



TIER 1 FINAL ENVIRONMENTAL IMPACT STATEMENT  
VOLUME 2



## 7.10 Visual and Aesthetic Resources



## 7.10 VISUAL AND AESTHETIC RESOURCES

### 7.10.1 Introduction

This chapter identifies the visual and aesthetic resources in the Affected Environment and Context Area and assesses the effects of the Tier 1 Draft Environmental Impact Statement (Tier 1 Draft EIS) No Action and Action Alternatives on these resources. Appendix E, Section E.10, provides the methodology for evaluating visual and aesthetic resources and includes data that supports the analysis. Because of the overlapping nature of the visual and aesthetic resources with other resources, the analysis relies on geographic information system (GIS) data and mapping generated for several other resources including Land Cover, Parklands and Wild and Scenic Rivers, Ecological Resources, Water Resources, and Cultural Resources and Historic Properties. Appendix A, Mapping Atlas, provides the general locations of related resources identified as part of the visual and aesthetics resources analysis.

#### 7.10.1.1 Definition of Resources

Visual and aesthetic resources include features of both the built and natural environments that together comprise the visual landscape. Examples of visual and aesthetic resources include parks, natural areas, scenic features, open vistas, water bodies, and other landscape features. Cultural resources, such as historic landmarks and historic districts, can also be visual resources.

Visual and aesthetic resources are often described in terms of their visual quality, which is an attribute or characteristic based on professional, public, or personal values and the intrinsic physical properties of the landscape. Intactness—or the extent to which the resource is free from obstruction— influences visual quality. Effects on visual and aesthetic resources result from changes in the visual landscape and the viewer’s response or sensitivity to those changes. Appendix E, Section E.10, provides more-detailed definitions of visual and aesthetic resources.

#### 7.10.1.2 Effects-Assessment Methodology

The Federal Railroad Administration (FRA) developed an effects-assessment methodology for the visual and aesthetics resource evaluation. The methodology provides a detailed definition of each resource, data sources, an explanation on how the Affected Environment was defined and established, and how the effects on each resource were evaluated and reported. Table 7.10-1 summarizes key factors associated with the methodology. Appendix E, Section E.10, provides the detailed methodology. This Tier 1 Draft EIS did not involve field visits or validation of the identified resources. Field surveys to identify specific resources, view sheds, or potential viewer groups would be undertaken during subsequent Tier 2 analysis.

**Table 7.10-1: Effects-Assessment Methodology Summary: Visual and Aesthetic Resources**

| Resource                       | Affected Environment  | Type of Assessment | Outcome  |
|--------------------------------|---|--------------------|--|
| Visual and Aesthetic Resources | 1-mile-wide swath centered along Representative Route for each Action Alternative | Qualitative        | Identification of resources that would be affected by an Action Alternative(s) in areas where a new rail corridor is proposed and areas where there is a proposed change to the type of infrastructure within an existing rail corridor. |

Source: NEC FUTURE Visual and Aesthetic Effect-Assessment Methodology, Appendix E, Section E.10, 2014

### 7.10.2 Resource Overview

This visual analysis identified and took into consideration resources that comprise the visual environment (such as parks, natural areas, scenic features, open vistas, water bodies) and cultural resources (such as historic landmarks and historic districts) documented as part of this Tier 1 Draft EIS.

The visual environment of the Study Area ranges from undeveloped agricultural areas and open spaces, and small towns to large-scale industrial development and vibrant urban districts. The existing NEC and the Action Alternatives traverse and connect large metropolitan areas—including Washington, D.C., Baltimore, Philadelphia, New York City, and Boston—all of which are built on and around major water bodies such as the Atlantic Ocean and large rivers.

Cultural resources and historic properties are dispersed throughout, with higher numbers of sites found in urban areas such as Washington, D.C., Philadelphia, New York City, Providence, and Boston, which were heavily populated during the colonial era. Greater numbers of historic sites are typically associated with areas where the Action Alternatives are close to the existing NEC or new route options divert into urban areas.

Parklands are also scattered throughout the Study Area with higher acreages found in Maryland, New York, Connecticut, Rhode Island, and Massachusetts. This is primarily the case where the Action Alternatives diverge from the existing NEC and create new route options or extend off-corridor, primarily in New York, Connecticut, and Rhode Island. In addition, ecological resources are dispersed throughout the Study Area, with higher concentrations of ecological resources found in Maryland, New York, and Connecticut.

