Chapter 4: Indirect and Cumulative Effects

4.1 Regulatory Context and Methodology

The Council on Environmental Quality's (CEQ) regulations implementing the procedural provisions of NEPA (40 CFR Part 1500 et seq.) require federal agencies to consider the potential for indirect and cumulative effects from a project. While the other analyses presented in this EA assess the potential direct effects of the Proposed Project within the defined Proposed Project study area, this section addresses the potential for indirect and cumulative effects that could occur later in time and within a larger geographic region. Indirect effects are those that are "caused by an action and are later in time or farther removed in distance but are still reasonably foreseeable" (40 CFR 1508.8). Indirect effects can include the full range of impact types, such as changes in land use, economic vitality, neighborhood character, traffic congestion, air quality, noise, vibration, and water and natural resources. For example, transportation projects that provide new service to a neighborhood may result in indirect effects by inducing new growth in that neighborhood. The analysis of indirect effects focuses on the construction and operational effects of Proposed Project, building on the direct effect analyses discussed in Chapter 3 of this EA. For any potential indirect effects, the analysis used the same methodologies as for analysis of direct effects, although the study areas and timeframes may be larger or longer, respectively.

Cumulative impacts result from the incremental consequences of an action when added to other past and reasonably foreseeable future actions (40 CFR 1508.7). The direct effects of an individual action may be negligible but may contribute to a measurable environmental effect when considered cumulatively with other past and/or future projects. Actions that individually have no significant effect on the environment can cumulatively affect the environment. The analysis of cumulative effects considered the Proposed Project's operational and construction-period effects in conjunction with other local and regional projects.

4.2 Indirect Effects

The Proposed Project would remove the congestion point caused by the aging Sawtooth Bridges that are nearing the end of their functional life. The Proposed Project would replace the Sawtooth Bridges to achieve a state of good repair and improve the reliability and resiliency of the NEC. While this would be a direct benefit, it would also result in indirect benefits to the regional economy, which depends on the transportation system.

By improving the reliability, resiliency, and redundancy of the NEC, the Proposed Project would avoid indirect adverse social, economic, and environmental effects associated with further deterioration and the need for additional maintenance on the existing Sawtooth Bridges. The Proposed Project would potentially lead to induced growth and improved socioeconomic outcomes in communities served by stations along the NEC due to the improved service and corresponding increases in ridership. However, these effects would likely be negligible due to the continued existence of other restrictions along the NEC, which would limit the trip time savings enabled by the Proposed Project alone. The Proposed Project would have no indirect effects to land use; zoning and public policy; visual and aesthetic resources; cultural or natural resources; air quality; noise and vibration; contaminated and hazardous materials; or public health, safety, and security.

Construction of the Proposed Project would result in beneficial indirect effects to the economy during the construction period related to construction labor, the production of necessary services and materials, and expenditures by construction workers.

4.3 Cumulative Effects

The Proposed Project, along with other elements of the Gateway Program and NEC FUTURE, would result in a cumulative transportation benefit. If implemented, the Gateway Program would improve system resiliency and connectivity and increase capacity by creating four mainline tracks between Newark Penn Station, NJ, and New York Penn Station. Key components of the Gateway Program, which are in various stages of planning and design and are not all fully committed, would occur independently of the Proposed Project including the Hudson Tunnel Project, the new Moynihan Train Hall at New York Penn Station, the new Portal Bridges, Secaucus Junction, Bergen Loop and other components. The future Portal North and Portal South Bridges would be built directly adjacent to the study area for the Proposed Project. The Portal North and Portal South Bridge Projects entail the replacement of the existing moveable bridge over the Hackensack River with two new high-level bridges and extends from Secaucus Junction at its eastern limit to Swift Interlocking at its western limit. Amtrak designed the Proposed Project to connect to the Portal North Bridge and Portal South Bridge Projects at Swift Interlocking and to accommodate future tracks as considered in the Gateway Program and NEC FUTURE initiative. It should be noted that the Proposed Project is listed as part of the Gateway Program; however, the other key components of the Gateway Program would occur independently and regardless of the Proposed Project. Ultimately, service between Newark Penn Station and New York Penn Station would not increase until Amtrak and other railroads implement substantial infrastructure capacity improvements, such as those considered as part of NEC FUTURE, including the Gateway Program, in addition to expanded trans-Hudson capacity. Those improvements would be the subject of one or more separate design, engineering, and environmental reviews.

