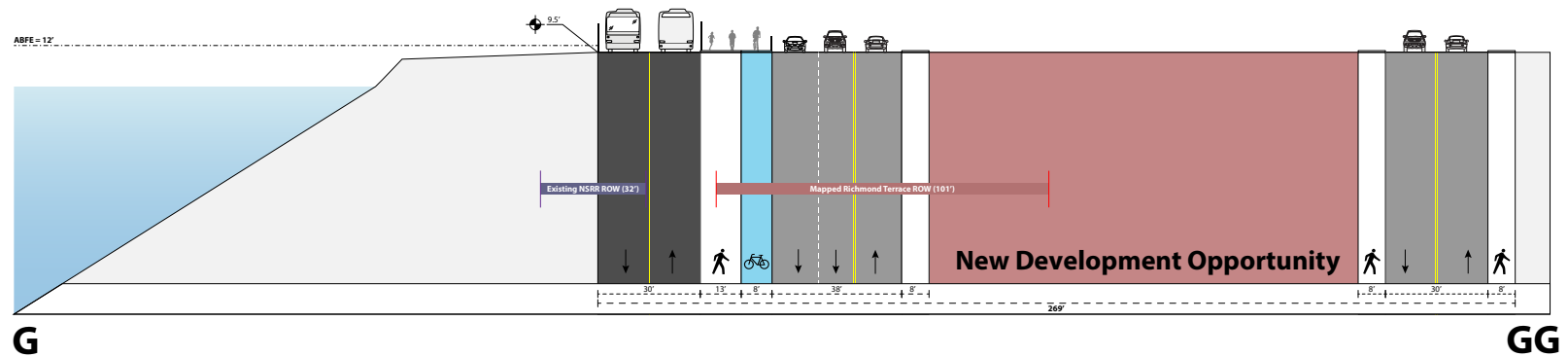
Existing Section G-GG

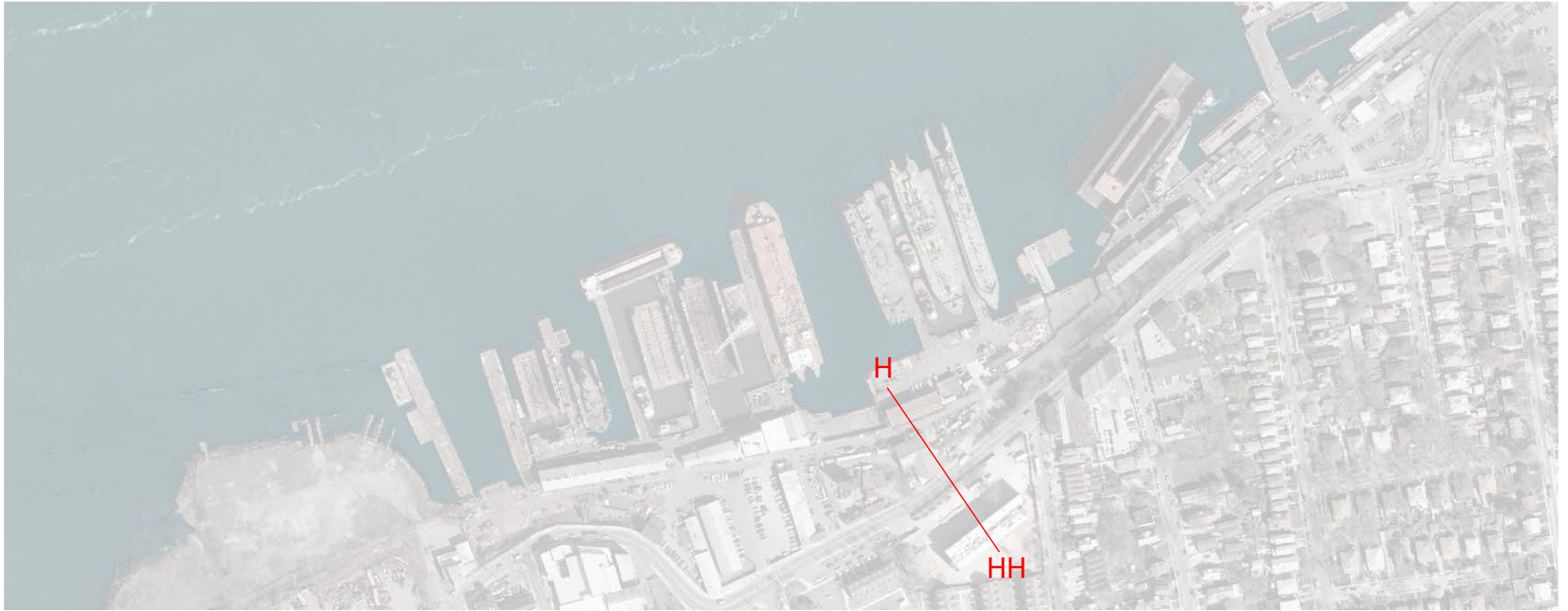
ABFE = 12'



