



# Welcome!

Susquehanna River Rail Bridge Project

**Public Outreach Information Session**

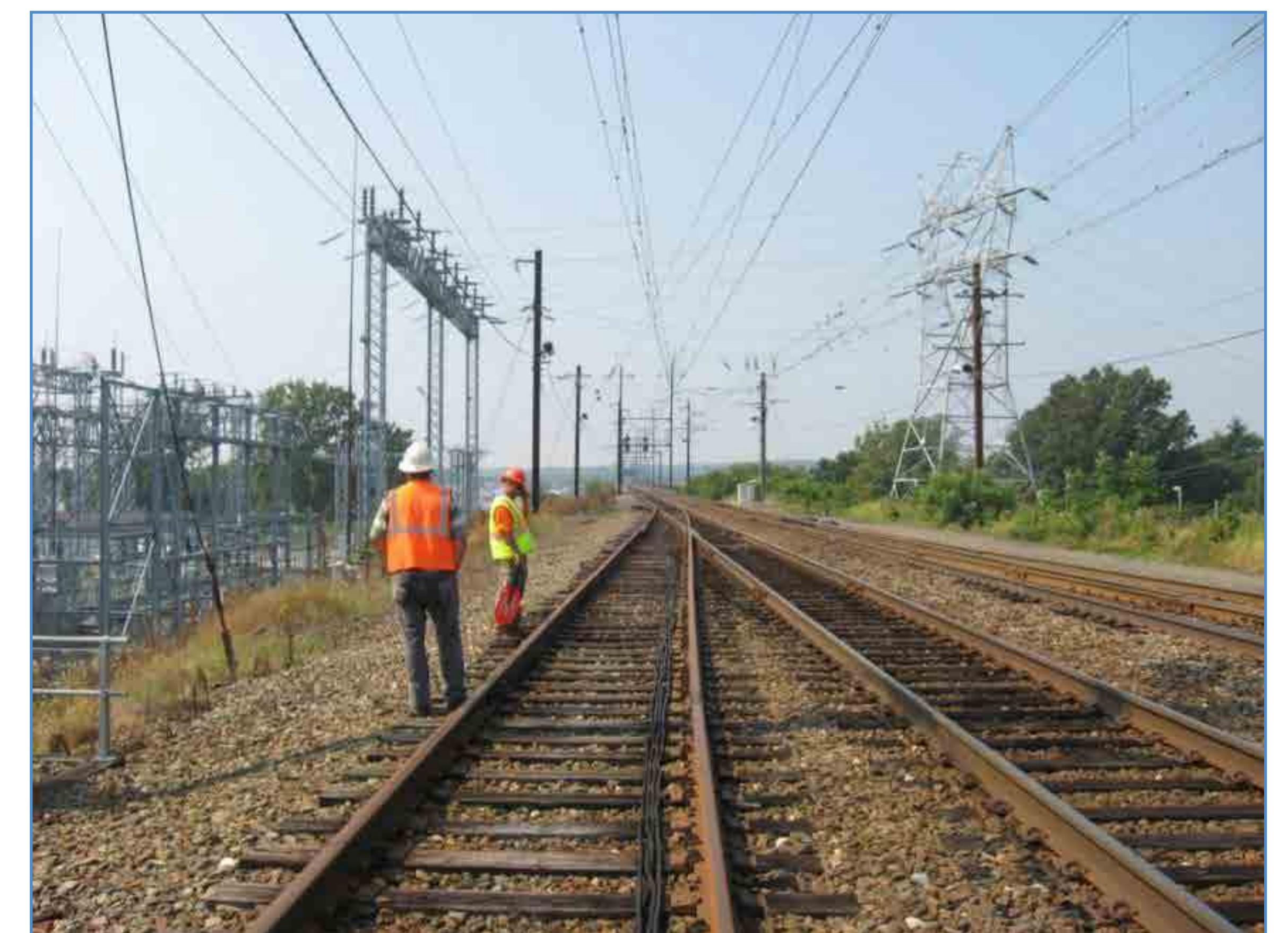


# Project Purpose and Need

**The primary purpose of the Susquehanna River Rail Bridge Project is to provide continued rail connectivity along the Northeast Corridor (NEC).**

The project goals include:

- Improve rail service reliability and safety
- Improve operational flexibility and accommodate reduced trip times
- Optimize existing and planned infrastructure and accommodate future freight, commuter, intercity, and high-speed rail operations
- Maintain adequate navigation and improve safety along the Susquehanna River



