

# Susquehanna River Rail Bridge Project

## Appendix B

### Environmental Commitments



**May 2017**

**A. MITIGATION, COMMITMENTS, AND MINIMIZATION MEASURES**

This section identifies commitments and measures that the Project Team considered in the Environmental Assessment to mitigate and minimize adverse impacts. The future Project sponsor, likely to be Amtrak,<sup>1</sup> should incorporate these measures during the detailed design and construction phases of the Project to the extent possible and practicable or required.

**TRANSPORTATION**

The Project would not preclude construction of the proposed Chesapeake Connector project on the eastern edge of the project limits. Amtrak will coordinate final design and construction of the Project with the MARC Northeast Maintenance Facility project, located on the eastern edge of the project limits. The City of Havre de Grace has developed plans to redesign the downtown gateway area at the intersection of Otsego Street and North Union Avenue, adjacent to the existing bridge abutment. Amtrak will continue to work with the City of Havre de Grace to accommodate these City-sponsored improvements.

**LAND USE, COMMUNITY FACILITIES, SOCIOECONOMICS, AND ENVIRONMENTAL JUSTICE**

The Federal funding agency will ensure that property acquisitions and displacements will adhere to the Uniform Act and all applicable Maryland State laws regarding relocation services, moving payments, and other allowable payments related to the displacement and moving costs. Where full property acquisition is required, property owners will be fairly compensated for the land acquired and the affected business will be provided with relocation assistance to facilitate their reestablishment elsewhere, should this be necessary.

**PARKS, TRAILS AND RECREATIONAL RESOURCES**

Amtrak will continue to work with the Harford County Public Schools (see Section 4(f) commitments) to minimize impacts to the Havre de Grace Middle/High School complex. Amtrak will continue to work with City of Havre de Grace to ensure that a replacement for the Jean S. Roberts boat ramp is provided in a suitable location. As detailed in the Programmatic Agreement (Appendix C), the future Project sponsor will contact National Parks Service (NPS) prior to initiating construction to determine whether any studies or evaluations related to the Captain John Smith Chesapeake National Historic Trail, Star-Spangled Banner National Historic Trail, and/or the Washington-Rochambeau Revolutionary Route National Historic Trail are underway or completed. If additional evaluation is warranted to determine if any segments of these trails are eligible for inclusion in the National Register of Historic Places (NRHP), the

---

<sup>1</sup> The likely future Project sponsor is Amtrak. However, depending on the source of future funding, there may be other project sponsors.

## Susquehanna River Rail Bridge Project

---

future Project sponsor will consult with the respective NPS trail Superintendent to complete such evaluations.

### **VISUAL & AESTHETIC CONDITIONS**

The proposed design for the two new bridges will be traditional in character and allow greater views under the bridge. Amtrak will avoid or minimize several potential visual adverse effects through the following:

- Design new physical structures such as the retaining walls in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*.
- Use a traditional design for the new bridges and the bridges' piers and ensure that the design allows greater views under the bridges.
- Apply an appropriate treatment to the retaining wall to minimize the visual adverse effect to Rodgers Tavern.
- Implement, to the extent practicable, construction near the Perryville Railroad Station that is compatible with the historic materials, features, size, scale and proportion of the station complex.
- Shift rather than demolish the Perry Interlocking Tower.
- Design undergrade bridge extensions using a form liner that emulates stone and is stained to be compatible with the color of the existing stone.
- Consider utilizing a 220-foot span(s) in the City of Havre de Grace as part of ongoing efforts to minimize effects to historic properties.

### **CULTURAL RESOURCES**

The future Project sponsor will undertake Phase IB archaeological investigations to determine the presence or absence of archaeological resources in these areas. If Phase IB testing identifies potentially significant (NR-eligible) archaeological resources in any of the Study Areas that could be affected by the Project, Phase II archaeological testing will determine the significance and the boundaries of the archaeological deposits. Additional information regarding the potential underwater archaeological resources within the Susquehanna River is required to determine potential impacts to these historic resources.

The Project Team identified measures to minimize and mitigate adverse effects to architectural resources in the Programmatic Agreement (PA), which has been prepared in coordination with MHT, concurring parties, and consulting parties. The PA (see Appendix C) includes a series of commitments and detailed measures that will be implemented.