### 7.10.3 Affected Environment

The Affected Environment is densely developed in the metropolitan areas of Washington, D.C., Baltimore, Philadelphia, New York City, Hartford, and Boston—all of which are surrounded by large suburban areas. Large areas of Forest/Shrub and Wetlands land covers occur in Anne Arundel, Howard, and Cecil Counties, MD; Salem and Gloucester Counties, NJ; Middlesex, New London, Tolland, and Windham Counties, CT; Washington and Providence Counties, RI; and Bristol, Norfolk, and Worcester Counties, MA. Appendix E, Section E.10, provides (by state and county) the identified visual and aesthetic resources.

Visual and aesthetic resources vary, consisting of cultural resources, developed park settings, and natural settings consisting of either water, wooded, or open views. Smaller, developed park resources are more prevalent south of New York. Undeveloped resources like the Patuxent Research Refuge in Maryland are located within tributaries to larger watersheds or ecosystems such as the Chesapeake Bay. Larger, undeveloped resources are more common north of New York; examples include Paugussett State Forest in Connecticut and Killingly Pond Management Area in Rhode Island. Connecticut and Rhode Island have the most acreage of parks. The greatest numbers of cultural sites are typically found in municipalities that date from colonial times and contain older buildings and structures. Municipalities with a large number of cultural sites include Baltimore City, MD; New Castle County, DE; Philadelphia, PA; New York City, NY; Fairfield, Hartford, New Haven, and New London Counties, CT; Providence, RI; and Suffolk County, MA.

#### 7.10.4 Environmental Consequences

Potential effects to visual and aesthetic resources would occur where new visual elements—such as elevated structures, water crossings, or new stations—would be introduced near or within sight of a visually sensitive resource. Potential effects would also occur where the Action Alternatives would require the removal of an existing visual feature (such as clearing of wooded areas) and changes in existing topography (which would occur through land acquisitions or construction). Changes to visually sensitive areas—areas where the proposed rail infrastructure would have unique aesthetic qualities (such as embankments, aerial structures, and track improvements), ancillary facilities (such as stations, and parking structures), or service changes—are also considered an impact.

Effects on visual and aesthetic resources at stations would be in the immediate vicinity of the station location. Stations are traditionally placed within communities in downtown areas or as part of a larger transportation hub serving the local population. Modified stations—existing stations where modifications to the tracks, platforms or parking might occur—would have minimal impacts to visual and aesthetic resources.

New stations would introduce new visual elements into the landscape and could have additional effects on visual and aesthetic resources. Elements associated with new stations might include buildings, platforms, tracks, parking, and other supporting structures. The number of new stations used for this assessment is considered conservative since the assessment included all stations. New underground stations may result in minimal effects to visual and aesthetic resources since the majority of the station infrastructure would be underground. Underground stations may include above-ground features such as ventilation and entrances. The effects of each Action Alternative are described in the following sections.

##### 7.10.4.1 No Action Alternative

Effects of the No Action Alternative are not quantified as part of this analysis as explained in the introduction to Chapter 7. However, it is anticipated that projects being implemented under the No Action Alternative would occur within or adjacent to the NEC right-of-way. The existing NEC contains rail infrastructure and ancillary facilities located adjacent to visual and aesthetic resources. Therefore, it is anticipated that the introduction of new or modified infrastructure associated with No Action Alternative projects would not result in significant effects to visual and aesthetic resources or settings.

##### 7.10.4.2 Alternative 1

Under Alternative 1, there would be minimal change to the visual landscape along most of the existing NEC, consistent with the No Action Alternative. Alternative 1 improvements would be confined largely to the existing NEC and, with limited improvements outside of the NEC right-of-way. Visual effects would primarily occur where Alternative 1 differs or varies from the existing NEC (Table 7.10-2)

