

A. INTRODUCTION

This chapter provides a general summary of aesthetic conditions and visual resources in the Cross Harbor Freight Program (CHFP) study area and identifies potential sensitivities to anticipated changes induced by the project alternatives.

B. METHODOLOGY**STUDY AREAS**

Study areas have been defined to a buffer of 1,000 feet from potential facilities associated with the project and centerline of existing rail lines where certain Build Alternatives may operate; this distance is appropriate to capture the area from which the physical changes anticipated as part of any proposed Build Alternative would likely be perceptible.

VISUAL RESOURCES IMPACT ASSESSMENT METHODOLOGY

With regard to aesthetic conditions, the project area represents broad diversity of built environments, ranging from some of the more intense waterfront industrial activities to be found in the region (the New Jersey study areas in the vicinity of Port Elizabeth, Port Newark, and Newark Liberty International Airport [EWR]), to urban residential neighborhoods, suburban residential subdivisions, neighborhood parks, and large expanses of state conservation area. Waterfront facilities and rail yards tend to be located within industrial areas, largely buffered from residential areas, while rail lines also extend through the residential areas that have been built up around them.

Potential visual resources (e.g., parks and playgrounds), are identified in Chapter 6.1, “Land Use, Neighborhood Character, and Social Conditions,” where they are generally considered positive attributes to neighborhood character. Key viewpoints are selected to represent views from these resources to the project site where Build Alternatives would result in substantial changes to the built environment. Those visual resources with direct and clear lines of sight to a proposed facility or proposed tunnel structure are evaluated to determine what potential changes to the landscape characterizing these resources would occur with the proposed project, to what degree their visual quality may be altered, and whether that represents an impact to associated viewer groups. Examples of viewer groups include workers in an industrial area; workers and shoppers in a commercial area; residents in residential areas; and a broad range of visitors, including children, teens and the elderly, in public parks.

Each viewer group may be assigned a typical level of activity, such as outdoor labor associated with industrial areas, day or night; indoor activity and driving associated with some commercial areas and residential areas (typically suburban), throughout the day or only in the evening; outdoor pedestrian activity associated with some commercial areas and residential areas (typically urban), throughout the day and into the night; and active recreational activity in parks

or passive enjoyment of parks and gardens throughout the day and possibly the evening and night.

For each type of activity a viewer may be attributed a corresponding level of attentiveness to the surrounding environs. For example, workers in an industrial yard may have clear views of the project area but not pause to consider the visual quality of the landscape because they are active and attending to the often dangerous work at hand. Pedestrians in a downtown commercial area may be highly aware of their environs, though perhaps most interested in specific street-side activity, as they stroll along the sidewalk, seeking destinations for shopping and dining. Passive users of open space, such as persons resting on park benches to enjoy their surroundings, may be the most highly attuned to the visual quality of the landscape. The potential for impact is determined based on quality of view enjoyed from the visual resource and the relationship of the view to the project area, and it is also based on the sensitivity of the associated viewer groups to changes in their visual environs.

C. EXISTING CONDITIONS

WEST-OF-HUDSON STUDY AREA

OAK ISLAND YARD, GREENVILLE YARD

This New Jersey study area comprises three basic landscape types: industrial/rail yard, commercial areas, and residential areas. There are, in addition, several natural open space areas that surround the industrial uses, highway and transportation infrastructure, and waterfront areas.

The industrial areas comprise large lots, some of which may be built out almost entirely with large-footprint buildings, while others may be un-built and used for parking and outdoor storage of equipment and containers. Warehousing is common throughout the area and many buildings do not exceed two stories in height. The street pattern throughout the industrial area is irregular, owing to the large lots, the proximity to water, and the major highways and rail infrastructure that cross through the area.

The commercial areas within this primary study area fit the same development pattern as the industrial areas, except for those industrial areas with specialized rail and port-related infrastructure, cranes and similar equipment, and fuel and chemical tanks. These are not neighborhood residential areas, but more closely related in function and appearance to the industrial uses typical of the area. Residential areas within the primary study area are densely developed areas with smaller lots. They generally are buffered from the rail yards in the study area, and from the intense port activities by warehousing and commercial space, thus limiting direct views from residential areas into the rail yards.

Viewer groups include workers throughout the study area, drivers on area highways, and residents (in the residential areas just west of Greenville Yard). All viewer groups experience the visual environs of the area, whether by traveling through it, working in it, or living in it.

The workers, present in the study area during working hours, would be among the least sensitive to changes in the visual environment. Workers in this area tend to be highly attentive to the work at hand and therefore are less sensitive to the quality of the visual environment around them except as a matter of ensuring a safe working environment. Sensitivity to change in the area is limited, as well, by the predominance of the industrial landscape, and the manner in which other land uses have developed around it, such that only monumental changes to land use patterns or port and yard operations would likely be perceptible to any viewer as representing a change to

the landscape. In this respect, viewer groups in residential areas in the New Jersey study area may not exhibit the sensitivity that could be attributed to residents of a suburban area with no such intense port land uses nearby.

PORT NEWARK/PORT ELIZABETH

This portion of the study area is entirely industrial and includes some of the more intensive port activity to be found in the project area and in the region. Large cranes and equipment are visible for several miles along the shore and throughout the vicinity in New Jersey and across Newark Bay in New York City. Viewer groups include workers throughout the study area, drivers on area highways, and boaters. As with other highly industrial areas, the workers, present in the study area only during working hours, would be among the least sensitive to changes in the visual environment. Other users, like boaters, would be more sensitive to changes such as the introduction of new vertical structures in this area.

EAST-OF-HUDSON STUDY AREA

SBMT, 51ST STREET YARD, 65TH STREET YARD

This portion of the study area is typical of the extent of the study area in Brooklyn and comprises three basic landscape types: urban residential areas, urban neighborhood commercial corridors (streetscapes), and small areas of light industry/manufacturing. There are, in addition several neighborhood parks and other open space (e.g., cemeteries) that contribute to the aesthetic character of their surroundings. Views from within Owl's Head Park toward areas north, including 65th Street Yard, are obstructed. Although the majority of the Brooklyn study area is drawn around an existing rail line, transportation infrastructure is not the most pronounced feature of the visual environs in this study area except in the immediate vicinity of the Brooklyn waterfront facilities—such as the South Brooklyn Marine Terminal, 51st Street Yard, and 65th Street Yard—which is part of the highly industrial Sunset Park waterfront.

Giving broad consideration to aesthetic conditions, the study area traverses a large urban residential landscape. The neighborhoods surrounding the study area and extending into it are built according to a street pattern that is primarily a regular grid, though arterial roadways (such as New Utrecht Avenue, Flatbush Avenue, and Atlantic Avenue) deviate from the regular grid. Views toward the project area vary, as some streets have straight and direct views to and past the rail line, while others may be interrupted by industrial uses that line the rail within the northern half of the study area. The aesthetic character of these predominantly single-family residential urban neighborhoods is generally revealed through the local streetscapes, whether there are street trees in some areas, front yards and stoops, and building design elements and street wall definition that contribute to the neighborhood streetscapes. Neighborhood commercial uses define several of the streetscapes in the vicinity of the study area, some crossing the rail line, such as Flatbush Avenue, or paralleling the rail line, such as 60th Street in the Sunset Park neighborhood. Many blocks of these streetscapes are busy throughout the day and evening with pedestrian activity as well as automobile traffic.

RED HOOK

The Red Hook study area is limited to the waterfront and is buffered to the south by industrial and manufacturing uses and to the east by the entrance to the Hugh L. Carey Tunnel. Similarly, because the Bay Ridge Branch is below grade throughout much of the western half of the study area, it is not a major landscape component; rather, the surrounding development pattern

includes residential neighborhoods extending right up to the rail line in many locations within the western half of the study area.

EAST NEW YORK YARD

The industrial parts of the landscape in and around the study area represent a mix of uses, and except for a few large industrial blocks and lots in the New Lots area, most industrial uses are on blocks and lots consistent in size and pattern with the surrounding residential neighborhoods. Small lots are generally built out, except for areas immediately adjacent to the rail line, such as around the East New York Yard site, where there are parking lots, vacant lots and outdoor storage areas. Warehousing is common throughout the area and many buildings do not exceed two or three stories in height.

The East New York Yard site specifically, is industrial in character; however, it is surrounded by residences, commercial and mixed uses and several playgrounds are located within the residential neighborhood to the west. Livonia Playground has been selected as being most representative of such playgrounds, being located directly across the street from the proposed rail yard site and comprising good quality urban open space. Three key viewpoints have been selected to represent the views from the Livonia Playground, at Livonia Avenue, between Powell Street and Junius Street (adjacent to the proposed East New York Yard site). Currently, the proposed East New York Yard site in the vicinity of Livonia Playground is of moderate visual quality. Under existing conditions, the area comprising the project site is fenced with chain link fencing and razor wire, with weeds growing along the fenceline and the public sidewalk on Junius Street (see **Figure 6.4-1, Photo 1**). The streetscape along Junius Street is dominated on the one side by the presence of the rail line (proposed yard site) and on the other by the attractive and light- to moderately well utilized Livonia Playground. Views from Livonia Playground toward the site are also dominated by the elevated subway line (the L line and the 3 and 4 lines) (see **Figure 6.4-1, Photo 2** and **Figure 6.4-2, Photo 3**) illustrates the industrial character of the streetscapes surrounding and comprising the potential rail yard site, with the visual environs dominated by the elevated L subway line that runs above the site. Viewer groups include residents, as well as some workers and shoppers along the commercial corridors. All viewer groups experience the visual environs of the area, whether by traveling through it, working in it, or living in it. The focus of activity within commercial corridors tends to be localized, with workers and shoppers, including pedestrians, moving from store to store, or in some cases driving to commercial destinations. As the rail line is not a definitive feature of the area, particularly within the western half of the study area, it does not hold the attention of viewer groups present in the surrounding area. It is unlikely that viewer groups within commercial areas with views of it are sensitive to its contribution to the landscape. Residents, likewise, experience their neighborhoods primarily through the streetscape, which varies in form and character from one neighborhood to another; while they may be sensitive to changes to the streetscape and streetscape pattern, they are not likely sensitive to the form or activities associated with the rail corridor itself. In large part this is due to the fact that neighborhoods surrounding the rail corridor have developed in accordance with its presence, making it merely an acknowledgeable landscape feature.

The workers, present in the industrial portions of the study area during working hours, would be among the least sensitive to changes in the visual environment. Workers in this area tend to be highly attentive to the work at hand and therefore less sensitive to the quality of the visual environment around them except as a matter of ensuring a safe working environment.



View from Junius Street /Livonia Playground toward the proposed East New York Yard site (subway elevated 3- and 4- line above site)

1



View from Livonia Avenue (Livonia Playground to left) looking east toward the proposed East New York Yard site (subway elevated 3- and 4- line)

2

Figure 6.4-1
Visual Resources
East New York Yard



View through Livonia Playground from Powell Street,
looking east toward the proposed East New York Yard site

3

Figure 6.4-2
Visual Resources
East New York Yard

FRESH POND YARD, MASPETH YARD

This portion of the study area in Queens comprises three basic landscapes: urban residential areas, urban neighborhood commercial corridors (streetscapes), and small areas of light industry/manufacturing. There are, in addition, several neighborhood parks and other open space (e.g., cemeteries) that contribute to the aesthetic character of their surroundings.

The industrial areas comprise a mix of large and small lots, many of which are irregular, some of which may be built out almost entirely with large-footprint buildings, while others may be unbuilt and used for parking and outdoor storage of equipment and containers. Warehousing is common throughout the area and many buildings do not exceed two stories in height. The street pattern throughout the industrial area is irregular, owing to the large lots, the proximity to Newtown Creek, regional roadways that bisect the study area, and large cemeteries in this part of Queens. Maspeth Yard is an integral part of this industrial landscape.

The residential landscape components that extend into the study area represent a more regular street pattern, though these residential edges also reflect the irregular patterns of the industrial areas and respond to the many regional roadways that intersect the neighborhoods at a variety of angles. The aesthetic character of these residential neighborhoods is generally revealed through the local streetscapes, whether there are street trees in some areas, front yards and stoops, and building design elements and street wall definition that contribute to the neighborhood streetscapes.

The commercial landscape in the study area is slight, represented by neighborhood commercial corridors following the regional roadways. Fresh Pond Yard contributes to this landscape, though as a peripheral element defining the edges between residential areas and cemeteries, interjecting a widening of the division between residential areas that is already caused by rail.

Giving broad consideration to aesthetic conditions, the secondary study area traverses a largely residential landscape. The neighborhoods surrounding the study area and extending into it are built according to a street pattern that is primarily a regular grid, though regional highways introduce curvilinear elements and obstructions to the regular grid. Views toward the project area vary, as some streets have straight and direct views to and past the rail line, while others may be interrupted by parks and cemeteries as well as highway infrastructure. The aesthetic character of these predominantly single-family residential urban neighborhoods is generally revealed through the local streetscapes, whether there are street trees in some areas, front yards and stoops, and building design elements and street wall definition that contribute to the neighborhood streetscapes. The presence of the rail in the project area is not a defining feature, nor is it part of a larger industrial or transportation landscape element that dominates the surrounding neighborhoods. Neighborhood commercial uses define several of the streetscapes in the vicinity of the study area, some crossing the rail line, such as 31st Street in Astoria, and Northern Boulevard, 37th Avenue, and Greenpoint Avenue in the middle of the study area. Many blocks of these streetscapes are bustling throughout the day and evening with pedestrian activity as well as automobile traffic.