#### **SECTION 4(f)**

As discussed above, the Project Team identified measures to minimize and mitigate adverse effects to architectural resources in the PA, which has been prepared in coordination with MHT, concurring parties, and consulting parties. The PA includes a series of commitments and detailed measures that parties to the PA should implement. Additionally, future Project sponsor will implement the following measures to minimize harm to parkland:

- Continue to work with Havre de Grace to identify appropriate mitigation measures to mitigate the adverse impact on Jean S. Roberts Memorial Park and relocate the boat ramp.
- Implement the following measures to minimize harm to the Havre de Grace Middle/High School complex in collaboration with Harford County Public Schools:

- Build the railroad on an elevated structure over the 110-meter hurdle runout area. During construction, the runout may be reduced to 8.5 meters; after construction, it will be rebuilt to its current 11.5-meter length.
- Relocate the pole vault, high jump, long jump and storage shed.
- Reimburse Harford County Public Schools for the agreed upon additional design cost.
- Schedule construction to minimize disruption to athletic facilities, to the extent practical.
- Redesign the baseball field by shifting home plate three feet away from the railroad and rotating the field 2.5 degrees counterclockwise.
- Work with the baseball field redesign consultant to provide adequate clear area around Amtrak's proposed retaining wall.
- Provide conduit and embedded inserts for installation of a future score board by Harford County Public Schools.
- Install a protective netting to shield the railroad from foul balls.
- Relocate the water main in a casing, allowing future replacement to be done without affecting the athletic facilities.

#### **SECTION 6(F) RESOURCES**

The future Project sponsor will continue to coordinate with Harford County Public Schools to submit an application for land conversion to the NPS Regional Administrator through DNR. A suitable replacement property will be identified, in consultation with NPS, DNR and HCPS, once the project transitions into detailed design and as construction funds become available.

#### **NATURAL RESOURCES**

The Project Team has coordinated extensively with natural resource review agencies throughout the course of the project. As discussed in the EA, multiple permits and approvals will be required prior to construction. These permits and approvals will stipulate the final mitigation measures, based on the project's impacts. Nonetheless, the sections below outline some of the anticipated commitments and mitigation measures based on agency coordination and information obtained today.

#### *GEOLOGY & SOILS*

The future Project sponsor will prepare and implement a grading plan and erosion and sediment control plan in accordance with MDE regulations, and secure a Notice of Intent under the 2014 National Pollution Discharge Elimination System (NPDES) General Permit for Stormwater Associated with Construction Activity. Minimization techniques include:

- Seeding, sodding, and stabilizing slopes as soon as possible during construction.
- Stabilizing ditches at the tops of cuts and at the bottoms of fill slopes before excavation and formation of embankments.
- Using sediment traps, silt fences, slope drains, water holding areas, and other control measures.
- Using diversion dikes, mulches, netting, energy dissipaters, and other physical erosion controls on slopes where vegetation cannot be supported.

## **Susquehanna River Rail Bridge Project**

---

### *FLOODPLAINS AND WETLANDS/WATERS OF THE US*

A Joint Federal/State Application for the Alteration of Any Floodplain, Waterway, Tidal or Nontidal Wetland in Maryland will be submitted, as this Project would impact nontidal wetland and waterways. The future Project sponsor would also be required to obtain other federal and state authorizations. The future Project sponsor will complete mitigation for wetland and waterway impacts in accordance with USACE/MDE recommendations. Any mitigation measures employed due to unavoidable impacts to Waters of the U.S., including wetlands, will follow the Federal Compensatory Mitigation Rule (33 CFR Part 325 and 40 CFR Part 230), and Maryland state compensatory guidelines, as well as other practicable recommendations from federal and state resource agencies. Mitigation could include mitigation banking credits, in lieu fees, or permittee-responsible mitigation using a watershed approach.

To ensure that floodwater impacts are minimized, drainage structures will be designed to maintain the current flow regime and prevent associated flooding, potentially through the construction of bottomless culverts and/or other measures. The Project Team may include the following minimization and mitigation efforts for floodplain encroachment: increased bridge spans over the 100- and 500-year floodplain, reducing encroachments by using 2:1 minimum slopes for rail berms, and building retaining walls, where practicable. The future Project sponsor will seek approval regarding floodplains from the appropriate regulatory authority.

### *FOREST RESOURCES*

The future Project sponsor will offset any forest impacts by planting trees in cleared areas (reforestation) and/or in areas not previously forested (afforestation). If applicable, the Project future Project sponsor will prepare a DNR-approved Forest Conservation Plan (FCP) that prescribes the reforestation and afforestation acreage, any applicable construction work windows required to protect Forest Interior Dwelling Bird Species (FIDS), mitigation site selection process, planting requirements and specifications, and monitoring plan.