**Table 7.10-2: Environmental Consequences: Potential Impacts to Visual and Aesthetic Resources – Alternative 1**

| State | Counties       | Change to Visual and Aesthetic Resources  |
|-------|----------------|---|
| MD    | Baltimore City | New Stations 9 (Upton) and 12 (Broadway) would introduce new visual elements to two cultural resources; Station 9 would also affect the Park Avenue Median Park.  |
|       | Cecil          | New Station 23 (Elkton) would introduce new visual elements to two cultural resources.  |
| DE    | New Castle     | New Stations 26 (Newport) and 28 (Edgemoor) would introduce new visual elements to two cultural resources.  |
| PA    | Delaware       | New Station 34 (Baldwin) would introduce new visual elements near the BicyclePA Route E trail.  |
| NY    | Bronx          | New Station 81 (Co-op City) would introduce new visual elements to Pelham Bay Park.   |
| CT    | Fairfield      | New Station 94 (Stamford H.S.) would introduce new visual elements to one cultural resource; a new bridge would introduce new visual elements to the Saugatuck River Water Access Park; 23 cultural resources could also experience visual effects.   |
|       | Middlesex      | A new bridge would span the Connecticut River.  |
|       | New London     | New embankment would bisect and introduce new visual elements to Mystic Oral School Water Access Park; new bridges would span the Connecticut and Pawcatuck Rivers; new Station 124 (Mystic/New London H.S.) would introduce new elements to one cultural resource. Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape and affect 12 cultural resources. |
| RI    | Washington     | Trenches, aerial structures, and embankments would introduce new visual elements to 10 parks, some of which include Burlingame Management Area and Great Swamp Management Area; nine cultural resources would also be affected. Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape.  |

Source: NEC FUTURE team, 2015

Note: See Chapter 4, Alternatives Considered, for additional information on stations and Representative Route characteristics.

### 7.10.4.3 Alternative 2

Alternative 2 would result in minimal change to the visual landscape along most of the existing NEC since the improvements would be focused generally within the existing NEC right-of-way; however, off-corridor route options—including an inland route through northern Connecticut and western Rhode Island—and additional new stations would result in visual changes to the existing landscape. Table 7.10-3 describes the visual effects that would occur under Alternative 2.

**Table 7.10-3: Environmental Consequences: Potential Impacts to Visual and Aesthetic Resources – Alternative 2**

| State | Counties       | Change to Visual and Aesthetic Resources  |
|-------|----------------|---|
| MD    | Baltimore City | New Stations 9 (Upton) and 12 (Broadway) would introduce new visual elements to two cultural resources; Station 9 would also affect the Park Avenue Median Park.  |
|       | Harford        | New trench would introduce new visual element to North Deen Park and one cultural resource.   |
|       | Cecil          | New Station 23 (Elkton) would introduce new visual elements to two cultural resources; embankments and aerial structures would introduce new visual elements to Fletchwood Community Park, West Branch Community Park, and three cultural resources. Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape. |

**Table 7.10-3: Environmental Consequences: Potential Impacts to Visual and Aesthetic Resources – Alternative 2 (continued)**

| State | Counties     | Change to Visual and Aesthetic Resources   |
|-------|--------------|--|
| DE    | New Castle   | New Stations 26 (Newport) and 28 (Edgemoor) would introduce new visual elements to two cultural resources.   |
| PA    | Delaware     | New Station 34 would introduce new visual elements near the BicyclePA Route E trail; an embankment and major bridge would introduce new visual elements to the John Heinz National Wildlife Refuge at Tinicum and one cultural resource.   |
|       | Philadelphia | Aerial structures, embankments, and a major bridge would introduce new visual elements to Bartram's Garden, East Park, John Heinz National Wildlife Refuge at Tinicum, Schuylkill River Water Trail, West Park, and five cultural resources.   |
| NJ    | Middlesex    | Embankments adjacent to the existing NEC would introduce new visual element to Merrill Park and two cultural resources.  |
|       | Union        | Embankments adjacent to the existing NEC would introduce new visual element to Merrill Park and three cultural resources.  |
| NY    | Bronx        | New at-grade track would cut off a portion of Pelham Parkway; new Station 81 (Co-op City) would introduce new visual elements to Pelham Bay Park; embankments and aerial structures would bisect Starlight Park; two cultural resources would also experience visual effects.  |
| CT    | Fairfield    | Embankments, aerial structures, and a major bridge would bisect and introduce new visual elements to Mianus River Water Access, Saugatuck River Water Access, and 22 cultural resources.   |
|       | New Haven    | New Station 112 (New Haven Station H.S.) would introduce new visual elements to one cultural resource; embankments, aerial structures, and a major bridge would introduce new visual elements to Quinnipiac River Marsh Wildlife Area and 10 cultural resources. Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape.  |
|       | New London   | New Station 124 (Mystic/New London H.S.) would introduce new elements to one cultural resource.  |
|       | Hartford     | New at-grade track would introduce new visual elements to Silver Lake Water Access and 16 cultural resources; new Stations 161 (Newington) and 164 (Hartford) would introduce new visual elements to seven cultural resources. Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape.  |
|       | Tolland      | New trench would bisect and introduce new visual elements to Nathan Hale State Forest; two cultural resources could also be affected. Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape.   |
|       | Windham      | New embankment would cross the Airline State Park Trail; embankments and trenches would bisect and introduce new visual elements to Natchaug State Forest; one cultural resource would also be affected. Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape.  |
| RI    | Providence   | New Station 129 (Providence Station H.S.) would introduce new visual elements to Roger Williams National Park, Greenway, and four cultural resources; embankments, aerials, trenches, and at-grade tracks would introduce new visual elements to six parks, some of which include Killingly Pond Management Area, Harris Preserve (Audubon Society of Rhode Island) Natural Area, and Snake Den Park; 21 cultural resources would also be affected. Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape. |