As an investment in critical NEC rail infrastructure, the Proposed Project would improve the resiliency of railroad infrastructure along the NEC. Although the Proposed Project alone would not result in increased service, when all components of the Gateway Program are realized, it would contribute to the cumulative benefit of increasing ridership and improving connectivity and travel times along the NEC. A reduction in vehicle miles traveled on highways as rail ridership increases due to improved service and reliability is another potential cumulative benefit. The improved movement of people would also result in a cumulative benefit to air quality and energy efficiency of the overall system.

No significant adverse cumulative effects to environmental resources would result from the Proposed Project. Several of the separate projects discussed above would occur along the Pennsylvania Railroad New York to Philadelphia Historic District (NRHP-eligible). Some of these separate projects would add to the prior alterations of the Historic District. The Portal Bridge North and South Projects and other projects along the NEC in the area would remove or alter features that contribute to the historic character of the Pennsylvania Railroad New York to Philadelphia Historic District. In combination with the effects of these other projects, the Proposed Project would further diminish the integrity of the Historic District; however, notwithstanding these incremental changes, the historic district would remain NRHP-eligible. Furthermore, each project sponsor would implement appropriate mitigation measures to avoid, minimize and mitigate adverse effects, as part of Section 106 coordination. As discussed in Chapter 3, the PA for the Proposed Project describes the measures Amtrak would implement to avoid, minimize, or mitigate adverse effects of the Proposed Project on historic resources. With the implementation of such measures, the Proposed Project would not result in significant adverse cumulative effects to historic resources.

Chapter 5: Draft Section 4(f) Evaluation

FRA and Amtrak prepared this Draft Section 4(f) Evaluation pursuant to the U.S. Department of Transportation (USDOT) Act of 1966. This chapter describes the applicability of Section 4(f) of the USDOT Act to the Proposed Project, the use of Section 4(f) properties, avoidance alternatives to the use of the Section 4(f) properties, and measures to minimize harm to the Section 4(f) properties.

5.1 Regulatory Context and Methodology

Section 4(f) of the USDOT Act of 1966 (49 USC § 303) prohibits the Secretary of Transportation from approving any program or project that requires the "use" of: (1) any publicly owned parkland, recreation area, or wildlife and waterfowl refuge of national, state, or local significance; or (2) any land from a historic site of national, state, or local significance (collectively, "Section 4(f) properties"), unless there is no feasible and prudent alternative to the use of such land and such program or project includes all possible planning to minimize harm to the Section 4(f) properties. A historic site is a property that is listed in, or eligible for listing in, the NRHP.

If FRA determines that there is no feasible and prudent avoidance alternative to the use of a Section 4(f) property, then FRA may approve, from among the alternatives that use Section 4(f) properties, only the alternative that causes the least overall harm in light of the statute's preservation purpose. A feasible and prudent avoidance alternative would avoid using all Section 4(f) properties and would not cause other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property.

To determine whether an alternative is feasible and prudent, FRA may collectively consider adverse factors such as environmental impacts, safety, engineering/operational deficiencies, poor transportation service, increased costs, and other factors. FRA considers an alternative to be infeasible if it cannot be built as a matter of sound engineering judgement and not prudent if it fails to meet the project's stated purpose and need, results in safety or operational problems, results in significant adverse environmental impacts, or results in extraordinary costs, among other factors.