Viewer groups include residents, as well as some workers and shoppers along the commercial corridors. All viewer groups experience the visual environs of the area, whether by traveling through it, working in it, or living in it. The focus of activity within commercial corridors tends to be localized, with workers and shoppers, including pedestrians, moving from store to store, or in some cases driving to commercial destinations. As the rail line is not a definitive feature of the area, it does not command broad attention throughout the study area, and so it is unlikely that

viewer groups within commercial areas with views of it are sensitive to its contribution to the landscape. Residents, likewise, experience their neighborhoods primarily through the streetscape, which varies in form and character from one neighborhood to another; while they may be sensitive to changes to the streetscape, they are not likely sensitive to the form or activities associated with the rail corridor itself. In large part, this is due to the fact that neighborhoods surrounding the rail corridor have developed in accordance with its presence, making it merely an acknowledgeable landscape feature.

Viewer sensitivity to change in the area is limited, primarily by the predominance of this industrial landscape that defines the Newtown Creek border between Brooklyn and Queens. Other land uses have developed around this historically industrial area, and only large-scale changes to land use patterns would likely be perceptible to any viewer as representing a change to the landscape. Residents experience their neighborhoods primarily through the streetscape, which varies in form and character from one neighborhood to another; while they may be sensitive to changes to the streetscape, they are not likely sensitive to the form or activities associated with the rail corridor itself. Residential users are broadly separated from Maspeth Yard, with no visual connectivity to the yard. Where there is visibility of the Fresh Pond Yard from surrounding areas, the views are limited to portions of the yard, which resembles a simple widening of rail line at many locations.

OAK POINT YARD AND HUNTS POINT

This Bronx study area comprises three basic landscape types: industrial/rail yard, park, and urban residential areas.

Oak Point Yard and Hunts Point and the industrial areas that immediately surround them define this portion of the South Bronx waterfront. Industrial areas comprise a mix of large and small lots, generally following a regular street grid. Some lots are built out almost entirely with large-footprint buildings, while others may be un-built and used for parking and outdoor storage of equipment and containers. Warehousing is common throughout the area and many buildings do not exceed two or three stories in height.

The residential landscape components that extend into the study area are largely separated from the industrial uses by the elevated Major Deegan Expressway and the Bruckner Expressway, however some residential uses are present outside of the Hunts Point study area to the north, between Oak Point Avenue and the Bruckner Expressway. These neighborhoods represent a regular street pattern. The aesthetic character of these residential neighborhoods is generally revealed through the local streetscapes, whether there are street trees in some areas, front yards and stoops, and building design elements and street wall definition that contribute to the neighborhood streetscapes. Those residences south of the elevated roadways and nearer the rail yards are part of mixed-use streetscapes, which are less residential in character than streetscapes found in areas north and inland.

The Randall's Island and Wards Island parks comprise nearly half the length of the Bronx study area. Though physically separated from Oak Point Yard and Hunts Point by large expanse of the East River, there is visual connectivity between some parts of these parks and the industrial south Bronx waterfront. The integrity of each landscape, however, is not encroached upon by the other; the character of the Bronx waterfront is appreciable from within the park but does not define the character of the park.

Viewer groups include workers throughout the industrial portions of the study area along the Bronx waterfront, including the rail yards; drivers on area roadways; some residents; and some

park users. All viewer groups experience the visual environs of the area, whether by traveling through it, working in it, or living in it, or spending leisure time in the area (park). The workers, present in the study area during working hours, would be among the least sensitive to changes in the visual environment, as such changes potentially resulting from the proposed project would be the alteration of (but not elimination of) industrial forms and activities. Workers in this area tend to be highly attentive to the work at hand and therefore less sensitive to the quality of the visual environment around them except as a matter of ensuring a safe working environment.

Residents experience their neighborhoods primarily through the streetscape, which varies in form and character from one neighborhood to another; while they may be sensitive to changes to the streetscape, they are not likely sensitive to the form or activities associated with the rail yards or industrial waterfront. Residential users are generally separated from Oak Island Yard and Harlem River Yard, with little to no visual connectivity to the yards. Sensitivity to change in the area is limited, primarily by the established presence of the industrial waterfront and the physical and visual separation between it and residential areas north by the elevated roadway structures. Park users at the northern end of Randall's Island park, having direct views to the South Bronx waterfront, would likely be enjoying use of the ball fields located there, and when actively engaged in sporting activity would not likely be sensitive to changes to the industrial waterfront to the north or to the massive rail infrastructure that crosses over the island.

LONG ISLAND FACILITIES

Broadly considering the aesthetic conditions along the Long Island Rail Road (LIRR) Main Line leading out of Fresh Pond Yard, the residential landscape may be characterized as single-family residential neighborhoods. Throughout most of these neighborhoods, the presence of the rail in the project area is not a defining feature, nor is it part of a larger industrial or transportation landscape element that dominates the surrounding neighborhoods. Neighborhood commercial uses are present along certain streets, such as Metropolitan Avenue or 87th Street, which intersect the study area. These streetscapes are busy throughout the day, though generally with more automobile traffic and less pedestrian activity than would be found in northern Queens or other urban residential neighborhoods.

Jamaica Avenue, which runs parallel to and just north of the rail line throughout much of the Queens portion of the study area, represents an interruption to the residential character. It includes residential uses as well as a mix of commercial and light industrial uses. Residences along Jamaica Avenue tend to be multi-family, rather than single-family, which is otherwise more common. Within Jamaica Center, Jamaica Avenue is the core of a major commercial area that is centered on and expands out from the rail. This area is vibrant with commercial activity, pedestrians and automobiles.

The mixed-use pattern characteristic of Queens in the study area continues on through the western portion of Long Island in the study area. However, much of the study area on Long Island comprises suburban residential neighborhoods, with some built according to a regular street grid, and others built according to a curvilinear pattern unique to each particular development. Lots tend to be larger, and a sense of openness defines many of the suburban streetscapes; as many homes have large yards, relative to urban residential neighborhoods, the character of the streetscapes represents a mix of uniformity and individuality, varying among suburban neighborhoods. Some suburban neighborhoods, particularly older ones, represent variety in landscaping and building styles, while many newer ones represent homogeneity in building style and property appearance. Portions of suburban neighborhoods are present within about 1,000 feet of all three rail yard sites.

Industrial areas on Long Island may appear near rail or may be oriented toward trucking activity and be developed as industrial campuses, areas that are subdivided and platted according to a pattern similar to a residential neighborhood, with blocks and drives, but generally larger lots. Both Pilgrim Intermodal Terminal and Brookhaven Rail Terminal are near such industrial neighborhoods.

Natural areas are common landscape features on Long Island, including large state and local conservation areas. Some of these are present within 1,000 feet of each of the rail yard sites. These areas tend to be non-maintained natural areas, usually wooded; on the largely flat terrain of Long Island, these are generally viewed from the regional roadway network.

Viewer groups include workers throughout the study area, drivers on area highways, as well as residents (in the residential areas). All viewer groups experience the visual environs of the area, whether by traveling through it, working in it, or living in it.

In those areas that are highly commercial, such as Jamaica Center, the focus of activity within tends to be localized, with workers and shoppers, including pedestrians, moving from store to store, or in some cases driving to commercial destinations. The same is true for some of the less intensive commercial corridors such as Metropolitan Avenue. In these cases, the rail line is experienced by drivers meeting with a rail crossing or irregularities in the street grid, where rail crossings are absent. The rail line is not a definitive feature for most of the study area, and so it is unlikely that viewer groups within commercial areas with views of it are sensitive to its contribution to the landscape.

Residents, likewise, experience their neighborhoods primarily through the streetscape, which varies in form and character from one neighborhood to another; while they may be sensitive to changes to the streetscape, they are not likely sensitive to the form or activities associated with the rail corridor itself. The inward-oriented design of many suburban residential subdivisions further separates their streetscapes from the regional landscape, and in many instances this may be an intentional attempt to buffer the residential viewer groups from the pre-existing rail and highway infrastructure on Long Island.

Whether the workers are within an industrial environment adjacent to the rail or within an industrial neighborhood, it is unlikely that they are sensitive to changes in the visual quality of their environment, so long as those changes do not represent diminished safety or convenience and efficiency of operations. The workers, present in the study area during working hours, would be among the least sensitive to changes in the visual environment, as such changes potentially resulting from the proposed project would be the alteration of (but not elimination of) industrial forms and activities.

D. POTENTIAL EFFECTS FROM THE NO ACTION AND BUILD ALTERNATIVES

This section presents a discussion of potential effects to visual and aesthetic conditions that may result from the Build Alternatives. A description of the No Action Alternative is also provided to allow comparison among conditions with and without the CHFP.

A key function of this Tier I EIS is to identify geographic areas that may be determined sensitive to project-related changes to visual and aesthetic conditions. While the project as a whole, regardless of alternative, does not represent a substantial change to visual and aesthetic conditions over the entire project area, potential effects may be identifiable, within smaller geographic areas (e.g., the study areas, described previously).

For a transportation project such as the CHFP, which relies heavily on existing infrastructure, effects to visual and aesthetic conditions identifiable within the study areas may include the following:

- Direct changes in land use, such as through yard expansion (land acquisition);
- Changes to land forms, including changes to grade or elevation through the construction of cuts, berms, etc.;
- Alteration of existing structures, particularly vertical structures such as raising overhead bridges to increase rail clearance heights; removal of structures from the landscape, such that open vistas are created (i.e., removal of visual buffers);
- Introduction of new vertical structures, including new signal structures, tunnel ventilation towers, bridges, yard fencing and other facility structures;
- Project-related activities or operations that would result in the ongoing presence of temporary (e.g., non-fixed) vertical elements, such as stacking of containers in storage yards, the “storing” of trains, the presence of cranes or other large equipment, or introduction of new nighttime lighting; and
- Changes to the visual quality of neighborhoods and streetscape design through landscaping, signage, decorative lighting, street trees, provision of furniture and other public amenities, or where there would be changes to street patterns, block forms, or building massing or distribution attributable to the proposed project (potentially the result of land acquisition or creation of new land forms, such as covering existing cuts, or also potentially the result of identified mitigation, such as creation of new public open space).

Details regarding property acquisitions are not known at this time, and locations of vertical structures, though generally identified, have not been specified, nor are designs available. Typological characteristics of new structures are assumed, and to the extent locations for physical changes can be assumed, they are so noted. As such, effects to visual quality and aesthetic conditions are presented in a generalized manner in this Tier I EIS; it is anticipated that detailed assessment of changes to visual quality and aesthetic conditions, may be required in subsequent environmental review when more detailed design information is available.

This section is broadly organized according to the Build Alternatives. Potential impacts or issues to be examined further are identified according to study areas, and rail yards and points of infrastructure improvement, specifically. Where changes are expected to the visual and aesthetic conditions, the likely viewer groups and their sensitivities to changes in the visual environs are considered to determine likely significance of such effects. In this way, changes to visual and aesthetic conditions attributable to the CHFP may be presented as clearly and efficiently as possible, facilitating comparison of alternatives.

OPERATIONAL EFFECTS

NO ACTION ALTERNATIVE

Under the No Action Alternative, the proposed project would not be implemented, although improvements to properties and areas on which one or more proposed project alternative may rely are anticipated in the future without the project. Specifically, as described in Chapter 4, “Alternatives,” under the No Action Alternative there would be several changes to the operations or improvements at Greenville Yard and 65th Street Yard. These changes, comprising the construction of up to two new transfer bridges and new track work in Greenville Yard and

improvements to 65th Street Yard with new railcar float service to and from the existing 65th Street transfer bridges, would not constitute changes to the visual character of these areas or their surrounding environs. These structural improvements would be in keeping with existing rail- and freight transport-related character of these properties and study areas under existing conditions, and the operations would not be expected to introduce changes to the visual environment. No substantial changes to parks, playgrounds or other visual resources are anticipated. Therefore future visual and aesthetic conditions in the study areas without the proposed project would resemble existing conditions.

WATERBORNE ALTERNATIVES

Enhanced Railcar Float Alternative

Visual Effects Associated with Changes to Land Use

West-of-Hudson

Greenville Yard

As described in Chapter 6.1, Greenville Yard would be utilized as the western terminus of the Enhanced Railcar Float Alternative, which would add another float bridge to the float system constructed under the No Action Alternative. This addition would not be expected to represent a substantial change from existing visual and aesthetic conditions at the location. The aesthetic and visual conditions of the yard would therefore resemble existing conditions and the No Action Alternative.

East-of-Hudson

65th Street Yard

It is anticipated that the existing yard would be expanded by approximately 7.5 acres to support yard operations under the Enhanced Railcar Float Alternative. On-site improvements under this alternative may include the construction of one additional float bridge and support track, in addition to the No Action Alternative. The land uses in this location are industrial and related to freight-handling. These infrastructure changes would not be expected to represent a substantial change from existing visual and aesthetic conditions at the location. The aesthetic and visual conditions of the 65th Street Rail Yard would therefore resemble existing conditions and the No Action Alternative.

Oak Point Yard

It is anticipated that the existing Oak Point Yard would be expanded to support yard operations under the Enhanced Railcar Float Alternative, however the size of the expansion is not determined at this time. The land uses in this location are light and heavy industry, many related to freight-handling that characterizes this area of the South Bronx waterfront. The acquisition of property and expansion of yard facilities at this location would be expected to result in no changes to the visual and aesthetic conditions of the site or in the surrounding study area.