Source: NEC FUTURE team, 2015

Note: See Chapter 4, Alternatives Considered, for additional information on stations and Representative Route characteristics.

### 7.10.4.4 Alternative 3

Alternative 3 includes new tracks and stations between Washington, D.C., and Boston, including areas outside of the existing NEC right-of-way, which would result in the highest potential for changes to the visual landscape. Potential visual effects that would occur under Alternative 3 are described in the following sections.

#### Washington, D.C., to New York City

Table 7.10-4 describes the potential visual effects for Alternative 3 from Washington, D.C., to New York City.

**Table 7.10-4: Environmental Consequences: Potential Impacts to Visual and Aesthetic Resources – Alternative 3 (Washington, D.C., to New York City)**

| Geography | County           | Change to Visual and Aesthetic Resources   |
|-----------|------------------|--|
| D.C.      |                  | Embankment and a major bridge would introduce new visual elements to the Arboretum/Rec Center Grounds, Anacostia Park, and Baltimore Washington Pkwy; Anacostia Park would also be bisected; eight cultural resources would also be affected.  |
| MD        | Prince George's  | At-grade track, aerial structures, and embankments would introduce new visual elements to Folly Branch Stream Valley Park and Fran Uhler Natural Area. Some Forest/Shrub and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape.   |
|           | Anne Arundel     | Embankments, aerial structures, and a major bridge would bisect and introduce new visual elements to Patuxent Research Refuge and Midland Park; at-grade, embankments, and major bridge would introduce new visual elements to Patapsco Valley State Park; one cultural resource would be affected. Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape.   |
|           | Baltimore County | An embankment, aerial structure, and a major bridge would introduce new visual elements to Herring Run Park, Gunpowder Falls State Park, and Patapsco Valley State Park; Gunpowder Falls State Park would be bisected.   |
|           | Baltimore City   | New Stations 9 (Upton) and 12 (Broadway) would introduce new visual elements to two cultural resources; Station 9 would also affect the Park Avenue Median Park; 11 cultural resources would be affected.  |
|           | Harford          | Nine parks would experience visual effects due to new construction; the Anita C. Leight Estuary Center would be bisected by a trench and embankment; Perryman Park, Fletchwood Community Park, and West Branch Community Park would be bisected by an embankment and aerial structure; one cultural resource would be affected. Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape.   |
|           | Cecil            | New Station 23 (Elkton) would introduce new visual elements to two cultural resources. Some Forest/Shrub and Grassland/Cultivated land covers would be acquired, which could cause visual effects to the undeveloped landscape.  |
| DE        | New Castle       | Seven parks and four cultural resources would experience visual effects due to new construction of at-grade tracks and aerial structures; new Stations 26 (Newport) and 28 (Edgemoor) would introduce new visual elements to two cultural resources; A new aerial structure would cross the Christina River and Brandywine Creek; the White Clay Creek Wild and Scenic River would be crossed three times by an embankment, aerial structure, and at-grade track. Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape. |