5.2 Section 4(f) Properties

Amtrak identified all properties within the Proposed Project study area eligible for protection pursuant to Section 4(f) (see Figure 3-5). There are no publicly owned parklands, recreation areas, or wildlife/waterfowl refuges in the Proposed Project study area.

5.2.1 Architectural Resources

Section 4(f) properties within the Proposed Project study area include the following five historic resources, as defined in consultation with NJHPO under Section 106 of the NHPA:

- Pennsylvania Railroad New York to Philadelphia Historic District;
- Old Main Delaware Lackawanna & Western Railroad Historic District;
- Substation 4;
- Hudson Tower; and
- Pennsylvania Railroad New York Bay Branch Historic District.

Chapter 3, "Affected Environment and Environmental Consequences" provides a description of each of these historic resources, and Appendix 1 presents the Section 106 correspondence.

5.2.2 Archaeological Resources

Section 4(f) applies to archeological sites that are on or eligible for listing on the NRHP, including those discovered during construction. According to the exemptions provided under 23 CFR 774.13(b), Section 4(f) does not apply if the Federal agency determines, after consultation with SHPO, Federally-recognized Indian Tribes (as appropriate), and the ACHP (if participating) that the archaeological resource is important chiefly because of what can be learned by data recovery (even if it is agreed not to recover the resource) and has minimal value for preservation in place, and the official with jurisdiction concurs with this determination. SHPO, Tribal Nation(s) and ACHP (if participating) do not object to this determination.

The Phase 1A Phase 1A did not identify any known archaeological properties eligible for protection. The Phase 1A concluded that the archaeological APE has low potential to yield intact prehistoric archaeological deposits overall and has no sensitivity for archaeological resources dating to the historic period. Potential archaeological resources, if present, would most likely be important for the information they might yield and not for preservation in place. Therefore, FRA and Amtrak do not consider these potential archaeological resources as Section 4(f) properties. The draft PA includes stipulations regarding further identification efforts for archaeology (see Appendix 1).

5.3 Section 4(f) Use

As discussed in Chapter 3, under Section 106 of the NHPA, the Proposed Project would have an adverse effect on the NRHP-eligible Pennsylvania Railroad New York to Philadelphia Historic District. Specifically, the Proposed Project would demolish the existing Sawtooth Bridges, which are contributing resources to the Historic District. Demolition of the Sawtooth Bridges would constitute a Section 4(f) use of the Pennsylvania Railroad New York to Philadelphia Historic District.

The Proposed Project would not have an adverse effect on the following four historic properties under Section 106 of NHPA: Old Main Delaware Lackawanna & Western Railroad Historic District; Substation 4; Hudson Tower; and Pennsylvania Railroad New York Bay Branch Historic District. The Proposed Project would not permanently incorporate any of these four Section 4(f) properties into a transportation facility or result in the temporary occupancy of Section 4(f) land that is adverse in terms of the statute's preservation purpose. Furthermore, although the Proposed Project would somewhat alter the setting of these Section 4(f) properties, the Proposed Project would not substantially diminish the characteristics that qualify them for listing in the NRHP and the value of the resources would not be reduced or lost. The Proposed Project would replace existing railroad-related structures with new railroad-related structures; therefore, the use, atmosphere, and overall conditions of the context of the resources would remain largely the same. Therefore, the Proposed Project would not constitute a Section 4(f) use of these four properties and no further analyses of these properties are necessary.