Fresh Pond Yard

It is anticipated that additional area may be required southeast of the Fresh Pond Yard, to improve the curve on the east leg of the Fresh Pond Yard wye to facilitate current yard operations and to accommodate the trains anticipated with the Enhanced Railcar Float Alternative. Preliminary estimates indicate that approximately 3.5 acres outside the existing right-of-way may be required at this location. The acquisition of property and expansion of yard facilities at this location would be expected to result in no changes to the visual and aesthetic conditions of the site or in the surrounding study area.

Maspeth Yard

To accommodate the Enhanced Railcar Float Alternative, Maspeth Yard would be expanded by approximately 15 acres to handle bulk and intermodal freight. In the case where the Enhanced Railcar Float Alternative is developed as a carload-only option (see Chapter 4, “Alternatives”), the required expansion would be smaller than 15 acres. The land uses in this location are light and heavy industry and warehousing. The acquisition of property and expansion of yard facilities at this location would be expected to result in no changes to the visual and aesthetic conditions of the site or in the surrounding study area.

Introduction of New Vertical Structures

Based on the preliminary design concepts currently available, it is not known specifically what types of rail-related vertical structures (such as signal towers) may be required or where they may be located, either within facilities such as rail yards or throughout the remainder of the project area. No major structures (such as new bridges, tunnel ventilation towers, etc.) would be required with the Enhanced Railcar Float Alternative. Additional consideration of new vertical structures may be required in subsequent environmental review when pertinent information would be available. However, it is not anticipated at this time that the addition of new vertical structures would result in substantial adverse impacts on visual and aesthetic conditions.

Changes to Existing Vertical Structures

The Enhanced Railcar Float would require minor adjustments to clearance heights along the Bay Ridge Branch and Montauk Branch of the LIRR between Fresh Pond Yard and West Maspeth. Although modifications to the overhead bridges spanning the Bay Ridge Branch would likely be required to achieve the clearances necessary for modern rail freight equipment to pass through, it is anticipated that this would be accomplished by undercutting the bridges, rather than raising the structures. It is anticipated that some rail bridges serving the project may require replacement or improvement to ensure proper load-bearing capacity for the project trains. It is anticipated that pertinent design information would be available for consideration in subsequent environmental reviews. However, it is not anticipated at this time that changes to overhead bridges or project-rail bridges would result in substantial changes to height or bulk of bridge structures, compared to No Action conditions, and so it is unlikely that adverse impacts on visual and aesthetic conditions would result.

Operational Changes (Ongoing Temporary Vertical Elements and Lighting)

All facilities supporting Enhanced Railcar Float Alternative would require some level of nighttime lighting, both for security and also to support round the clock operations of the railway. Further consideration of the visual effects of nighttime lighting at yards may be necessary as part of subsequent environmental reviews.

Changes to Urban Design and the Visual Quality of the Streetscape

It is possible that any property acquisition related to the expansion or establishment of freight handling support facilities may affect mapped streets, such as by closing them, or extend to within the street right-of-way, thus affecting sidewalks, curbs, street furniture, street trees and landscaping and even public on-street parking, where present. Additional consideration to potential changes to streetscapes and urban design may be required in subsequent environmental review.

Truck Ferry Alternative

Visual Effects Associated with Changes to Land Use West-of-Hudson.

Port Newark/Port Elizabeth

Similarly, Port Newark/Port Elizabeth may be utilized as a western terminus for the Truck Ferry Alternative, which would require the installation of similar infrastructure as described above. Terminals required to support operations under these alternatives would be approximately 10 acres and may be accommodated at existing waterfront facilities and therefore are not expected to represent a substantial change from existing visual and aesthetic conditions at the location.

East-of-Hudson

SBMT

As described in Chapter 6.1, “Land Use, Neighborhood Character, and Social Conditions,” the South Brooklyn Marine Terminal may be utilized as one of the eastern termini for the Truck Ferry Alternative. Terminals required to support operations under these alternatives would be approximately 10 acres and would include infrastructure that is in line with the industrial nature of the area: vehicle ramps, truck staging and parking areas, reach stackers, forklifts, mobile cranes, etc. The addition of this infrastructure would not be expected to represent a substantial change from existing visual and aesthetic conditions at the location.

51st Street Yard

Similarly, 51st Street Yard may be utilized as one of the eastern termini for the Truck Ferry Alternative. The addition of the infrastructure required to support these alternatives would be in line with existing uses of the Brooklyn waterfront in this area not be expected to represent a substantial change from existing visual and aesthetic conditions at the location.

65th Street Yard

65th Street Yard may also be used a terminus under the Truck Ferry Alternative, which would require the infrastructure and equipment identified above under SBMT and 51st Street Yard. The land uses in this location are industrial and related to freight-handling. These infrastructure changes would not be expected to represent a substantial change from existing visual and aesthetic conditions at the location. The aesthetic and visual conditions of the 65th Street Rail Yard would therefore resemble existing conditions and the No Action Alternative.

Oak Point Yard

Some expansion of Oak Point Yard (approximately 10 acres) may also be required to accommodate the Truck Ferry Alternative, which may use this yard as an eastern terminus. The land uses in this location are light and heavy industry, many related to freight-handling that characterizes this area of the South Bronx waterfront. The acquisition of property and expansion of yard facilities at this location would be expected to result in no changes to the visual and aesthetic conditions of the site or in the surrounding study area.

Hunts Point

Similarly, the Truck Ferry Alternative that may use the Hunts Point Yard area as an eastern terminus (necessitating a terminal of approximately 10 acres) would require the installation of infrastructure such as truck ramps, staging areas, etc. However, these infrastructure elements would not be out of character with the industrial waterfront in this area of the South Bronx.

Maspeth Yard

For the Truck Ferry Alternative, Maspeth Yard would be improved with the necessary infrastructure to accommodate this alternative and to accommodate a terminal of approximately

10 acres. The land uses in this location are light and heavy industry and warehousing. The acquisition of property and expansion of yard facilities at this location would be expected to result in no changes to the visual and aesthetic conditions of the site or in the surrounding study area.

Introduction of New Vertical Structures

Based on the preliminary design concepts no new vertical structures are expected with the Truck Ferry Alternative. Additional consideration of new vertical structures may be required in subsequent environmental review when pertinent information would be available. However, it is not anticipated at this time that the addition of new vertical structures would result in substantial adverse impacts on visual and aesthetic conditions

Changes to Existing Vertical Structures

Based on the preliminary design concepts no modifications of existing vertical structures are expected with the Truck Ferry Alternative. Additional consideration of new vertical structures may be required in subsequent environmental review when pertinent information would be available. However, it is not anticipated at this time that the addition of new vertical structures would result in substantial adverse impacts on visual and aesthetic conditions

Operational Changes (Ongoing Temporary Vertical Elements and Lighting)

All facilities supporting the Waterborne Alternatives, including the Truck Ferry Alternative would require some level of night-time lighting, both for security and also to support round the clock operations. Further consideration of the visual effects of nighttime lighting at yards may be necessary as part of subsequent environmental reviews.

Changes to Urban Design and the Visual Quality of the Streetscape

It is possible that any property acquisition related to the expansion or establishment of freight handling support facilities may affect mapped streets, such as by closing them, or extend to within the street right-of-way, thus affecting sidewalks, curbs, street furniture, street trees and landscaping and even public on-street parking, where present. Additional consideration to potential changes to streetscapes and urban design may be required in subsequent environmental review.

Truck Float Alternative

Visual Effects Associated with Changes to Land Use

West-of-Hudson

Port Newark/Port Elizabeth

Similarly, Port Newark/Port Elizabeth may be utilized as a western terminus for the Truck Float Alternative, which would require the installation of similar infrastructure as described above. Terminals required to support operations under these alternatives would be approximately 10 acres however, the facility would integrate with existing freight handling land uses in the area and would not be expected to represent a substantial change from existing visual and aesthetic conditions at the location.

East-of-Hudson

SBMT

As described in Chapter 6.1, “Land Use, Neighborhood Character, and Social Conditions,” the South Brooklyn Marine Terminal may be utilized as one of the eastern termini for the Truck Float Alternative. Terminals required to support operations under these alternatives would be approximately 10 acres and would include infrastructure that is in line with the industrial nature of the area: vehicle ramps, truck staging and parking areas, reach stackers, forklifts, mobile

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cranes, etc. The addition of this infrastructure would not be expected to represent a substantial change from existing visual and aesthetic conditions at the location.

51st Street Yard

Similarly, 51st Street Yard may be utilized as one of the eastern termini for the Truck Float Alternative. The addition of the infrastructure required to support these alternatives would be in line with existing uses of the Brooklyn waterfront in this area not be expected to represent a substantial change from existing visual and aesthetic conditions at the location.

65th Street Yard

65th Street Yard may also be used a terminus under the Truck Float Alternative, which would require the infrastructure and equipment identified above under SBMT and 51st Street Yard. The land uses in this location are industrial and related to freight-handling. These infrastructure changes would not be expected to represent a substantial change from existing visual and aesthetic conditions at the location. The aesthetic and visual conditions of the 65th Street Rail Yard would therefore resemble existing conditions and the No Action Alternative.

Oak Point Yard

Some expansion of Oak Point Yard may also be required to accommodate the Truck Float Alternative, which may use this yard as an eastern terminus. The land uses in this location are light and heavy industry, many related to freight-handling that characterizes this area of the South Bronx waterfront. The acquisition of property and expansion of yard facilities at this location would be expected to result in no changes to the visual and aesthetic conditions of the site or in the surrounding study area.

Hunts Point

Similarly, the Truck Float Alternative that may use the Hunts Point Yard area as an eastern terminus would require the installation of infrastructure such as truck ramps, staging areas, etc. However, these infrastructure elements would not be out of character with the industrial waterfront in this area of the South Bronx.

Maspeth Yard

For the Truck Float Alternative, Maspeth Yard would be improved with the necessary infrastructure to accommodate this alternative, as described above. The land uses in this location are light and heavy industry and warehousing. The acquisition of property and expansion of yard facilities at this location would be expected to result in no changes to the visual and aesthetic conditions of the site or in the surrounding study area.

Introduction of New Vertical Structures

Based on the preliminary design concepts no new vertical structures are expected with the Truck Float Alternative. Additional consideration of new vertical structures may be required in subsequent environmental review when pertinent information would be available. However, it is not anticipated at this time that the addition of new vertical structures would result in substantial adverse impacts on visual and aesthetic conditions

Changes to Existing Vertical Structures

Based on the preliminary design concepts no modifications of existing vertical structures are expected with the Truck Float Alternative. Additional consideration of new vertical structures may be required in subsequent environmental review when pertinent information would be available. However, it is not anticipated at this time that the addition of new vertical structures would result in substantial adverse impacts on visual and aesthetic conditions

Operational Changes (Ongoing Temporary Vertical Elements and Lighting)

All facilities supporting the Waterborne Alternatives, including the Truck Float Alternative would require some level of night-time lighting, both for security and also to support round the clock operations. Further consideration of the visual effects of nighttime lighting at yards may be necessary as part of subsequent environmental reviews.

Changes to Urban Design and the Visual Quality of the Streetscape

It is possible that any property acquisition related to the expansion or establishment of freight handling support facilities may affect mapped streets, such as by closing them, or extend to within the street right-of-way, thus affecting sidewalks, curbs, street furniture, street trees and landscaping and even public on-street parking, where present. Additional consideration to potential changes to streetscapes and urban design may be required in subsequent environmental review.

Lift On-Lift Off (LOLO) Container Barge Alternative

Visual Effects Associated with Changes to Land Use

West-of-Hudson

Greenville Yard

Greenville Yard may be used as a terminus under the LOLO Container Barge Alternative, which would require the installation of infrastructure that is in line with the industrial nature of the area: mobile harbor cranes, container storage area, tractor staging area, truck staging/parking areas, and access to highway truck routes. Approximately 15 acres would be required to support operations under this alternative; however, the facility would integrate with existing freight handling land uses in the area and would not be expected to represent a substantial change from existing visual and aesthetic conditions at the location.

Port Newark/Port Elizabeth

Similarly, Port Newark/Port Elizabeth may be utilized as a western terminus for this alternative, which would require the installation of similar infrastructure. Approximately 15 acres would be required to support operations under this alternative, however, the facility would integrate with existing freight handling land uses in the area and would not be expected to represent a substantial change from existing visual and aesthetic conditions at the location.

East-of-Hudson

SBMT

As described in Chapter 6.1, “Land Use, Neighborhood Character, and Social Conditions,” the South Brooklyn Marine Terminal may be utilized as one of the eastern termini for this alternative. Approximately 10-15 acres would be required to support operations under this alternative; however, the facility would integrate with existing freight handling land uses in the area and would not be expected to represent a substantial change from existing visual and aesthetic conditions at the location. The addition of this infrastructure and equipment required to operate this alternative would not be expected to represent a substantial change from existing visual and aesthetic conditions at the location.

51st Street Yard

Similarly, 51st Street Yard may be utilized as one of the eastern termini for this alternative. The addition of the infrastructure and equipment required to support this alternative would be in line with existing uses of the Brooklyn waterfront in this area and would not be expected to represent a substantial change from existing visual and aesthetic conditions at the location.