### *AQUATIC RESOURCES*

The future Project sponsor will work with the NMFS, DNR, and other resource agencies to determine the most appropriate construction timing restrictions for each aquatic resource (e.g., Susquehanna River, SAV, streams, etc.) to protect multiple resources potentially occurring within the project area, including, federally endangered sturgeon, state endangered map turtle, and anadromous fish species. Amtrak will schedule any blasting activities to occur within a work window that corresponds to the time period of the year when protected species are least likely to occur in the vicinity of the project area, and conduct any blasting in such a manner as to minimize the potential for fish mortalities, in coordination with resource agencies. Amtrak will use appropriate measures (such as wooden cushion blocks and other Best Management Practices) during impact pile driving for the finger piers. The future Project sponsor will continue to coordinate with resource agencies regarding the tidal black bass fishery and any new information regarding logperch, the Northern map turtle, and other species located near the project site.

Amtrak will prepare an Erosion and Sediment Control Plan, implement stormwater best management practices (BMPs), and use sediment containment techniques, such as turbidity curtains, floating booms, and/or other approved best practices, during construction to minimize sediment releases that could harm SAV, water, or sediment quality. Mitigation for unavoidable impacts to SAV will follow the Federal Compensatory Mitigation Rule and other state compensatory mitigation guidelines, to be developed through coordination with federal and state

resource agencies. NMFS provided the following recommendations for SAV mitigation after removal of the temporary finger piers:

- Allow the sediment to settle.
- Replant the area the following growing season to restore existing conditions.
- Mitigate for the temporal loss of SAV habitat by planting additional SAV at a 3:1 ratio or as otherwise specified in project permits, preferably in locations where SAV has been successful in the past but has disappeared or has minimal density.
- Monitor the entire project site for five years to determine if there are additional SAV losses resulting from the Project that require mitigation and to determine the success of replanting. If SAV growth has not been documented by year three, a second round of planting may be necessary.

The future Project sponsor will investigate this approach along with other out-of-kind mitigation alternatives as the Project advances to later design phases.

The future Project sponsor will notify DNR and the public at least two weeks prior to periods when sediment is expected to be re-suspended, as recommended. As the project design and permitting progresses, the future Project sponsor will continue to monitor the mapped locations of SAVs and consider the use of demolition materials or clean spoil for the creation of additional aquatic habitat.

*THREATENED, ENDANGERED, OR SPECIAL CONCERN TERRESTRIAL RESOURCES*

The future Project sponsor will coordinate with DNR, as the Project progresses into later phases of design, regarding any potential disturbances to waterfowl along the shoreline and adjacent open waters and appropriate protection measures.

*CHESAPEAKE BAY CRITICAL AREA*

Minimization efforts to avoid the Critical Area were incorporated as part of the early design for the Project. The future Project sponsor will include further minimization and mitigation measures for unavoidable impacts to the Critical Area, such as:

- Strictly enforced erosion and sediment control measures.
- Replacement lands of equal or greater natural resource and economic value.
- Additional appropriate mitigation measures, such as landscaping (where applicable with respect to the resource).

The future Project sponsor will continue coordination with the CAC during the design phase of the Project to ensure compliance with all Critical Area criteria, mitigation requirements, and regulations.

*COASTAL ZONE MANAGEMENT*

The joint permit application/authorization process with MDE and the USACE will constitute Coastal Zone Management consistency.

**GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE**

Amtrak will use cement replacements, such as slag, fly-ash, silica fume, and calcined clay, and recycled steel as part of the contract requirements, to the extent practicable. The Project will be designed to accommodate reasonably foreseeable future conditions due to climate change.

## **CONTAMINATED & HAZARDOUS MATERIALS**

To prevent exposure pathways and doses during construction, the Project will include appropriate health and safety and investigative/remedial measures. The future Project sponsor will:

- Determine the need for additional investigation/remediation in consultation with MDE once the exact extent of disturbance and potential need for dewatering is identified.
- Follow established regulatory requirements for pre-construction removal of asbestos and appropriate management of lead-based paint and of PCB-containing equipment.
- Develop and implement an environmental Construction Health and Safety Plan (CHASP), conforming to applicable local, state, and federal regulatory requirements.
- Coordinate with the MDE Oil Control Program, the Solid Waste Program, the Waste Diversion Utilization Program, and the Brownfields Site Assessment and Voluntary Cleanup Program, as warranted, during future project phases.