5.4 Avoidance Alternatives

The purpose of Section 4(f) is to avoid, and when avoidance is not feasible or prudent, minimize the use of Section 4(f) properties. As articulated in Chapter 2, "Alternatives," Amtrak considered three alternatives, in addition to the Preferred Alternative: the No Action Alternative, the Rehabilitation Alternative, and the Online Replacement Alternative. Similar to the Preferred Alternative, the Online Replacement Alternative would demolish the Sawtooth Bridges. Therefore, the Online Replacement Alternative is not an avoidance

alternative, as it would not avoid the use of the Section 4(f)-protected Pennsylvania Railroad New York to Philadelphia Historic District. The No Action Alternative and the Rehabilitation Alternative would not demolish the Sawtooth Bridges and would avoid the use of all Section 4(f) properties. However, as discussed in Chapter 2, the No Action Alternative and the Rehabilitation Alternative would not meet the Purpose and Need for the Proposed Project. Therefore, these two alternatives would not be prudent and consequently do not meet the criteria for "a feasible and prudent avoidance alternative". As discussed in Chapter 2, Amtrak considered four alignment options under the New Alignment Alternative. All four alignment options would demolish the existing Sawtooth Bridges and would, therefore, not avoid the use of all Section 4(f) properties. For the purposes of this Section 4(f) Evaluation, Amtrak developed an additional alternative—the Sawtooth Bridges Preservation Alternative, described below.

5.4.1 Sawtooth Bridges Preservation Alternative

Under the Sawtooth Bridges Preservation Alternative, Amtrak would build new bridges that would carry four NEC tracks on a separate alignment and leave the existing bridges in place for another use or as an unused historic resource. Constructing new bridges on a separate alignment would avoid the demolition of the existing Sawtooth Bridges in a manner that would preserve their contribution to the Pennsylvania Railroad New York to Philadelphia Historic District and would avoid the Section 4(f) use.

However, this alternative would require an extensive realignment of the NEC and other tracks, extensive modification of the existing infrastructure, and would dramatically increase the right-of-way requirements, as compared with the Preferred Alternative. In the Preferred Alternative, Amtrak would construct one new elevated structure parallel to the existing alignment to carry two additional NEC tracks. With the Sawtooth Bridges Preservation Alternative, Amtrak would construct two new structures off the existing alignment to carry all four NEC tracks. As discussed in Chapter 2, one of the design constraints for the track alignment is the need for tracks to fit between the existing New Jersey Turnpike overpass piers. The Sawtooth Bridges Preservation Alternative would keep the existing Sawtooth Bridges in place, thereby occupying some of the space between the New Jersey Turnpike overpass piers. With the Sawtooth Bridges Preservation Alternative, multiple tracks would need to be aligned through a different slot between the overpass piers, pushing the alignment of those tracks into the wetland area and resulting in additional environmental impacts. To reduce the curvature of the alignment and allow for a 90-mph design speed, Amtrak would have to make substantial changes to the existing infrastructure.

Furthermore, due to the condition of the Sawtooth Bridges and their advanced age, this alternative would be problematic from a safety standpoint, as it would retain a structure that is more than a century old and is in deteriorated condition over tracks that are actively used by other railroads, including NJ TRANSIT, PATH, and Conrail. The long-term risk of falling rail and bridge components could compromise public safety and significantly and adversely impact rail operations below the Sawtooth Bridges.

Overall, the Sawtooth Bridges Preservation Alternative would not take advantage of the already established Amtrak right-of-way that serves this heavily-traveled passenger rail corridor. The alternative would result in extensive environmental impacts, including temporary and permanent impacts to wetlands, as well as substantial property acquisition and costs. Therefore, while this alternative would be feasible, and could meet the Proposed Project Purpose and Need, it would not be prudent based on the following Section 4(f) criteria:

- After reasonable mitigation, the Sawtooth Bridges Preservation Alternative would still cause severe impacts to environmental resources protected under other federal statutes by expanding the right-of-way, acquiring property, and affecting the wetland area and open water.
- It would result in additional construction costs of an extraordinary magnitude resulting from: additional viaduct structures, property acquisition, mitigation of wetland impacts, significant realignment of existing tracks, and significant modification of other existing rail infrastructure. Additional costs would stem from stabilizing the Sawtooth Bridges to preserve them as non-operational historic properties and to avoid safety hazards associated with the potential for the deteriorated structure to fall onto the tracks under the bridge.
- It would cause other unique problems or unusual factors by requiring significant realignment of existing tracks and other rail infrastructure, resulting in extended disruption of rail service.