65th Street Yard

65th Street Yard may also be used as a terminus under this alternative, which would require the infrastructure and equipment identified above under SBMT and 51st Street Yard. The land uses in this location are industrial and related to freight-handling. The introduction of infrastructure and equipment required to operate this alternative would not be expected to represent a substantial change from existing visual and aesthetic conditions at the location. The aesthetic and visual conditions of the 65th Street Yard would therefore resemble existing conditions and the No Action Alternative.

Red Hook

As described in Chapter 6.1, “Land Use, Neighborhood Character, and Social Conditions,” Red Hook would be utilized as a terminus for both Container Barge Alternatives, which would require the construction of new bulkhead and fendering systems, vehicle ramps, truck staging/parking areas, and the addition of various facility equipment such as yard tractors, ramp, container chassis, reach stackers, forklifts, gate/office, and a maintenance facility. These infrastructure changes would not be expected to represent a substantial change from existing visual and aesthetic conditions at the location.

Introduction of New Vertical Structures

Based on the preliminary design concepts currently available, the LOLO Container Barge Alternative would require the addition of mobile cranes at the waterfront termini, however, these structures would resemble existing structures of the type found within the corridor. Additional consideration of new vertical structures may be required in subsequent environmental review when pertinent information would be available. However, it is not anticipated at this time that the addition of new vertical structures would result in substantial adverse impacts on visual and aesthetic conditions.

Changes to Existing Vertical Structures

Based on the preliminary design concepts no modifications of existing vertical structures are expected with this alternative. Additional consideration of new vertical structures may be required in subsequent environmental review when pertinent information would be available. However, it is not anticipated at this time that the addition of new vertical structures would result in substantial adverse impacts on visual and aesthetic conditions.

Operational Changes (Ongoing Temporary Vertical Elements and Lighting)

All facilities supporting the Waterborne Alternatives, including this alternative, would require some level of night-time lighting, both for security and also to support round the clock operations. Further consideration of the visual effects of nighttime lighting at yards may be necessary as part of subsequent environmental reviews.

Changes to Urban Design and the Visual Quality of the Streetscape

It is possible that any property acquisition related to the expansion or establishment of freight handling support facilities may affect mapped streets, such as by closing them, or extend to within the street right-of-way, thus affecting sidewalks, curbs, street furniture, street trees and landscaping and even public on-street parking, where present. Additional consideration to potential changes to streetscapes and urban design may be required in subsequent environmental review.

Roll On-Roll Off (RORO) Container Barge Alternative

Visual Effects Associated with Changes to Land Use

West-of-Hudson

Greenville Yard

Greenville Yard may be used as a terminus under the RORO Container Barge Alternative, which would require the installation of infrastructure that is in line with the industrial nature of the area: mobile harbor cranes, container storage area, tractor staging area, truck staging/parking areas, and access to highway truck routes. Approximately 15 acres would be required to support operations under this alternative; however, the facility would integrate with existing freight handling land uses in the area and would not be expected to represent a substantial change from existing visual and aesthetic conditions at the location.

Port Newark/Port Elizabeth

Similarly, Port Newark/Port Elizabeth may be utilized as a western terminus for this alternative, which would require the installation of similar infrastructure. Approximately 15 acres would be required to support operations under this alternative; however, the facility would integrate with existing freight handling land uses in the area and would not be expected to represent a substantial change from existing visual and aesthetic conditions at the location.

East-of-Hudson

SBMT

As described in Chapter 6.1, “Land Use, Neighborhood Character, and Social Conditions,” the South Brooklyn Marine Terminal may be utilized as one of the eastern termini for this alternative. Approximately 15 acres would be required to support operations under this alternative; however, the facility would integrate with existing freight handling land uses in the area and would not be expected to represent a substantial change from existing visual and aesthetic conditions at the location. The addition of this infrastructure and equipment required to operate this alternative would not be expected to represent a substantial change from existing visual and aesthetic conditions at the location.

51st Street Yard

Similarly, 51st Street Yard may be utilized as one of the eastern termini for this alternative. The addition of the infrastructure and equipment required to support this alternative would be in line with existing uses of the Brooklyn waterfront in this area and is not expected to represent a substantial change from existing visual and aesthetic conditions at the location.

65th Street Yard

65th Street Yard may also be used as a terminus under this alternative, which would require the infrastructure and equipment identified above under SBMT and 51st Street Yard. The land uses in this location are industrial and related to freight-handling. The introduction of infrastructure and equipment required to operate this alternative would not be expected to represent a substantial change from existing visual and aesthetic conditions at the location. The aesthetic and visual conditions of the 65th Street Yard would therefore resemble existing conditions and the No Action Alternative.

Red Hook

As described in Chapter 6.1, “Land Use, Neighborhood Character, and Social Conditions,” Red Hook would be utilized as a terminus for both Container Barge Alternatives, which would require the construction of new bulkhead and fendering systems, vehicle ramps, truck staging/parking areas, and the addition of various facility equipment such as yard tractors, ramp,

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container chassis, reach stackers, forklifts, gate/office, and a maintenance facility. These infrastructure changes would not be expected to represent a substantial change from existing visual and aesthetic conditions at the location.

Introduction of New Vertical Structures

Based on the preliminary design concepts currently available, this alternative would not require the introduction of major new vertical structures. Additional consideration of new vertical structures may be required in subsequent environmental review when pertinent information would be available. However, it is not anticipated at this time that the addition of new vertical structures would result in substantial adverse impacts on visual and aesthetic conditions.

Changes to Existing Vertical Structures

Based on the preliminary design concepts no modifications of existing vertical structures are expected with this alternative. Additional consideration of new vertical structures may be required in subsequent environmental review when pertinent information would be available. However, it is not anticipated at this time that the addition of new vertical structures would result in substantial adverse impacts on visual and aesthetic conditions.

Operational Changes (Ongoing Temporary Vertical Elements and Lighting)

All facilities supporting the Waterborne Alternatives, including this alternative, would require some level of night-time lighting, both for security and also to support round the clock operations. Further consideration of the visual effects of nighttime lighting at yards may be necessary as part of subsequent environmental reviews.

Changes to Urban Design and the Visual Quality of the Streetscape

It is possible that any property acquisition related to the expansion or establishment of freight handling support facilities may affect mapped streets, such as by closing them, or extend to within the street right-of-way, thus affecting sidewalks, curbs, street furniture, street trees and landscaping and even public on-street parking, where present. Additional consideration to potential changes to streetscapes and urban design may be required in subsequent environmental review.

RAIL TUNNEL ALTERNATIVES

Rail Tunnel Alternative

Visual Effects Associated with Changes to Land Use

West-of-Hudson

Oak Island Yard

It is anticipated that the existing yard would be expanded by approximately 50 acres to support yard operations under the Rail Tunnel Alternative. Direct effects to the industrial, manufacturing, and commercial land uses surrounding this facility would be expected result of property acquisition and would be investigated further in subsequent environmental review. It is unlikely that broader land use patterns or development trends in the area would be affected since the expanded facility would be in line with land use at the existing facility and the industrial and transportation-related nature of the area. Therefore, it is expected that changes to the visual and aesthetic conditions on property to be acquired at Oak Island Yard would not be substantial as it would be in line with existing uses at the yard and in the surrounding area.

Greenville Yard

As described in Chapter 4, the western tunnel portal for all Rail Tunnel Alternatives would be located south of Greenville Yard. Potential effects from the introduction of the tunnel portal are

discussed below. The land uses in this area are light and heavy industry, many related to freight-handling, and therefore aesthetic and visual conditions in the area would continue to resemble existing conditions and the No Action Alternative.

East-of-Hudson

65th Street Yard

It is anticipated that the existing yard would be expanded by approximately 7.5 acres to support yard operations under the Rail Tunnel Alternative. The aesthetic and visual conditions of the 65th Street Yard would continue to resemble existing conditions and the No Action Alternative; therefore, no visual effects are expected from this expansion.

East New York Yard

As described in Chapter 6.1, some of the Rail Tunnel Alternatives, including this alternative, would require an expansion of this site for storage and sidings and potentially as a file/toupee facility. Land uses in this area are mixed and include industrial, commercial and residential uses. Local effects to visual and aesthetic conditions are likely as result of property acquisition. Many of the properties surrounding the yard are industrial in character and do not contribute positively to the visual quality of the surrounding streetscapes or neighborhood; their conversion would not generally represent a wholesale change to land use. However, they currently stand as buffer between the existing rail corridor and the residential portions of the neighborhood.

The change to the visual and aesthetic conditions of the properties comprising the acquisition and expansion area would be substantial but not necessarily adverse. Detailed assessment of potential impacts on visual and aesthetic conditions in the vicinity of the East New York Yard resulting from this alternative is expected to be undertaken when pertinent details are known regarding property acquisition and rail yard design.

For all of the Rail Tunnel Alternatives, including this alternative, vertical structures are likely to be introduced to the East New York Yard site; however, these structures could include perimeter fencing, platforms on to facilitate loading and unloading of containers by truck, towers in communications systems, and likely a single story structure serving as an attendants booth/office for a weigh station. These vertical structures would not be expected to be of substantial height and bulk, especially within the visual context attributable to the change of the land use on the property, as noted above. Therefore, it is expected that the introduction of new vertical elements at the East New York Yard site would not constitute substantial effects to visual and aesthetic conditions.

Fresh Pond Yard

All of the Rail Tunnel Alternatives, including this alternative, would require the same improvement to the east leg of the Fresh Pond wye. Preliminary estimates indicate that approximately 3.5 acres outside the existing right-of-way may be required at this location; however, the aesthetic and visual conditions of the Fresh Pond Yard would resemble existing conditions and the No Action Alternative.

Maspeth Yard

It is anticipated that the existing yard would be expanded by approximately 60 acres to handle bulk and intermodal freight under the Rail Tunnel Alternative. The land uses in this location are light and heavy industry, many related to freight-handling and therefore no substantial changes the visual character or aesthetic conditions would be expected to result with this property acquisition.

Oak Point Yard

It is anticipated that the existing yard would be expanded by approximately 9 acres to support yard operations under the Rail Tunnel Alternatives, including this alternative. The acquisition of property and expansion of yard facilities at this location would be expected to result in no changes to the visual and aesthetic conditions of the site or in the surrounding study area.

Introduction of New Vertical Structures

All of the Rail Tunnel Alternatives would require ventilation shafts that would rise vertically from grade, in the form of tower buildings. For this evaluation it is assumed that two ventilation towers approximately 50 to 60 feet in height would be located in New Jersey and in Brooklyn. The New Jersey ventilation tower would be located near Greenville Yard. In Brooklyn the ventilation tower would likely be located near 65th Street Yard. Though of a moderate height (about 6 stories), the placement of these towers at these locations where there are no substantial building groups surrounding them, would mean that they would be visible from points within the study area. It is unlikely that the viewer groups, including workers and drivers would be sensitive to these changes in the industrial visual environs in which the towers would be situated. No important views would be blocked, nor would the towers alter any skyline feature or generally contribute to a substantial change in visual conditions.

The portals would be of functional design, without ornamentation or surrounding support structures (as may be found associated with highway tunnels in New York City). In effect they represent changes in grade, and the visibility of tracks outside the tunnel above ground. The portal on the New Jersey end of the tunnel would likely be located south of Greenville Yard. In Brooklyn, the portal would be located within the existing Bay Ridge Branch rail right-of-way between 11th and 13th avenues.

Based on the conceptual alignment for this Tier I EIS, it is not known specifically what other types of rail-related vertical structures (such as signal towers) may be required or where they may be located, either within rail yards or throughout the remainder of the project area. It is anticipated that any such new vertical structures would resemble existing structures of the type found within the corridor, and would likewise be located within the right-of-way and neither detract from nor substantially contribute to the visual quality of the rail infrastructure or surrounding areas.

Additional consideration of new vertical structures may be required in subsequent environmental review when pertinent information would be available. Given the information available at this time, it is expected that no adverse impacts on visual or aesthetic conditions would result from the introduction of new vertical elements into the landscape as part of the Rail Tunnel Alternatives.

Changes to Existing Vertical Structures

Based on the preliminary design concepts currently available the only existing vertical structures that may be affected by the Rail Tunnel Alternatives, including this alternative, may be rail bridges. Although modifications to the overhead bridges spanning the Bay Ridge Branch would likely be required to achieve the clearances necessary for modern rail freight equipment to pass through, it is anticipated that this would be accomplished by undercutting the bridges, rather than raising the structures. It is anticipated that some rail bridges serving the project may require replacement or improvement to ensure proper load-bearing capacity for the project trains. It is anticipated that pertinent design information would be available for consideration in subsequent environmental reviews. However, it is not anticipated at this time that changes to overhead bridges or project-rail bridges would result in substantial changes to height or bulk of bridge

structures, compared to No Action conditions, and so it is unlikely that adverse impacts on visual and aesthetic conditions would result.

Operational Changes (Ongoing Temporary Vertical Elements and Lighting)

Temporary or non-fixed vertical structures that may be present on an on-going basis, such as cranes or similar large equipment, would be expected for all of the Rail Tunnel Alternatives.

Given the general character of the study area these onsite activities would not be visible from residential areas or community facilities. It is expected that the equipment and containers associated with intermodal operations at Oak Island Yard, especially if that location is developed as a fillet/toupee facility, would be perceptible primarily to automobile drivers on the I-78 expressway. Given their attention to highway driving and the existing visual and aesthetic conditions of the study area in this vicinity, which are defined by extensive areas of large-scale transportation infrastructure including rail, rail yards, highway, and EWR that dominate the landscape, it is expected that onsite operations would not constitute substantial changes to the visual and aesthetic conditions of the area.