**Table 7.10-4: Environmental Consequences: Potential Impacts to Visual and Aesthetic Resources – Alternative 3 (Washington, D.C., to New York City) (continued)**

| Geography | County       | Change to Visual and Aesthetic Resources   |
|-----------|--------------|--|
| PA        | Delaware     | Embankments, aerial structures, at-grade track, and new Station 34 (Baldwin) would introduce new visual elements to BicyclePA Route E and one cultural resource.   |
|           | Philadelphia | Embankments, aerial structures, at-grade track, and trenches would introduce new visual elements to eight parks and seven cultural resources; Pennypack Creek Park would be bisected by an embankment and aerial structure.                          |
|           | Bucks        | An embankment and aerial structure would cross the D & L Trail - Delaware Canal Towpath and the Delaware Canal, introducing new visual elements to the resources; three cultural resources would also be affected.                                   |
| NJ        | Mercer       | Embankment adjacent to the existing NEC would introduce a new visual element to Merrill Park and four cultural resources.  |
|           | Middlesex    | Visual effects may occur to two cultural resources by an embankment adjacent to the existing NEC. Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape. |
|           | Union        | Embankment adjacent to the existing NEC would introduce a new visual element to Merrill Park and two cultural resources.   |
|           | Essex        | Visual effects may occur to two cultural resources by an embankment adjacent to the existing NEC.  |
|           | Hudson       | Visual effects may occur to two cultural resources by an embankment adjacent to the existing NEC.  |

Source: NEC FUTURE team, 2015

Note: See Chapter 4, Alternatives Considered, for additional information on stations and Representative Route characteristics.

## New York City to Hartford

### **Via Central Connecticut**

Table 7.10-5 describes the potential visual effects for Alternative 3 via Central Connecticut.

**Table 7.10-5: Environmental Consequences: Potential Impacts to Visual and Aesthetic Resources – Alternative 3 (via Central Connecticut)**

| State | Counties    | Change to Visual and Aesthetic Resources  |
|-------|-------------|---|
| NY    | Bronx       | New tracks at-grade or on an embankment parallel to the existing NEC would introduce additional visual elements to six parks. Pelham Bay Park and Starlight Park would be bisected.   |
|       | Westchester | Embankment, aerial structures, and a trench parallel to the existing NEC would bisect Saxon Woods County Park and Silver Lake Preserve, and have visual effects to three cultural resources. Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape. |
| CT    | Fairfield   | An aerial structure and major bridge would bisect Paugussett State Forest and Saugatuck River Water Access, and have visual effects to 15 cultural resources. Some Forest/Shrub and Grassland/Cultivated land covers would be acquired, which could cause visual effects to the undeveloped landscape.  |
|       | New Haven   | A new aerial structure would bisect George C. Waldo State Park Scenic Reserve and have potential visual effects to six cultural resources. Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape.   |

Source: NEC FUTURE team, 2015

Note: See Chapter 4, Alternatives Considered, for additional information on stations and Representative Route characteristics.

### **Via Long Island**

Table 7.10-6 describes the potential visual effects for Alternative 3 via Long Island.

**Table 7.10-6: Environmental Consequences: Potential Impacts to Visual and Aesthetic Resources – Alternative 3 (via Long Island)**

| State | Counties  | Change to Visual and Aesthetic Resources   |
|-------|-----------|--|
| NY    | Queens    | An embankment and aerial structure would introduce new visual elements to Daniel A Haggerty Park, Forest Park, Jacob Riis Triangle, Prospect Cemetery, and three cultural resources.   |
|       | Nassau    | A trench would bisect Eisenhower County Park and four cultural resources could experience visual effects.  |
|       | Suffolk   | A trench and aerial structure would introduce new visual elements to Connetquot River State Park Preserve, Lakeland County Park, and South Setauket County Nature Preserve.  |
| CT    | Fairfield | An aerial structure and major bridge would bisect Paugussett State Forest and Saugatuck River Water Access, and have visual effects to 15 cultural resources. Some Forest/Shrub and Grassland/Cultivated land covers would be acquired, which could cause visual effects to the undeveloped landscape. |
|       | New Haven | A new aerial structure would bisect George C. Waldo State Park Scenic Reserve and have potential visual effects to six cultural resources. Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape.          |

Source: NEC FUTURE team, 2015

Note: See Chapter 4, Alternatives Considered, for additional information on stations and Representative Route characteristics.

Hartford to Boston

**Via Providence**

Table 7.10-7 describes the potential visual effects for Alternative 3 via Providence.