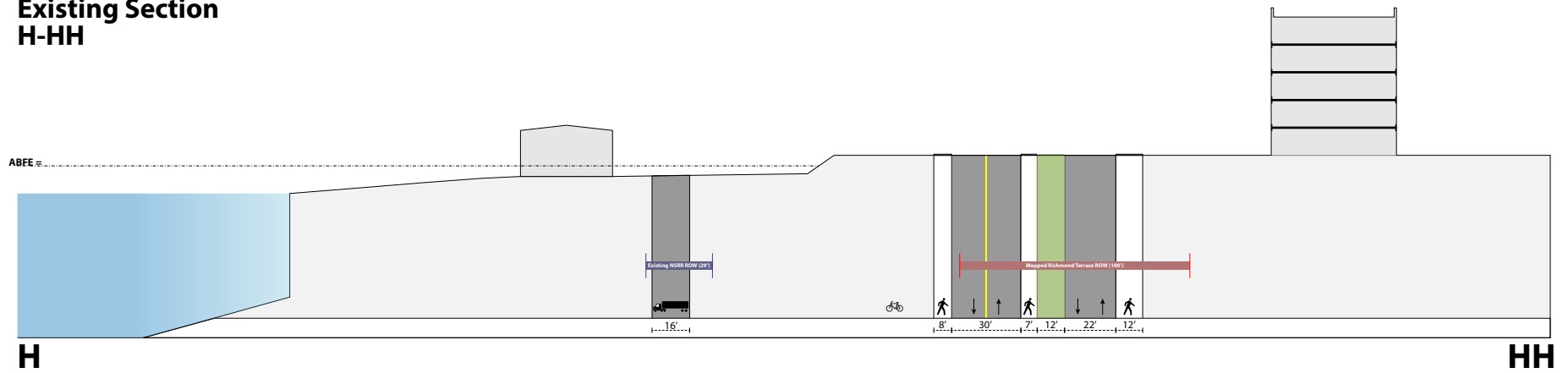


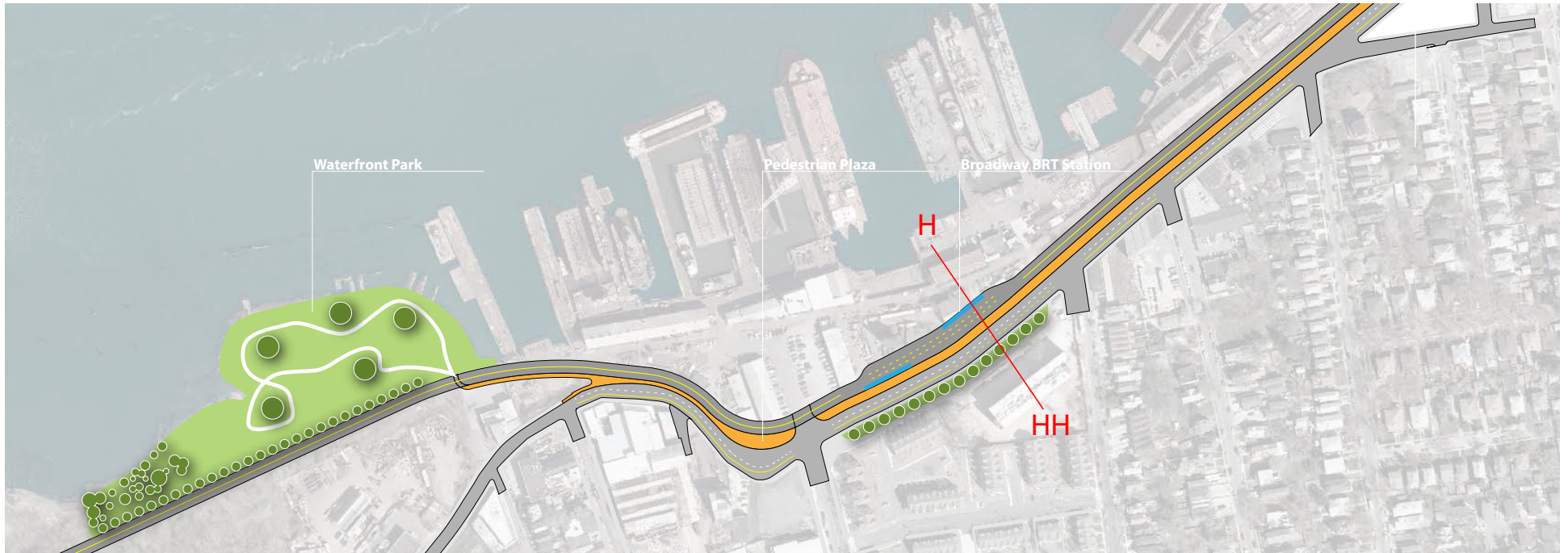
Scenario 4 G-GG





**Existing Section
H-HH**





Scenario 4 H-HH