The land uses surrounding Maspeth Yard are light and heavy industry, many related to freight-handling; no substantial changes the visual character or aesthetic conditions would result with the introduction of intermodal operations, particularly given the lack of proximate viewer groups (there are no nearby residential areas or parks).

Regarding lighting, it is anticipated that all facilities supporting the Rail Tunnel Alternatives would require some level of night-time lighting, both for security and also to support round the clock operations of the railway. Further consideration of the visual effects of nighttime lighting at yards may be necessary as part of subsequent environmental reviews.

Changes to Urban Design and the Visual Quality of the Streetscape

As noted above, information available at this time indicates that the Rail Tunnel Alternatives would not be expected to result in visual effects related to changes in land use, including within the identified yard expansion areas where property acquisitions are anticipated. Details regarding property acquisitions are not known at this time, and so it is likely that additional consideration to potential changes to streetscapes and urban design may be required in subsequent environmental review. It is possible that any acquisition considered may affect mapped streets, such as by closing them, or extend to within the street right-of-way, thus affecting sidewalks, curbs, street furniture, street trees and landscaping and even public on-street parking, where present. Based on preliminary “worst-case” acquisitions information, it is anticipated that changes to urban design and the visual quality of the streetscape as a result of the Rail Tunnel Alternatives would not be substantial.

It is anticipated that design information pertaining to the potential visual effects resulting from intermodal operations at a Long Island facility may be subject to separate environmental review. In particular, the intermodal facility on Long Island, like the similar facility at Maspeth Yard, would host cranes and other large equipment and be the site of container storage. It is anticipated that such an intermodal yard on Long Island would be of a larger size; however, potential impacts are dependent on its location and immediate surroundings, as well as operations, and therefore whether any such change would be significant or adverse cannot be determined at this time.

Rail Tunnel with Shuttle (“Open Technology”) Service Alternative

Visual Effects Associated with Changes to Land Use West-of-Hudson

The Rail Tunnel with Shuttle Service Alternative is nearly identical to the Rail Tunnel Alternative in its infrastructure requirements, except in the specific areas discussed below. Shuttle operations would require additional facilities beyond those of the Rail Tunnel Alternative. The west-of-Hudson terminal would be located at a suitable location outside of the Port District, such as the intermodal facility in Harrisburg, Pennsylvania (see Chapter 4, “Alternatives”).

Oak Island Yard

It is anticipated that the existing yard would be expanded by approximately 50 acres to support yard operations under this alternative, as with the Rail Tunnel Alternative. Direct effects to the industrial, manufacturing, and commercial land uses surrounding this facility would be expected result of property acquisition and would be investigated further in subsequent environmental review. It is unlikely that broader land use patterns or development trends in the area would be affected since the expanded facility would be in line with land use at the existing facility and the industrial and transportation-related nature of the area. Therefore, it is expected that changes to the visual and aesthetic conditions on property to be acquired at Oak Island Yard would not be substantial as it would be in line with existing uses at the yard and in the surrounding area.

Greenville Yard

As described in Chapter 4, “Alternatives,” the western tunnel portal for all Rail Tunnel Alternatives would be located south of Greenville Yard. Potential effects from the introduction of the tunnel portal are discussed below. The land uses in this area are light and heavy industry, many related to freight-handling, and therefore aesthetic and visual conditions in the area would continue to resemble existing conditions and the No Action Alternative.

East-of-Hudson

65th Street Yard

It is anticipated that the existing yard would be expanded by approximately 7.5 acres to support yard operations under this alternative, as with the Rail Tunnel Alternative. The aesthetic and visual conditions of the 65th Street Yard would continue to resemble existing conditions and the No Action Alternative and no visual effects are expected from this expansion.

East New York Yard

As described in Chapter 6.1, “Land Use, Neighborhood Character, and Social Conditions,” some of the Rail Tunnel Alternatives, including this alternative, would require an expansion of this site for storage and sidings and potentially as a file/toupee facility. Land uses in this area are mixed and include industrial, commercial and residential uses. Local effects to visual and aesthetic conditions are likely as result of property acquisition. Many of the properties surrounding the yard are industrial in character and do not contribute positively to the visual quality of the surrounding streetscapes or neighborhood; their conversion would not generally represent a wholesale change to land use. However, they currently stand as a buffer between the existing rail corridor and the residential neighborhood to the west.

The change to the visual and aesthetic conditions of the properties comprising the acquisition and expansion area would be substantial but not necessarily adverse. Detailed assessment of potential impacts on visual and aesthetic conditions in the vicinity of the East New York Yard

resulting from this alternative is expected to be undertaken when pertinent details are known regarding property acquisition and rail yard design.

For all of the Rail Tunnel Alternatives, including this alternative, vertical structures are likely to be introduced to the East New York Yard site; however, these structures could include perimeter fencing, platforms on to facilitate loading and unloading of containers by truck, towers in communications systems, and likely a single story structure serving as an attendants booth/office for a weigh station. These vertical structures would not be expected to be of substantial height and bulk, especially within the visual context attributable to the change of the land use on the property, as noted above. Therefore, it is expected that the introduction of new vertical elements at the East New York Yard site would not constitute substantial effects to visual and aesthetic conditions.

Fresh Pond Yard

All of the Rail Tunnel Alternatives, including this alternative, would require the same improvement to the east leg of the Fresh Pond wye. Preliminary estimates indicate that approximately 3.5 acres outside the existing right-of-way may be required at this location; however, the aesthetic and visual conditions of the Fresh Pond Yard would resemble existing conditions and the No Action Alternative.

Maspeth Yard

It is anticipated that the existing yard would be expanded by approximately 60 acres to handle bulk and intermodal freight under all Rail Tunnel Alternatives. In addition, since this location would represent the eastern terminus for the Rail Tunnel with Shuttle Service Alternative, it would be expanded by an additional 10 acres. The land uses in this location are light and heavy industry, many related to freight-handling and therefore no substantial changes the visual character or aesthetic conditions would be expected to result with this property acquisition.

Oak Point Yard

It is anticipated that the existing yard would be expanded by approximately 9 acres to support yard operations under the Rail Tunnel Alternatives, including this alternative. The acquisition of property and expansion of yard facilities at this location would be expected to result in no changes to the visual and aesthetic conditions of the site or in the surrounding study area.

Introduction of New Vertical Structures

All of the Rail Tunnel Alternatives would require ventilation shafts that would rise vertically from grade, in the form of tower buildings. For this evaluation it is assumed that two ventilation towers approximately 50 to 60 feet in height would be located in New Jersey and in Brooklyn. The New Jersey ventilation tower would be located near Greenville Yard. In Brooklyn the ventilation tower would likely be located near 65th Street Yard. Though of a moderate height (about 6 stories), the placement of these towers at these locations where there are no substantial building groups surrounding them, would mean that they would be visible from points within the study area. It is unlikely that the viewer groups, including workers and drivers would be sensitive to these changes in the industrial visual environs in which the towers would be situated. No important views would be blocked, nor would the towers alter any skyline feature or generally contribute to a substantial change in visual conditions.

The portals would be of functional design, without ornamentation or surrounding support structures (as may be found associated with highway tunnels in New York City). In effect they represent changes in grade, and the visibility of tracks outside the tunnel above ground. The portal on the New Jersey end of the tunnel would likely be located south of Greenville Yard. In

Brooklyn, the portal would be located within the existing Bay Ridge Branch rail right-of-way between 11th and 13th avenues.

Based on the conceptual alignment for this Tier I EIS, it is not known specifically what other types of rail-related vertical structures (such as signal towers) may be required or where they may be located, either within rail yards or throughout the remainder of the project area. It is anticipated that any such new vertical structures would resemble existing structures of the type found within the corridor, and would likewise be located within the right-of-way and neither detract from nor substantially contribute to the visual quality of the rail infrastructure or surrounding areas.

Additional consideration of new vertical structures may be required in subsequent environmental review when pertinent information would be available. Given the information available at this time, it is expected that no adverse impacts on visual or aesthetic conditions would result from the introduction of new vertical elements into the landscape as part of the Rail Tunnel Alternatives.

Changes to Existing Vertical Structures

Based on the preliminary design concepts currently available the only existing vertical structures that may be affected by the Rail Tunnel Alternatives, including this alternative, may be rail bridges. Although modifications to the overhead bridges spanning the Bay Ridge Branch would likely be required to achieve the clearances necessary for modern rail freight equipment to pass through, it is anticipated that this would be accomplished by undercutting the bridges, rather than raising the structures. It is anticipated that some rail bridges serving the project may require replacement or improvement to ensure proper load-bearing capacity for the project trains. It is anticipated that pertinent design information would be available for consideration in subsequent environmental reviews. However, it is not anticipated at this time that changes to overhead bridges or project-rail bridges would result in substantial changes to height or bulk of bridge structures, compared to No Action conditions, and so it is unlikely that adverse impacts on visual and aesthetic conditions would result.

Operational Changes (Ongoing Temporary Vertical Elements and Lighting)

Temporary or non-fixed vertical structures that may be present on an on-going basis, such as cranes or similar large equipment, would be expected for all of the Rail Tunnel Alternatives.

Given the general character of the study area these onsite activities would not be visible from residential areas or community facilities. It is expected that the equipment and containers associated with intermodal operations at Oak Island Yard, especially if that location is developed as a fillet/toupee facility, would be perceptible primarily to automobile drivers on the I-78 expressway. Given their attention to highway driving and the existing visual and aesthetic conditions of the study area in this vicinity, which are defined by extensive areas of large-scale transportation infrastructure including rail, rail yards, highway, and EWR that dominate the landscape, it is expected that onsite operations would not constitute substantial changes to the visual and aesthetic conditions of the area.

The land uses surrounding Maspeth Yard are light and heavy industry, many related to freight-handling; no substantial changes the visual character or aesthetic conditions would result with the introduction of intermodal operations, particularly given the lack of proximate viewer groups (there are no nearby residential areas or parks).

Regarding lighting, it is anticipated that all facilities supporting the Rail Tunnel Alternatives would require some level of night-time lighting, both for security and also to support round the

clock operations of the railway. Further consideration of the visual effects of nighttime lighting at yards may be necessary as part of subsequent environmental reviews.

Changes to Urban Design and the Visual Quality of the Streetscape

As noted above, information available at this time indicates that the Rail Tunnel Alternatives would not be expected to result in visual effects related to changes in land use, including within the identified yard expansion areas where property acquisitions are anticipated. Details regarding property acquisitions are not known at this time, and so it is likely that additional consideration to potential changes to streetscapes and urban design may be required in subsequent environmental review. It is possible that any acquisition considered may affect mapped streets, such as by closing them, or extend to within the street right-of-way, thus affecting sidewalks, curbs, street furniture, street trees and landscaping and even public on-street parking, where present. Based on preliminary “worst-case” acquisitions information, it is anticipated that changes to urban design and the visual quality of the streetscape as a result of the Rail Tunnel Alternatives would not be substantial.

It is anticipated that design information pertaining to the potential visual effects resulting from intermodal operations at a Long Island facility may be subject to separate environmental review. In particular, the intermodal facility on Long Island, like the similar facility at Maspeth Yard, would host cranes and other large equipment and be the site of container storage. It is anticipated that such an intermodal yard on Long Island would be of a larger size however potential impacts are dependent on its location and immediate surroundings, as well as operations, and therefore whether any such change would be significant or adverse cannot be determined at this time.

Rail Tunnel with Chunnel Service Alternative

Visual Effects Associated with Changes to Land Use

West-of-Hudson

Oak Island Yard

It is anticipated that the existing yard would be expanded by approximately 50 acres to support yard operations under all Rail Tunnel Alternatives. In addition, this yard would also be used as a terminus for the Rail Tunnel with Chunnel Service, in which case it would be expanded by an additional 20 acres. Direct effects to the industrial, manufacturing, and commercial land uses surrounding this facility would be expected result of property acquisition and would be investigated further in subsequent environmental review. It is unlikely that broader land use patterns or development trends in the area would be affected since the expanded facility would be in line with land use at the existing facility and the industrial and transportation-related nature of the area. Therefore, it is expected that changes to the visual and aesthetic conditions on property to be acquired at Oak Island Yard would not be substantial as it would be in line with existing uses at the yard and in the surrounding area.

Greenville Yard

As described in Chapter 4, “Alternatives,” the western tunnel portal for all Rail Tunnel Alternatives would be located south of Greenville Yard. Potential effects from the introduction of the tunnel portal are discussed below. The land uses in this area are light and heavy industry, many related to freight-handling, and therefore aesthetic and visual conditions in the area would continue to resemble existing conditions and the No Action Alternative.

East-of-Hudson 65th Street Yard

It is anticipated that the existing yard would be expanded by approximately 7.5 acres to support yard operations under the Rail Tunnel Alternative. The aesthetic and visual conditions of the 65th Street Yard would continue to resemble existing conditions and the No Action Alternative and no visual effects are expected from this expansion.