**Table 7.10-7: Environmental Consequences: Potential Impacts to Visual and Aesthetic Resources – Alternative 3 (via Providence)**

| State | Counties   | Change to Visual and Aesthetic Resources   |
|-------|------------|--|
| CT    | Hartford   | Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape.   |
|       | Tolland    | Visual effects would occur to Nathan Hale State Forest, which would be bisected by a trench, and two cultural resources. Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape.  |
|       | Windham    | New embankment would cross Airline State Park Trail and an embankment and trench would bisect Natchaug State Forest resulting in visual effects to each park as well as one cultural resource. Acquisition of Forest/Shrub, Prime Timberland, and Prime Farmland land covers that would be acquired would change the visual landscape.   |
| RI    | Providence | New Station 129 (Providence Station H.S.) would introduce new visual elements to the Greenway, Roger Williams National Park, and four cultural resources. The station would also affect one cultural resource. Killingly Pond Management Area and Snake Den Park would be bisected by an embankment and aerial structure; 18 cultural resources could also experience visual effects. Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape. |
| MA    | Bristol    | Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape.   |
|       | Norfolk    | New at-grade track would introduce new visual elements to the Bay Circuit Trail; an embankment and at-grade track would bisect the Norfolk County Canoe River Wilderness causing visual effects. Three cultural resources would also be affected. Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape.   |
|       | Suffolk    | Some Grasslands, Forest/Shrub, and Wetland land covers would be acquired, which would affect the visual landscapes. New Station 142 (Back Bay H.S.) would have potential effects to two cultural resources.  |

Source: NEC FUTURE team, 2015

Note: See Chapter 4, Alternatives Considered, for additional information on stations and Representative Route characteristics.

## Via Worcester

Table 7.10-8 describes the potential visual effects for Alternative 3 via Worcester.

**Table 7.10-8: Environmental Consequences: Potential Impacts to Visual and Aesthetic Resources – Alternative 3 (via Worcester)**

| State | Counties  | Change to Visual and Aesthetic Resources  |
|-------|-----------|---|
| CT    | Hartford  | Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape.  |
|       | Hartford  | New Station 166 (Tolland/Storrs) would introduce new visual elements to two cultural resources.   |
|       | Tolland   | Embankment along I-84 would introduce new visual elements to Nipmuck State Forest, Nye Holman State Forest, and one cultural resource. Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape. |
| MA    | Worcester | An aerial structure would be introduced to Midstate Trail and Quinsigamond State Park. Some Forest/Shrub, Grassland/Cultivated, and Wetland land covers would be acquired, which could cause visual effects to the undeveloped landscape.   |
|       | Suffolk   | New Station 142 (Back Bay H.S.) would introduce new visual elements to two cultural resources.  |

Source: NEC FUTURE team, 2015

Note: See Chapter 4, Alternatives Considered, for additional information on stations and Representative Route characteristics.

### 7.10.5 Context Area

The Context Area consists of higher percentages of undeveloped land covers, such as Forest/Shrub, Grasslands/Cultivated, and Wetlands, than the Affected Environment. In addition, there are over 1,900 parks and over 2,400 cultural resources in the Context Area. This indicates that should the Representative Route shift, there would be a potential to affect a greater share of undeveloped land covers, which could be incompatible with transportation uses and result in more land cover conversions. Likewise, if one of the Representative Routes were to shift, it is likely that a larger portion of a resource, such as a park acreage or cultural resource, in the Context Area would be encountered, which would cause more visual effects. See Chapter 7.2, Land Cover, Chapter 7.4, Parklands and Wild and Scenic Rivers, and Chapter 7.9, Cultural Resources and Historic Properties, for more information.

### 7.10.6 Potential Mitigation Strategies

An example of a programmatic mitigation measure for visual and aesthetic resources includes development of context-sensitive design measures of more visually prominent facilities, such as stations and bridges, to improve the aesthetic characteristics. In areas where cultural resources, parks, and/or residences are located, design of bridge abutments, retaining walls, and other structures will consider aesthetic treatments to be consistent with the environs and setting. Examples of these types of measures include development of visual barriers, creative landscaping to screen or enhance views, or innovative design features on ancillary facilities. Context-sensitive design measures will also be important for resources where new features related to the Action Alternatives would be introduced to the visual environment. Consultation with agencies having jurisdiction over the cultural resources and parks, as well as area residents, will be performed, as appropriate, to obtain input into the development of project design concepts.

### **7.10.7 Subsequent Tier 2 Analysis**

A more-detailed assessment of visual and aesthetic resources would be necessary as part of subsequent Tier 2 analyses. This could include field visits, identification of viewer groups, review of plan drawings and profiles to determine view sheds, and visual simulations of future conditions. Visual and aesthetic resources from the perspective of the viewer and the viewer's sensitivity to changes in the visual character would also be evaluated as part of Tier 2 evaluations. Consultation with agencies having jurisdiction over the cultural resources and parks would be performed as appropriate.