## **CONSTRUCTION EFFECTS**

### *TRANSPORTATION*

Coordination will be required between the contractor, the USCG, and local mariners to permit safe passage of vessels during construction activities. To avoid damage to commercial fishing equipment during the construction period, waterborne construction traffic will use navigation routes selected in consultation with the local fishermen's organization. The future Project sponsor will consult with the commercial fishing community as needed during the construction process. The future Project sponsor will include provisions to avoid damage to commercial fishing equipment, such as advanced communication and schedule coordination, in construction documents for the Project. Amtrak will develop a construction access plan in coordination with the community, to determine appropriate highway access routes and acceptable street closure schedules.

### *CULTURAL RESOURCES*

To avoid accidental damage to adjacent resources, the Amtrak will develop a Construction Protection Plan (CPP) in consultation with SHPO for all historic properties that may be subject to inadvertent damage resulting from construction activities.

### *AIR QUALITY*

Amtrak will implement common construction practices to suppress dust emissions, including:

- Prepare a detailed dust control plan to minimize fugitive emissions and define measures to be used for each operation type and location.
- Use Tier 4 engines or, where Tier 4 is not available or practicable, Tier 3 engines retrofitted with EPA, California Air Resources Board (CARB), or VERT-approved after-market diesel particle filters (DPF) where technically feasible (including safety considerations) for all non-road diesel engines greater than 60 horsepower (hp). It is noted that use of after-market DPF for Tier 3 engines with ULSD fuel achieve nearly the same particulate matter emissions as the newer Tier 4 engines, and the use of Tier 3 engines ensures the lowest practicable NO<sub>x</sub> emissions to minimize NO<sub>2</sub> concentrations in the nearby areas to the extent practicable.

- Apply these requirements to all construction engines including, but not limited to, marine engines, nonroad engines, and portable and/or truck mounted equipment such as generators, pumps, and drills, including all phases of construction and any exploratory work such as test drilling.
- Minimize localized effects due to increases in on-road mobile source emissions through the use of barges or materials transport where feasible and the use of appropriate routes for truck deliveries (that avoid residential areas to the extent practicable).
- Strictly prohibit truck idling, other than in cases where a truck engine is required to operate auxiliary devices such as loading and unloading or concrete mixing.
- Require that all trucks expected to operate onsite, including but not limited to concrete mixing trucks and dump trucks, be model year (MY) 2007 or newer or equipped with DPF approved similar to the above non-road requirements (MY 2007 or newer vehicles are equipped with advanced systems to substantially reduce both PM and NOx emissions).
- Allow use small portable generators (including truck-mounted generators) up to 50 hp at land-based sites only for sites where construction duration would be limited (less than two weeks) and where obtaining a grid connection would be impracticable; no use of large generators at land-based sites.

#### *NOISE AND VIBRATION*

- Amtrak will use appropriate low-noise emission level equipment and implement operational procedures to ensure equipment noise emission levels that do not exceed the values shown in Table 17-2 in Chapter 8 of the EA.
- Amtrak will ensure compliance with noise control measures by including them in the contract documents as material specifications and by directives to the construction contractor.
- Amtrak will encourage the contractor to use quiet construction equipment. In addition to the establishment of a project-wide CPP, special measures set forth by MHT will be followed to protect historic resources from increased vibration levels associated with construction activities.
- At any construction location where historic resources, and particularly older fragile buildings, are within an area of potential effect (see Chapter 8, “Cultural Resources,” of the EA for more details), construction contractors will be required to implement special vibration protection measures.

The CPP for historic resources (discussed above under “Cultural Resources”) will likely include the following:

- Inspect and report on the current foundation and structural condition of any historic resources.
- Set up a vibration monitoring program to measure vertical and lateral movement and vibration to the historic structures within 150 feet of pile-driving activities. Details as to the frequency and duration of the vibration monitoring program will be determined as part of the Project’s ongoing consultation process with MHT.
- Establish and monitor construction methods to limit vibrations to levels that would not cause structural damage to the historic structures, as determined by the condition survey.



## **Susquehanna River Rail Bridge Project**

---

- Issue “stop work” orders to the construction contractor, as required, to prevent damage to the structures, based on any vibration levels that exceed the design criteria in lateral or vertical direction. Work will not begin again until the steps proposed to stabilize and/or prevent further damage to the designated buildings were approved.

### *INFRASTRUCTURE AND UTILITIES*

Amtrak will coordinate relocation of the known utilities with the utility provider to minimize service disruptions.

\*