East New York Yard

As described in Chapter 6.1, “Land Use, Neighborhood Character, and Social Conditions,” some of the Rail Tunnel Alternatives, including this alternative, would require an expansion of this site for storage and sidings and potentially as a file/toupee facility. In addition to the improvements required for all Rail Tunnel Alternatives, an independent truck loading terminal would be constructed between New Lots Avenue and Pitkin Avenue (which would require the acquisition of approximately 13 acres). The terminal would also include truck driveways, ramps, platforms, staging areas, office, and other service facilities.

Land uses in this area are mixed and include industrial, commercial and residential uses. Local effects to visual and aesthetic conditions are likely as result of property acquisition. Many of the properties surrounding the yard are industrial in character and do not contribute positively to the visual quality of the surrounding streetscapes or neighborhood; their conversion would not generally represent a wholesale change to land use. However, they currently stand as buffer between the existing rail corridor and the residential neighborhood to the west. The change to the visual and aesthetic conditions of the properties comprising the acquisition and expansion area would be substantial but not necessarily adverse. Detailed assessment of potential impacts on visual and aesthetic conditions in the vicinity of the East New York Yard resulting from this alternative is expected to be undertaken when pertinent details are known regarding property acquisition and rail yard design.

For all of the Rail Tunnel Alternatives, including this alternative, vertical structures are likely to be introduced to the East New York Yard site; however, these structures could include perimeter fencing, platforms on to facilitate loading and unloading of containers by truck, towers in communications systems, and likely a single story structure serving as an attendants booth/office for a weigh station. These vertical structures would not be expected to be of substantial height and bulk, especially within the visual context attributable to the change of the land use on the property, as noted above. Therefore, it is expected that the introduction of new vertical elements at the East New York Yard site would not constitute substantial effects to visual and aesthetic conditions.

Fresh Pond Yard

All of the Rail Tunnel Alternatives, including this alternative, would require the same improvement to the east leg of the Fresh Pond wye. Preliminary estimates indicate that approximately 3.5 acres outside the existing right-of-way may be required at this location; however, the aesthetic and visual conditions of the Fresh Pond Yard would resemble existing conditions and the No Action Alternative.

Maspeth Yard

It is anticipated that the existing yard would be expanded by approximately 60 acres to handle bulk and intermodal freight under the Rail Tunnel Alternative. The land uses in this location are light and heavy industry, many related to freight-handling and therefore no substantial changes the visual character or aesthetic conditions would be expected to result with this property acquisition.

Oak Point Yard

It is anticipated that the existing yard would be expanded by approximately 9 acres to support yard operations under the Rail Tunnel Alternatives, including this alternative. The acquisition of property and expansion of yard facilities at this location would be expected to result in no changes to the visual and aesthetic conditions of the site or in the surrounding study area.

Introduction of New Vertical Structures

All of the Rail Tunnel Alternatives would require ventilation shafts that would rise vertically from grade, in the form of tower buildings. For this evaluation it is assumed that two ventilation towers approximately 50 to 60 feet in height would be located in New Jersey and in Brooklyn. The New Jersey ventilation tower would be located near Greenville Yard. In Brooklyn the ventilation tower would likely be located near 65th Street Yard. Though of a moderate height (about 6 stories), the placement of these towers at these locations where there are no substantial building groups surrounding them, would mean that they would be visible from points within the study area. It is unlikely that the viewer groups, including workers and drivers would be sensitive to these changes in the industrial visual environs in which the towers would be situated. No important views would be blocked, nor would the towers alter any skyline feature or generally contribute to a substantial change in visual conditions.

The portals would be of functional design, without ornamentation or surrounding support structures (as may be found associated with highway tunnels in New York City). In effect they represent changes in grade, and the visibility of tracks outside the tunnel above ground. The portal on the New Jersey end of the tunnel would likely be located south of Greenville Yard. In Brooklyn, the portal would be located within the existing Bay Ridge Branch rail right-of-way between 11th and 13th avenues.

Based on the conceptual alignment for this Tier I EIS, it is not known specifically what other types of rail-related vertical structures (such as signal towers) may be required or where they may be located, either within rail yards or throughout the remainder of the project area. It is anticipated that any such new vertical structures would resemble existing structures of the type found within the corridor, and would likewise be located within the right-of-way and neither detract from nor substantially contribute to the visual quality of the rail infrastructure or surrounding areas.

Additional consideration of new vertical structures may be required in subsequent environmental review when pertinent information would be available. Given the information available at this time, it is expected that no adverse impacts on visual or aesthetic conditions would result from the introduction of new vertical elements into the landscape as part of the Rail Tunnel Alternatives.

Changes to Existing Vertical Structures

Based on the preliminary design concepts currently available, the only existing vertical structures that may be affected by the Rail Tunnel Alternatives, including this alternative, may be rail bridges. Although modifications to the overhead bridges spanning the Bay Ridge Branch would likely be required to achieve the clearances necessary for modern rail freight equipment to pass through, it is anticipated that this would be accomplished by undercutting the bridges, rather than raising the structures. It is anticipated that some rail bridges serving the project may require replacement or improvement to ensure proper load-bearing capacity for the project trains. It is anticipated that pertinent design information would be available for consideration in subsequent environmental reviews. However, it is not anticipated at this time that changes to overhead bridges or project-rail bridges would result in substantial changes to height or bulk of

bridge structures, compared to No Action conditions, and so it is unlikely that adverse impacts on visual and aesthetic conditions would result.

Operational Changes (Ongoing Temporary Vertical Elements and Lighting)

Temporary or non-fixed vertical structures that may be present on an on-going basis, such as cranes or similar large equipment, would be expected for all of the Rail Tunnel Alternatives.

Given the general character of the study area these onsite activities would not be visible from residential areas or community facilities. It is expected that the equipment and containers associated with intermodal operations at Oak Island Yard, especially if that location is developed as a fillet/toupee facility, would be perceptible primarily to automobile drivers on the I-78 expressway. Given their attention to highway driving and the existing visual and aesthetic conditions of the study area in this vicinity, which are defined by extensive areas of large-scale transportation infrastructure including rail, rail yards, highway, and EWR that dominate the landscape, it is expected that onsite operations would not constitute substantial changes to the visual and aesthetic conditions of the area.

The land uses surrounding Maspeth Yard are light and heavy industry, many related to freight-handling; no substantial changes the visual character or aesthetic conditions would result with the introduction of intermodal operations, particularly given the lack of proximate viewer groups (there are no nearby residential areas or parks).

Regarding lighting, it is anticipated that all facilities supporting the Rail Tunnel Alternatives would require some level of night-time lighting, both for security and also to support round the clock operations of the railway. Further consideration of the visual effects of nighttime lighting at yards may be necessary as part of subsequent environmental reviews.

Changes to Urban Design and the Visual Quality of the Streetscape

As noted above, information available at this time indicates that the Rail Tunnel Alternatives would not be expected to result in visual effects related to changes in land use, including within the identified yard expansion areas where property acquisitions are anticipated. Details regarding property acquisitions are not known at this time, and so it is likely that additional consideration to potential changes to streetscapes and urban design may be required in subsequent environmental review. It is possible that any acquisition considered may affect mapped streets, such as by closing them, or extend to within the street right-of-way, thus affecting sidewalks, curbs, street furniture, street trees and landscaping and even public on-street parking, where present. Based on preliminary “worst-case” acquisitions information, it is anticipated that changes to urban design and the visual quality of the streetscape as a result of the Rail Tunnel Alternatives would not be substantial.

It is anticipated that design information pertaining to the potential visual effects resulting from intermodal operations at a Long Island facility may be subject to separate environmental review. In particular, the intermodal facility on Long Island, like the similar facility at Maspeth Yard, would host cranes and other large equipment and be the site of container storage. It is anticipated that such an intermodal yard on Long Island would be of a larger size; however, potential impacts are dependent on its location and immediate surroundings, as well as operations, and therefore whether any such change would be significant or adverse cannot be determined at this time.

*Rail Tunnel with Automated Guided Vehicle (AGV) Technology Alternative**Visual Effects Associated with Changes to Land Use**West-of-Hudson**Oak Island Yard*

It is anticipated that the existing yard would be expanded by approximately 50 acres to support yard operations under all Rail Tunnel Alternatives. Direct effects to the industrial, manufacturing, and commercial land uses surrounding this facility would be expected result of property acquisition and would be investigated further in subsequent environmental review. It is unlikely that broader land use patterns or development trends in the area would be affected since the expanded facility would be in line with land use at the existing facility and the industrial and transportation-related nature of the area. Therefore, it is expected that changes to the visual and aesthetic conditions on property to be acquired at Oak Island Yard would not be substantial as it would be in line with existing uses at the yard and in the surrounding area.

Greenville Yard

As described in Chapter 4, “Alternatives,” the western tunnel portal for all Rail Tunnel Alternatives would be located south of Greenville Yard. Potential effects from the introduction of the tunnel portal are discussed below.

In addition, an independent AGV loading terminal would be constructed at this yard (approximately 30 acres, in addition to what would be required under the Rail Tunnel Alternative), which would include a container storage area, an AGV staging area, and an AGV queuing area. The AGV queuing area would have a direct and easy access to the tunnel portal. The terminal would also include crane, truck driveways, ramps, truck staging areas, office space, and other service facilities.

The land uses in this area are light and heavy industry, many related to freight-handling, and therefore aesthetic and visual conditions in the area would continue to resemble existing conditions and the No Action Alternative.

*East-of-Hudson**65th Street Yard*

It is anticipated that the existing yard would be expanded by approximately 7.5 acres to support yard operations under the Rail Tunnel Alternative. The aesthetic and visual conditions of the 65th Street Yard would continue to resemble existing conditions and the No Action Alternative and no visual effects are expected from this expansion.

East New York Yard

As described in Chapter 6.1, “Land Use, Neighborhood Character, and Social Conditions,” some of the Rail Tunnel Alternatives, including this alternative, would require an expansion of this site for storage and sidings and potentially as a file/toupee facility. In addition to the improvements required for all Rail Tunnel Alternatives, for this alternative an independent AGV loading terminal would be constructed between New Lots Avenue and Pitkin Avenue (which would require the acquisition of approximately 15 acres), which would include a container storage area, an AGV staging area, and an AGV queuing area. The AGV queuing area would have a direct and easy access to the rail tracks. The terminal would also include truck driveways, ramps, platforms, staging areas, office, and other service facilities.

Land uses in this area are mixed and include industrial, commercial and residential uses. Local effects to visual and aesthetic conditions are likely as result of property acquisition. Many of the properties surrounding the yard are industrial in character and do not contribute positively to the

visual quality of the surrounding streetscapes or neighborhood; their conversion would not generally represent a wholesale change to land use. However, they currently stand as buffer between the existing rail corridor and the residential neighborhood to the west.

The change to the visual and aesthetic conditions of the properties comprising the acquisition and expansion area would be substantial but not necessarily adverse. Detailed assessment of potential impacts on visual and aesthetic conditions in the vicinity of the East New York Yard resulting from this alternative is expected to be undertaken when pertinent details are known regarding property acquisition and rail yard design.

For all of the Rail Tunnel Alternatives, including this alternative, vertical structures likely to be introduced to the East New York Yard site, however, could include perimeter fencing, platforms on to facilitate loading and unloading of containers by truck, towers in communications systems, and likely a single story structure serving as an attendants booth/office for a weigh station. These vertical structures would not be expected to be of substantial height and bulk, especially within the visual context attributable to the change of the land use on the property, as noted above. Therefore, it is expected that the introduction of new vertical elements at the East New York Yard site would not constitute substantial effects to visual and aesthetic conditions.

Fresh Pond Yard

All of the Rail Tunnel Alternatives, including this alternative, would require the same improvement to the east leg of the Fresh Pond wye. Preliminary estimates indicate that approximately 3.5 acres outside the existing right-of-way may be required at this location; however, the aesthetic and visual conditions of the Fresh Pond Yard would resemble existing conditions and the No Action Alternative.

Maspeth Yard

It is anticipated that the existing yard would be expanded by approximately 60 acres to handle bulk and intermodal freight under the Rail Tunnel Alternative. The land uses in this location are light and heavy industry, many related to freight-handling and therefore no substantial changes the visual character or aesthetic conditions would be expected to result with this property acquisition.

Oak Point Yard

It is anticipated that the existing yard would be expanded by approximately 9 acres to support yard operations under the Rail Tunnel Alternatives, including this alternative. The acquisition of property and expansion of yard facilities at this location would be expected to result in no changes to the visual and aesthetic conditions of the site or in the surrounding study area.

Introduction of New Vertical Structures

All of the Rail Tunnel Alternatives would require ventilation shafts that would rise vertically from grade, in the form of tower buildings. For this evaluation it is assumed that two ventilation towers approximately 50 to 60 feet in height would be located in New Jersey and in Brooklyn. The New Jersey ventilation tower would be located near Greenville Yard. In Brooklyn the ventilation tower would likely be located near 65th Street Yard. Though of a moderate height (about 6 stories), the placement of these towers at these locations where there are no substantial building groups surrounding them, would mean that they would be visible from points within the study area. It is unlikely that the viewer groups, including workers and drivers would be sensitive to these changes in the industrial visual environs in which the towers would be situated. No important views would be blocked, nor would the towers alter any skyline feature or generally contribute to a substantial change in visual conditions.

The portals would be of functional design, without ornamentation or surrounding support structures (as may be found associated with highway tunnels in New York City). In effect they represent changes in grade, and the visibility of tracks outside the tunnel above ground. The portal on the New Jersey end of the tunnel would likely be located south of Greenville Yard. In Brooklyn, the portal would be located within the existing Bay Ridge Branch rail right-of-way between 11th and 13th avenues.