5.5 Measures to Minimize Harm

For the reasons discussed above, FRA determined that there are no prudent and feasible avoidance alternatives to the Proposed Project. FRA did not perform a least overall harm analysis because only the Preferred Alternative is prudent and feasible. As required by Section 106 of NHPA, through consultation with NJHPO and consulting parties, Amtrak and FRA developed measures to minimize or mitigate the adverse effect on the contributing resources of the Pennsylvania Railroad New York to Philadelphia Historic District, and these mitigation measures are set forth in the PA (see Appendix 1). The alternatives analysis discussed above and the execution of the PA represent FRA and Amtrak's efforts to conduct all possible planning to minimize harm to Section 4(f) properties.

5.6 Coordination

FRA and Amtrak are coordinating with NJHPO and consulting parties through the Section 106 process (see Appendix 1). On behalf of FRA and Amtrak, Amtrak's consultant invited the following potentially interested Federally-recognized Indian Tribes to consult and provide comments: the Delaware Nation; the Shawnee Tribe of Oklahoma; the Absentee-Shawnee Tribe of Oklahoma; the Stockbridge-Munsee Community; the Oneida Indian Nation; and the Delaware Tribe. While none of these Tribes formally accepted the invitation, the Delaware Tribe, the Delaware Nation, and the Shawnee Tribe of Oklahoma asked to remain apprised of the Project as it moves forward. The Stockbridge-Munsee Community declined to participate, stating that the project location is outside of their cultural area of interest. Furthermore, on behalf of FRA and Amtrak, Amtrak's consultant invited 26 organizations, institutions, governmental agencies, elected officials, non-Federally-recognized Indian Tribes, and individuals to participate as Consulting Parties. The Town of Kearny accepted the invitation. Thomas Flagg, a known industrial archaeologist, declined to participate. While Conrail did not formally accept the invitation, the railroad requested ongoing consultation with respect to engineering design.

NJHPO concurred with the APEs for the Proposed Project (see Figure 3-5) in a letter (dated April 11, 2016) and with the identification of historic resources and the findings of the effects assessment (letter dated April 3, 2017).

FRA and Amtrak are publishing this Draft Section 4(f) Evaluation for public review and comment as part of the Environmental Assessment review. USDOI is reviewing concurrently with the public. After providing opportunity for USDOI and public comment on this Draft Section 4(f) Evaluation, FRA and Amtrak would prepare the final Section 4(f) Evaluation.

Chapter 6: Environmental Commitments

Throughout this Environmental Assessment, Amtrak identified measures necessary to avoid, minimize, and mitigate adverse environmental effects that might occur from the Proposed Project. The text below outlines these measures that Amtrak would implement as part of the Proposed Project.

6.1 Cultural Resources

Amtrak would comply with the terms of the PA for architectural and archaeological resources as summarized below and detailed in the PA (see Appendix 1):

- Amtrak will produce documentation of the Sawtooth Bridges that meets the standards of the National Park Service (NPS) Level II Historic American Engineering Record (HAER) documentation.
- As Proposed Project planning progresses and construction limits are finalized, Amtrak will prepare and implement a Construction Protection Plan (CPP) to avoid construction-related damage to historic properties within close proximity (approximately 100 feet) of Proposed Project construction activities.
- Amtrak will ensure that the preliminary and final plans and specifications for the proposed new bridges adhere to the *Secretary of the Interior's Standards and Treatments for Historic Properties* and are compatible with the historical character of the Pennsylvania Railroad Historic District.
- Amtrak will consult with FRA and NJHPO in the development of bridge plans at the preliminary (30 percent), pre-final (approximately 75 percent), and final (100 percent) design stages.
- If Amtrak's archaeologist, in consultation with FRA and NJHPO, determines that archaeological monitoring is warranted, Amtrak will develop an archaeological monitoring plan in consultation with FRA and NJHPO. Any monitoring plan developed in consultation with FRA and NJHPO will include provisions for consulting with Indian Tribes, as appropriate, in the event of a discovery.
- If potentially significant archaeological resources are encountered during monitoring, Amtrak and FRA will consult with NJHPO and any other consulting parties that wish to participate pursuant to 36 CFR 800.4(b) to complete identification efforts and develop ways to avoid, minimize, and/or mitigate any project effects pursuant to 36 CFR 800.6.