Based on the conceptual alignment for this Tier I EIS, it is not known specifically what other types of rail-related vertical structures (such as signal towers) may be required or where they may be located, either within rail yards or throughout the remainder of the project area. It is anticipated that any such new vertical structures would resemble existing structures of the type found within the corridor, and would likewise be located within the right-of-way and neither detract from nor substantially contribute to the visual quality of the rail infrastructure or surrounding areas.

Additional consideration of new vertical structures may be required in subsequent environmental review when pertinent information would be available. Given the information available at this time, it is expected that no adverse impacts on visual or aesthetic conditions would result from the introduction of new vertical elements into the landscape as part of the Rail Tunnel Alternatives.

Changes to Existing Vertical Structures

Based on the preliminary design concepts currently available the only existing vertical structures that may be affected by the Rail Tunnel Alternatives, including this alternative, may be rail bridges. Although modifications to the overhead bridges spanning the Bay Ridge Branch would likely be required to achieve the clearances necessary for modern rail freight equipment to pass through, it is anticipated that this would be accomplished by undercutting the bridges, rather than raising the structures. It is anticipated that some rail bridges serving the project may require replacement or improvement to ensure proper load-bearing capacity for the project trains. It is anticipated that pertinent design information would be available for consideration in subsequent environmental reviews. However, it is not anticipated at this time that changes to overhead bridges or project-rail bridges would result in substantial changes to height or bulk of bridge structures, compared to No Action conditions, and so it is unlikely that adverse impacts on visual and aesthetic conditions would result.

Operational Changes (Ongoing Temporary Vertical Elements and Lighting)

Temporary or non-fixed vertical structures that may be present on an on-going basis, such as cranes or similar large equipment, would be expected for all of the Rail Tunnel Alternatives.

Given the general character of the study area these onsite activities would not be visible from residential areas or community facilities. It is expected that the equipment and containers associated with intermodal operations at Oak Island Yard, especially if that location is developed as a fillet/toupee facility, would be perceptible primarily to automobile drivers on the I-78 expressway. Given their attention to highway driving and the existing visual and aesthetic conditions of the study area in this vicinity, which are defined by extensive areas of large-scale transportation infrastructure including rail, rail yards, highway, and EWR that dominate the landscape, it is expected that onsite operations would not constitute substantial changes to the visual and aesthetic conditions of the area.

The land uses surrounding Maspeth Yard are light and heavy industry, many related to freight-handling; no substantial changes the visual character or aesthetic conditions would result with

the introduction of intermodal operations, particularly given the lack of proximate viewer groups (there are no nearby residential areas or parks).

Regarding lighting, it is anticipated that all facilities supporting the Rail Tunnel Alternatives would require some level of night-time lighting, both for security and also to support round the clock operations of the railway. Further consideration of the visual effects of nighttime lighting at yards may be necessary as part of subsequent environmental reviews.

Changes to Urban Design and the Visual Quality of the Streetscape

As noted above, information available at this time indicates that the Rail Tunnel Alternatives would not be expected to result in visual effects related to changes in land use, including within the identified yard expansion areas where property acquisitions are anticipated. Details regarding property acquisitions are not known at this time, and so it is likely that additional consideration to potential changes to streetscapes and urban design may be required in subsequent environmental review. It is possible that any acquisition considered may affect mapped streets, such as by closing them, or extend to within the street right-of-way, thus affecting sidewalks, curbs, street furniture, street trees and landscaping and even public on-street parking, where present. Based on preliminary “worst-case” acquisitions information, it is anticipated that changes to urban design and the visual quality of the streetscape as a result of the Rail Tunnel Alternatives would not be substantial.

It is anticipated that design information pertaining to the potential visual effects resulting from intermodal operations at a Long Island facility may be subject to separate environmental review. In particular, the intermodal facility on Long Island, like the similar facility at Maspeth Yard, would host cranes and other large equipment and be the site of container storage. It is anticipated that such an intermodal yard on Long Island would be of a larger size; however, potential impacts are dependent on its location and immediate surroundings, as well as operations, and therefore whether any such change would be significant or adverse cannot be determined at this time.

Rail Tunnel with Truck Access Alternative

Visual Effects Associated with Changes to Land Use

West-of-Hudson

Oak Island Yard

It is anticipated that the existing yard would be expanded by approximately 50 acres to support yard operations under all Rail Tunnel Alternatives. Direct effects to the industrial, manufacturing, and commercial land uses surrounding this facility would be expected result of property acquisition and would be investigated further in subsequent environmental review. It is unlikely that broader land use patterns or development trends in the area would be affected since the expanded facility would be in line with land use at the existing facility and the industrial and transportation-related nature of the area. Therefore, it is expected that changes to the visual and aesthetic conditions on property to be acquired at Oak Island Yard would not be substantial as it would be in line with existing uses at the yard and in the surrounding area.

Greenville Yard

As described in Chapter 4, “Alternatives,” the western tunnel portal for all Rail Tunnel Alternatives would be located south of Greenville Yard. Potential effects from the introduction of the tunnel portal are discussed below. In addition to the yard construction in the Rail Tunnel Alternatives, an independent truck access terminal would be constructed at this yard (approximately 30 acres in addition to what would be required under the Rail Tunnel

Alternative), which would include a truck parking area, a staging/queuing area, and truck ramps to rail tracks. The truck queuing area would have a direct and easy access to the tunnel portal. The terminal would also include driveways, ramps, truck staging areas, office space, and other service facilities. Road access to highway truck routes would be constructed, including Interstate-78, Route 185, and Route 440.

The land uses in this area are light and heavy industry, many related to freight-handling, and therefore aesthetic and visual conditions in the area would continue to resemble existing conditions and the No Action Alternative.

*East-of-Hudson
65th Street Yard*

It is anticipated that the existing yard would be expanded by approximately 7.5 acres to support yard operations under this and other Rail Tunnel Alternatives. The aesthetic and visual conditions of the 65th Street Yard would continue to resemble existing conditions and the No Action Alternative and no visual effects are expected from this expansion.

East New York Yard

As described in Chapter 6.1, “Land Use, Neighborhood Character, and Social Conditions,” some of the Rail Tunnel Alternatives, including this alternative, would require an expansion of this site for storage and sidings and potentially as a file/toupee facility. In addition to the mainline improvements in the Rail Tunnel Alternatives, an independent truck access terminal would be constructed between New Lots Avenue and Pitkin Avenue (which would require the acquisition of approximately 15 acres). The terminal would include a truck parking area, a staging/queuing area, and truck ramps to rail tracks. The truck queuing area would have a direct and easy access to the rail tracks. The terminal would also include driveways, ramps, truck staging areas, office space, and other service facilities. Road access to city truck routes would be constructed, including Atlantic Avenue, Linden Boulevard, and Avenue D.

Land uses in this area are mixed and include industrial, commercial and residential uses. Local effects to visual and aesthetic conditions are likely as result of property acquisition. Many of the properties surrounding the yard are industrial in character and do not contribute positively to the visual quality of the surrounding streetscapes or neighborhood; their conversion would not generally represent a wholesale change to land use. However, they currently stand as buffer between the existing rail corridor and the residential neighborhood to the west.

The change to the visual and aesthetic conditions of the properties comprising the acquisition and expansion area would be substantial but not necessarily adverse. Detailed assessment of potential impacts on visual and aesthetic conditions in the vicinity of the East New York Yard resulting from this alternative is expected to be undertaken when pertinent details are known regarding property acquisition and rail yard design.

For all of the Rail Tunnel Alternatives, including this alternative, vertical structures are likely to be introduced to the East New York Yard site; however, these structures could include perimeter fencing, platforms on to facilitate loading and unloading of containers by truck, towers in communications systems, and likely a single story structure serving as an attendants booth/office for a weigh station. These vertical structures would not be expected to be of substantial height and bulk, especially within the visual context attributable to the change of the land use on the property, as noted above. Therefore, it is expected that the introduction of new vertical elements at the East New York Yard site would not constitute substantial effects to visual and aesthetic conditions.

Fresh Pond Yard

All of the Rail Tunnel Alternatives, including this alternative, would require the same improvement to the east leg of the Fresh Pond wye. Preliminary estimates indicate that approximately 3.5 acres outside the existing right-of-way may be required at this location; however, the aesthetic and visual conditions of the Fresh Pond Yard would resemble existing conditions and the No Action Alternative.

Maspeth Yard

It is anticipated that the existing yard would be expanded by approximately 60 acres to handle bulk and intermodal freight under this and other Rail Tunnel Alternatives. The land uses in this location are light and heavy industry, many related to freight-handling and therefore no substantial changes the visual character or aesthetic conditions would be expected to result with this property acquisition.

Oak Point Yard

It is anticipated that the existing yard would be expanded by approximately 9 acres to support yard operations under the Rail Tunnel Alternatives, including this alternative. The acquisition of property and expansion of yard facilities at this location would be expected to result in no changes to the visual and aesthetic conditions of the site or in the surrounding study area.

Introduction of New Vertical Structures

All of the Rail Tunnel Alternatives would require ventilation shafts that would rise vertically from grade, in the form of tower buildings. For this evaluation it is assumed that two ventilation towers approximately 50 to 60 feet in height would be located in New Jersey and in Brooklyn. The New Jersey ventilation tower would be located near Greenville Yard. In Brooklyn the ventilation tower would likely be located near 65th Street Yard. Though of a moderate height (about 6 stories), the placement of these towers at these locations where there are no substantial building groups surrounding them, would mean that they would be visible from points within the study area. It is unlikely that the viewer groups, including workers and drivers would be sensitive to these changes in the industrial visual environs in which the towers would be situated. No important views would be blocked, nor would the towers alter any skyline feature or generally contribute to a substantial change in visual conditions.

The portals would be of functional design, without ornamentation or surrounding support structures (as may be found associated with highway tunnels in New York City). In effect they represent changes in grade, and the visibility of tracks outside the tunnel above ground. The portal on the New Jersey end of the tunnel would likely be located south of Greenville Yard. In Brooklyn, the portal would be located within the existing Bay Ridge Branch rail right-of-way between 11th and 13th avenues.

Based on the conceptual alignment for this Tier I EIS, it is not known specifically what other types of rail-related vertical structures (such as signal towers) may be required or where they may be located, either within rail yards or throughout the remainder of the project area. It is anticipated that any such new vertical structures would resemble existing structures of the type found within the corridor, and would likewise be located within the right-of-way and neither detract from nor substantially contribute to the visual quality of the rail infrastructure or surrounding areas.

Additional consideration of new vertical structures may be required in subsequent environmental review when pertinent information would be available. Given the information available at this time, it is expected that no adverse impacts on visual or aesthetic conditions would result from

the introduction of new vertical elements into the landscape as part of the Rail Tunnel Alternatives.

Changes to Existing Vertical Structures

Based on the preliminary design concepts currently available the only existing vertical structures that may be affected by the Rail Tunnel Alternatives, including this alternative, may be rail bridges. Although modifications to the overhead bridges spanning the Bay Ridge Branch would likely be required to achieve the clearances necessary for modern rail freight equipment to pass through, it is anticipated that this would be accomplished by undercutting the bridges, rather than raising the structures. It is anticipated that some rail bridges serving the project may require replacement or improvement to ensure proper load-bearing capacity for the project trains. It is anticipated that pertinent design information would be available for consideration in subsequent environmental reviews. However, it is not anticipated at this time that changes to overhead bridges or project-rail bridges would result in substantial changes to height or bulk of bridge structures, compared to No Action conditions, and so it is unlikely that adverse impacts on visual and aesthetic conditions would result.

Operational Changes (Ongoing Temporary Vertical Elements and Lighting)

Temporary or non-fixed vertical structures that may be present on an on-going basis, such as cranes or similar large equipment, would be expected for all of the Rail Tunnel Alternatives.

Given the general character of the study area these onsite activities would not be visible from residential areas or community facilities. It is expected that the equipment and containers associated with intermodal operations at Oak Island Yard, especially if that location is developed as a fillet/toupee facility, would be perceptible primarily to automobile drivers on the I-78 expressway. Given their attention to highway driving and the existing visual and aesthetic conditions of the study area in this vicinity, which are defined by extensive areas of large-scale transportation infrastructure including rail, rail yards, highway, and EWR that dominate the landscape, it is expected that onsite operations would not constitute substantial changes to the visual and aesthetic conditions of the area.

The land uses surrounding Maspeth Yard are light and heavy industry, many related to freight-handling; no substantial changes the visual character or aesthetic conditions would result with the introduction of intermodal operations, particularly given the lack of proximate viewer groups (there are no nearby residential areas or parks).

Regarding lighting, it is anticipated that all facilities supporting the Rail Tunnel Alternatives would require some level of night-time lighting, both for security and also to support round the clock operations of the railway. Further consideration of the visual effects of nighttime lighting at yards may be necessary as part of subsequent environmental reviews.

Changes to Urban Design and the Visual Quality of the Streetscape

As noted above, information available at this time indicates that the Rail Tunnel Alternatives would not be expected to result in visual effects related to changes in land use, including within the identified yard expansion areas where property acquisitions are anticipated. Details regarding property acquisitions are not known at this time, and so it is likely that additional consideration to potential changes to streetscapes and urban design may be required in subsequent environmental review. It is possible that any acquisition considered may affect mapped streets, such as by closing them, or extend to within the street right-of-way, thus affecting sidewalks, curbs, street furniture, street trees and landscaping and even public on-street parking, where present. Based on preliminary “worst-case” acquisitions information, it is anticipated that

changes to urban design and the visual quality of the streetscape as a result of the Rail Tunnel Alternatives would not be substantial.

It is anticipated that design information pertaining to the potential visual effects resulting from intermodal operations at a Long Island facility may be subject to separate environmental review. In particular, the intermodal facility on Long Island, like the similar facility at Maspeth Yard, would host cranes and other large equipment and be the site of container storage. It is anticipated that such an intermodal yard on Long Island would be of a larger size however potential impacts are dependent on its location and immediate surroundings, as well as operations, and therefore whether any such change would be significant or adverse cannot be determined at this time.

CONSTRUCTION EFFECTS

As described in Chapter 4, “Alternatives,” the construction elements for the proposed Build Alternatives can be broken down into three categories: (1) waterfront facilities, in-land termini and rail yards; (2) rail lines; and (3) tunnel-specific infrastructure, such as the tunnel itself and associated structures. The durations of construction activities associated with Build Alternatives are generally temporary, lasting between 12 and 24 months (and up to approximately 30 months for tunnel boring).

Construction activities and respective schedules for completing components of each alternative are considered here to identify whether construction activities would likely be within view of sensitive viewer groups, as identified above in “Existing Conditions.”

WATERBORNE ALTERNATIVES

Enhanced Railcar Float Alternative

As described in Chapter 4, “Alternatives,” construction activities would occur throughout the study areas within or adjacent to existing waterfront facilities, rail yards, and along the existing rail corridor. Construction phases are expected to last between 12 and 24 months and because this alternative requires more infrastructure than the other Waterborne Alternatives, the construction of this alternative may take longer.

As described above in “Existing Conditions,” viewer groups likely to experience views of construction activities would not be expected to be particularly sensitive to construction within Greenville Yard or Port Newark/Port Elizabeth in the New Jersey study area, the Brooklyn waterfront, or the Bronx waterfront. However, given the proximity of residential uses and identified visual resources (i.e., parks) to the 65th Street Yard and the East New York Yard in Brooklyn, and the Fresh Pond Yard in Queens, construction activities may be within view of residents and park users.

Truck Ferry Alternative

As described in Chapter 4, “Alternatives,” the Truck Ferry Alternative would require the construction of ferry terminals at the waterfront (with vehicle ramps, truck staging/parking areas, utility, gate/office, and maintenance facility), potential new bulkhead and fendering systems, and road access to highway truck routes, including driveway and truck ramp, if needed.

As described above in “Existing Conditions,” viewer groups likely to experience views of construction activities would not be expected to be particularly sensitive to construction within Port Newark/Port Elizabeth for the western terminus of this alternative, or the Brooklyn or the Bronx waterfronts for the eastern terminus.

Truck Float Alternative

The Truck Float Alternative would require the construction of much of the same infrastructure as described above for the Truck Ferry Alternative.

Similarly, viewer groups likely to experience views of construction activities would not be expected to be particularly sensitive to construction within Port Newark/Port Elizabeth for the western terminus of this alternative, or the Brooklyn or the Bronx waterfronts for the eastern terminus.

Life On-Lift Off (LOLO) Container Barge Alternative

The construction of this alternative would involve the installation of infrastructure at the waterfront termini, including mobile harbor cranes, tractor staging area, trailer and chassis parking, truck staging/parking areas, utility, gate/office, and maintenance facility. Road access to highway truck routes, including driveway and truck ramp, may be constructed and new bulkhead and fendering systems, may be installed if needed.

Similar to the Truck Ferry and Truck Float Alternatives, viewer groups likely to experience views of construction activities would not be expected to be particularly sensitive to construction within Greenville Yard or Port Newark/Port Elizabeth for the western terminus of this alternative, or the Brooklyn or the Bronx waterfronts for the eastern terminus.

Roll On-Roll Off (RORO) Container Barge Alternative

The construction of this alternative would involve the installation of much of the same infrastructure as described above under the LOLO Container Barge Alternative, with the exception of mobile harbor cranes.

Similar to the Truck Ferry and Truck Float Alternatives, viewer groups likely to experience views of construction activities would not be expected to be particularly sensitive to construction within Greenville Yard or Port Newark/Port Elizabeth for the western terminus of this alternative, or the Brooklyn or the Bronx waterfronts for the eastern terminus.

RAIL TUNNEL ALTERNATIVES

Rail Tunnel Alternative

Temporary construction-related effects associated with visual and aesthetic conditions may occur where rail yards are expanded, truck termini are constructed, or rail line is being installed, specifically where these activities would be within the view of sensitive viewer groups, as identified previously in “Existing Conditions.”

All of the Rail Tunnel Alternatives would also include construction activities associated with tunnel and associated infrastructure, as described in Chapter 4. Construction of tunnel portals, cut-and-cover tunnel construction areas, ventilation structures, and shaft sites providing access to tunnel boring machines (TBMs) would be located within the existing rights-of-way.

As described in Chapter 4, many of the construction activities would occur throughout the study areas within or adjacent to existing rail yards, along the existing rail corridor in discrete construction phases expected to last between 12 and 24 months, with tunnel boring expected to approximately 3 years. Viewer groups likely to experience views of construction activities would not be expected to be particularly sensitive to construction within or in the vicinity of the Oak Island Yard or to construction of tunnel infrastructure in the New Jersey study area; likewise, activities along most of the Brooklyn waterfront, in Maspeth Yard in Queens, or Oak

Point Yard or Hunts Point in the Bronx, would not be expected to be within view of particularly sensitive viewer groups.

However, given the proximity of residential uses and identified visual resources (parks) to 65th Street Yard and tunnel construction activities in the vicinity, East New York Yard in Brooklyn, and Fresh Pond Yard in Queens, construction activities may be within view of residents and park users.

Rail Tunnel with Shuttle (“Open Technology”) Service Alternative

All of the potential construction impacts identified above under the Rail Tunnel Alternative would apply to this alternative with the addition of a west-of-Hudson terminus constructed outside of the Port District, potentially in Pennsylvania. Temporary construction-related effects associated with visual and aesthetic conditions may occur where rail yards are expanded, truck termini are constructed, or rail line is being installed, specifically where these activities would be within the view of sensitive viewer groups. All of the Rail Tunnel Alternatives would also include construction activities associated with the tunnel and associated infrastructure, as described in Chapter 4.

As described in Chapter 4, many of the construction activities would occur throughout the study areas within or adjacent to existing rail yards, along the existing rail corridor in discrete construction phases expected to last between 12 and 24 months, with tunnel boring expected to last approximately 3 years. Viewer groups likely to experience views of construction activities would not be expected to be particularly sensitive to construction within or in the vicinity of the Oak Island Yard or to construction of tunnel infrastructure in the New Jersey study area; likewise, activities along most of the Brooklyn waterfront, in Maspeth Yard in Queens, or Oak Point Yard or Hunts Point in the Bronx, would not be expected to be within view of particularly sensitive viewer groups. However, given the proximity of residential uses and identified visual resources (parks) to 65th Street Yard and tunnel construction activities in the vicinity, East New York Yard in Brooklyn, and the Fresh Pond Yard in Queens, construction activities may be within view of residents and park users.

Rail Tunnel with Chunnel Service Alternative

All of the potential construction impacts identified above under the Rail Tunnel Alternative would apply to this alternative. Temporary construction-related effects associated with visual and aesthetic conditions may occur where rail yards are expanded, truck termini are constructed, or rail line is being installed. All of the Rail Tunnel Alternatives would also include construction activities associated with the tunnel and associated infrastructure, as described in Chapter 4. In addition to the infrastructure requirements of the Rail Tunnel Alternative, this alternative would require additional construction at Oak Island Yard and East New York Yard to accommodate independent truck terminals to serve as termini for the chunnel service.

As described in Chapter 4, many of the construction activities would occur throughout the study areas within or adjacent to existing rail yards, along the existing rail corridor in discrete construction phases expected to last between 12 and 24 months, with tunnel boring expected to last approximately 3 years. Viewer groups likely to experience views of construction activities would not be expected to be particularly sensitive to construction within or in the vicinity of the Oak Island Yard or to construction of tunnel infrastructure in the New Jersey study area; likewise, activities along most of the Brooklyn waterfront, in Maspeth Yard in Queens, or Oak Point Yard or Hunts Point in the Bronx, would not be expected to be within view of particularly sensitive viewer groups. However, given the proximity of residential uses and identified visual

resources (parks) to 65th Street Yard and New York side tunnel construction activities in the vicinity, East New York Yard in Brooklyn, and Fresh Pond Yard in Queens, construction activities may be within view of residents and park users.

Rail Tunnel with Automated Guided Vehicle (AGV) Technology Alternative

All of the potential construction impacts identified above under the Rail Tunnel Alternative would apply to this alternative. Temporary construction-related effects associated with visual and aesthetic conditions may occur where rail yards are expanded, truck termini are constructed, or rail line is being installed. All of the Rail Tunnel Alternatives would also include construction activities associated with the tunnel and associated infrastructure, as described in Chapter 4. In addition to the infrastructure requirements of the Rail Tunnel Alternative, this alternative would require additional construction at Greenville Yard and East New York Yard to accommodate AGV terminals that would include container storage areas, cranes, AGV staging area, truck ramps, truck parking/staging areas, gates, driveways, office, and auxiliary buildings. At East New York Yard, the truck staging area would be at an underground structure.

As described in Chapter 4, many of the construction activities would occur throughout the study areas within or adjacent to existing rail yards, along the existing rail corridor in discrete construction phases expected to last between 12 and 24 months, with tunnel boring expected to last approximately 3 years. Viewer groups likely to experience views of construction activities would not be expected to be particularly sensitive to construction within or in the vicinity of the Oak Island Yard or to construction of tunnel infrastructure in the New Jersey study area; likewise, activities along most of the Brooklyn waterfront, in Maspeth Yard in Queens, or Oak Point Yard or Hunts Point in the Bronx, would not be expected to be within view of particularly sensitive viewer groups. However, given the proximity of residential uses and identified visual resources (parks) to 65th Street Yard and New York side tunnel construction activities in the vicinity, East New York Yard in Brooklyn, and Fresh Pond Yard in Queens, construction activities may be within view of residents and park users.

Rail Tunnel with Truck Access Alternative

All of the potential construction impacts identified above under the Rail Tunnel Alternative would apply to this alternative. Temporary construction-related effects associated with visual and aesthetic conditions may occur where rail yards are expanded, truck termini are constructed, or rail line is being installed. All of the Rail Tunnel Alternatives would also include construction activities associated with the tunnel and associated infrastructure, as described in Chapter 4. Truck operations would require additional facilities beyond those of the other Rail Tunnel Alternatives. These facilities would be located at the two proposed terminals at Greenville and East New York. At each terminal, there would be truck ramps, truck parking/staging areas, gates, driveways, office, and auxiliary buildings. At the East New York Yard terminal, the truck staging area would be at an underground structure.

As described in Chapter 4, many of the construction activities would occur throughout the study areas within or adjacent to existing rail yards, along the existing rail corridor in discrete construction phases expected to last between 12 and 24 months, with tunnel boring expected to last approximately 3 years. Viewer groups likely to experience views of construction activities would not be expected to be particularly sensitive to construction within or in the vicinity of the Oak Island Yard or to construction of tunnel infrastructure in the New Jersey study area; likewise, activities along most of the Brooklyn waterfront, in Maspeth Yard in Queens, or Oak Point Yard or Hunts Point in the Bronx, would not be expected to be within view of particularly

sensitive viewer groups. However, given the proximity of residential uses and identified visual resources (parks) to 65th Street Yard and tunnel construction activities in the vicinity, East New York Yard in Brooklyn, and Fresh Pond Yard in Queens, construction activities may be within view of residents and park users.

E. TIER II ANALYSIS AND POTENTIAL MITIGATION MEASURES

Given the information available at this time, no substantial adverse effects to visual and aesthetic conditions resulting from project-related changes have been identified for any of the Build Alternatives. Further analysis would be undertaken in subsequent environmental review, and particularly for the potential effects to urban design in the vicinity of the East New York Yard site.

Further consideration of potential effects to visual and aesthetic conditions may be necessary in support of subsequent environmental review, as more detailed information becomes available with regard to land acquisition and rail corridor and yard design and engineering, as well as overall operations. The following points would likely be considered:

- Since each Build Alternative would require some land acquisition, more detailed information describing acquisition would be necessary to determine whether visual and aesthetic conditions may be substantially and adversely affected with potential changes at that location.
- Based on the preliminary design concepts currently available, it is not known specifically what other types of rail-related vertical structures (such as signal towers) would be required for the project alternatives or where they may be located, either within rail yards or throughout the remainder of the project area. It is also anticipated that all rail yards would require some level of night-time lighting, both for security and also to support round the clock operations of the railway. Further consideration of the visual effects of these elements would be necessary as part of any subsequent environmental reviews.
- Tier II environmental review would allow a quantitative analysis of potential impacts and their severity, which would inform the selection of appropriate measures to avoid, minimize, or mitigate any impacts. The Tier II environmental analysis would take into consideration detailed construction activities, including types of equipment and whether construction occurs during the day or at night, potentially with bright construction zone lighting, or on weekends when view groups' activity patterns may be more easily interrupted by views of construction activities.

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