6.2 Wetlands, Open Water, and Water Quality

Amtrak would adhere to the following commitments pertaining to wetlands, open water, and water quality:

- Amtrak anticipates that the Proposed Project may permanently affect approximately 1.04 acres of regulated wetlands. At this time, Amtrak anticipates that mitigation requirements would be satisfied through a combination of restoration-in-place and through purchasing mitigation credits from an available wetland mitigation bank. During the subsequent preliminary design and permitting phase, Amtrak and FRA will identify exact mitigation measures and wetland compensation ratios in collaboration with the regulatory agencies (including NJDEP, USACE, and NJSEA).
- Amtrak would avoid adverse effects to water quality through best management practices, including the use of silt fences, straw bales, and ditch checks to minimize soil erosion, sedimentation, runoff, and surface instability during construction. Amtrak would place and maintain erosion control in accordance with governing regulations and permits and thus minimize the discharge of sedimentation into waterways during construction.

- Amtrak would obtain a Soil Erosion and Sediment Control Plan Certification from the Hudson-Essex-Passaic Soil Conservation District prior to construction. This plan would include appropriate soil erosion and sediment control measures (e.g. silt fences, hay bales) to ensure no adverse effects to nearby waters.

6.3 Threatened & Endangered Species

Amtrak would adhere to the following commitments pertaining to threatened and endangered species:

- While the Proposed Project would not require any in-water work in the Passaic River, Amtrak would continue to coordinate with NMFS and other appropriate agencies during the permitting phase.
- Although the Proposed Project would not include work in the Passaic River, NMFS advises that no in-water work should occur between March 1 and June 30 of each year.

6.4 Noise & Vibration

Amtrak would comply with the terms of the CPP for the protection of historic properties as follows:

- Per the Section 106 PA, Amtrak would prepare a CPP to avoid construction-related damage to historic properties, likely including the Hudson Tower and/or Substation 4 (both NR-eligible). The CPP would include measures to avoid inadvertent construction impacts to historic properties.

6.5 Contaminated & Hazardous Materials

Amtrak would adhere to the following commitments pertaining to contaminated and hazardous materials:

- Amtrak would prepare site-specific work plans to ensure safety of workers and the surrounding community, protect sensitive environmental conservation land areas, and adhere to all applicable regulatory requirements.
- Amtrak's contractors would adhere to best management practices and appropriate worker health and safety protocols, including procedures to identify and properly manage any unexpectedly encountered subsurface contamination.
- Amtrak's contractors would conduct waste classification soil testing for off-site disposal of any surplus soil generated during construction.
- Amtrak would report any evidence of a petroleum spill to NJDEP and address such spills in accordance with applicable requirements.
- Amtrak would ensure that contractors properly maintain their equipment to avoid spills.
- If Amtrak's contractors discover previously unknown or unexpected subsurface contamination during construction, a New Jersey Licensed State Remediation Professional (LSRP) would investigate and remediate the contamination, as required under Site Remediation Reform Act (SRRA) (NJSA 58:10C-1 et seq.), the Technical Requirements for Site Remediation (Technical Rules) (NJSA 7:26E), and ARRCS (NJAC 7:26C).
- Amtrak would incorporate site-specific work plans into all contract documents. The site-specific plans would ensure the safety of workers and the surrounding community, protect sensitive environmental conservation land areas, and adhere to all applicable regulatory requirements. These plans would include documentation of all known aboveground and underground utilities and storm water/tidal control conduits and final construction drawings would be overlaid with proposed areas of disturbance.

- Amtrak would carry out all construction activities and site-specific plans in collaboration with nearby responsible parties (or their authorized representatives) for known contaminated properties to confirm the latest available data is referenced to maintain safety for workers, the surrounding community, and nearby sensitive environmental receptors.
- Although not anticipated, if Amtrak encounters petroleum tanks during excavation completed for construction, Amtrak would remove them, along with contaminated soil, in accordance with applicable requirements. Amtrak would report and address any evidence of a petroleum spill to NJDEP in accordance with applicable requirements. If Amtrak discovers tanks, Amtrak would properly register them, if required, with the NJDEP and/or the Kearny/Harrison Fire Department.
- If dewatering is necessary during construction, Amtrak would manage and discharge water in accordance with applicable local and state regulatory permitting requirements. Amtrak would perform preliminary testing as required to support any necessary permitting.
- Surfaces coated with LBP may require abatement prior to disturbance (e.g., cutting) that could generate lead-containing dust or vapors. Prior to construction or demolition, if lead-coated surfaces would potentially be disturbed, Amtrak would perform an assessment to determine whether lead exposure would occur. Amtrak would perform any activities with the potential to disturb LBP in accordance with the applicable Occupational Safety and Health Administration regulation (OSHA 29 CFR 1926.62—Lead Exposure in Construction).
- Prior to any renovation or demolition activities with the potential to disturb suspect ACM, Amtrak would conduct an asbestos survey including the review of all known utilities, and if materials tested prove to contain asbestos, Amtrak would properly remove and dispose of those materials in accordance with all applicable local, state and federal regulations.
- Amtrak would dispose of fluorescent lights and other electrical equipment that contain or potentially contain mercury and/or PCBs in accordance with applicable federal, state and local regulations and guidelines during any decommissioning or demolition work for the Proposed Project.
- Amtrak would adhere to NJDEP's Linear Construction Technical Guidance document (January 2012 or most current version).
- Amtrak would incorporate the above measures as requirements of contract documents.

6.6 Utilities

Amtrak would adhere to the following commitment pertaining to utilities:

- Amtrak would coordinate utility relocations with the appropriate utility companies.

6.7 Public Health & Safety

Amtrak complies with all applicable federal safety regulations and industry standards and has implemented multiple measures to ensure public safety and minimize the potential for accidents on the existing rail system. The public health and safety measures currently in place on the Proposed Project site are as follows:

- Positive Train Control (PTC) to prevent or avoid train collisions and derailments. The purpose of PTC is to slow or stop a train that is operating at an excessive speed or operating in a manner inconsistent with the section of track that it is traversing;
- Adequate signaling and communications to prevent any trains from entering the bridges when personnel are on-site for repairs;

- Inspection of all bridge structural components regularly and repair them as needed;
- A System Safety Program Plan that provides guidance on hazard management, incident reporting, inspection, maintenance and repair of current facilities and stock, training and certification, emergency response, environmental management, drug and alcohol programs, and a number of security policies. One section of the System Safety Program Plan is devoted to employee safety, with a particular focus on field safety;
- Initiate a Safety Management System, a company-wide program designed to improve employee safety and security;
- Ensure personnel undergo Amtrak Safety Training before they are permitted on site;
- Maintain and update the Passenger Train Emergency Response Plan that must be approved by FRA. The plan includes train operations on the NEC and covers the Proposed Project site. Amtrak also conducts Passenger Train Emergency Response Training. In 2014, training was conducted for more than 3,000 first responders along Amtrak routes across the U.S. A passenger safety specialist position was created in 2014 within Amtrak's System Safety department to address passenger injuries on trains, platforms, and in stations; and
- Amtrak would incorporate site-specific work plans into all contract documents to ensure worker safety and the surrounding community.