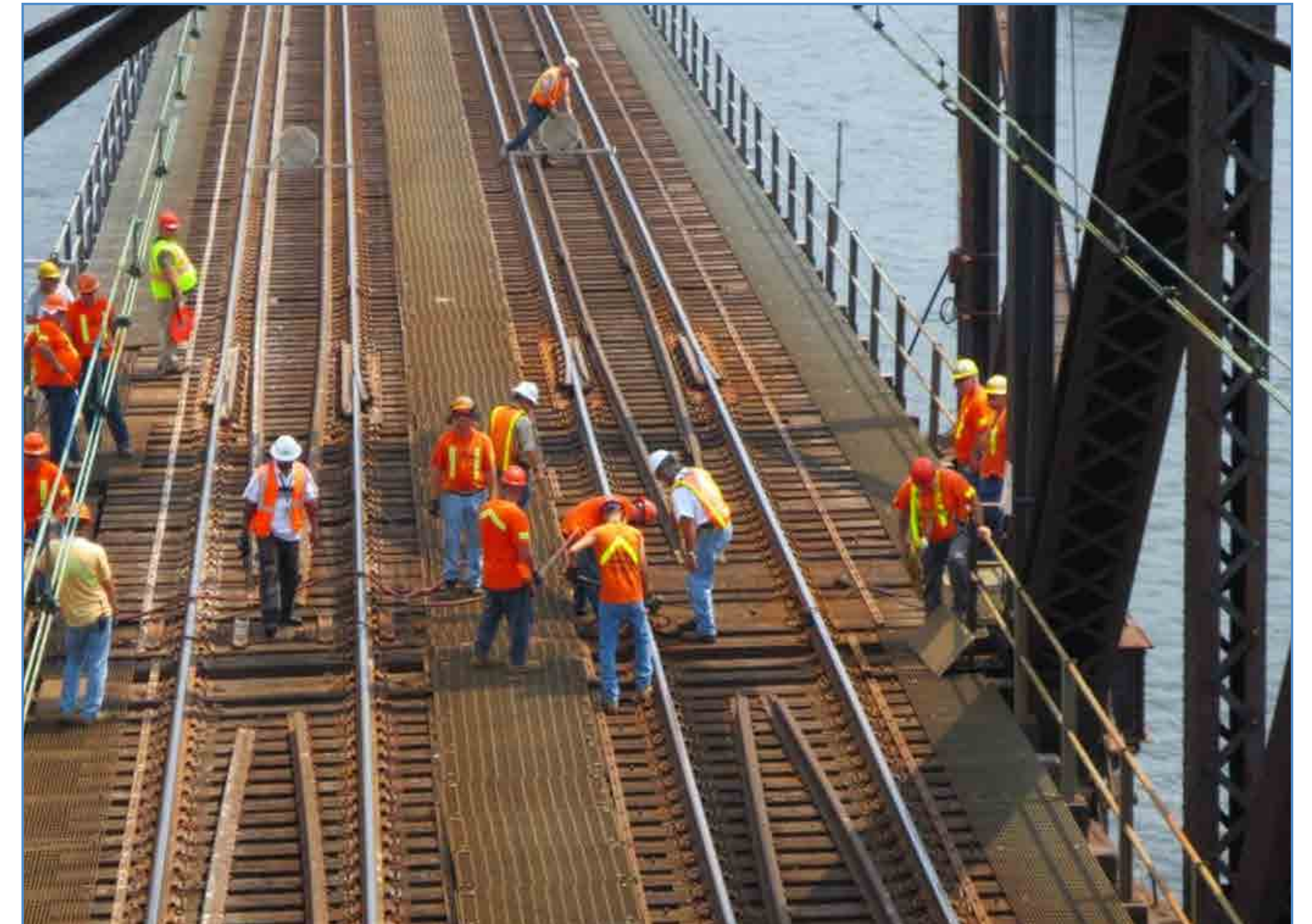
*The Northeast Corridor merges from four tracks to two tracks (heading south from Perryville to Havre de Grace).*



# Project Purpose and Need

The problems posed by the existing Susquehanna River Rail Bridge include:

- Functionally obsolete and aging infrastructure
- Speed and capacity constraints
- Operational inflexibility
- Maintenance difficulties
- Conflicts with maritime uses



*Amtrak crew manually opening the movable bridge span to accommodate marine traffic.*



# Two-Step Alternatives Screening Process

## Step 1: Fatal Flaw Screening—criteria developed from Purpose & Need

### ➤ *Pass/fail test—alternative must satisfy all criteria to advance*

- Provides rail connectivity
- Meets navigation requirements
- Has logical termini
- Is feasible & constructible
- Avoids critical property impacts (developed from community input)

## Step 2: Detailed Screening—based on specific project goals

### ➤ *Relative test—compare/contrast each alternative's ability to meet goals & objectives*

- Optimizes existing and planned infrastructure
- Considers operational, design, construction requirements
- Minimizes environmental/cultural/socioeconomic/property impacts



# Two-Step Alternatives Screening Results

- ***Fatal Flaw Screening—25 conceptual alignments were evaluated and 15 were eliminated***
  - Rehabilitation of existing bridge was eliminated; not feasible from construction and engineering perspective; will fail to provide continued rail connectivity and meet navigational requirements
- ***Detailed Screening—9 remaining alignments and 1 value engineering alignment were evaluated; all but 2 alignments were eliminated***
  - Alignments were eliminated based on the following factors:
    - Natural and Human Environmental Impacts
    - Operational and Engineering Considerations
- ***Alternatives Retained for Detailed Study—Alignments 9A and 9B***



# Alternatives Retained for Detailed Study

## ➤ *Alternative 9A*

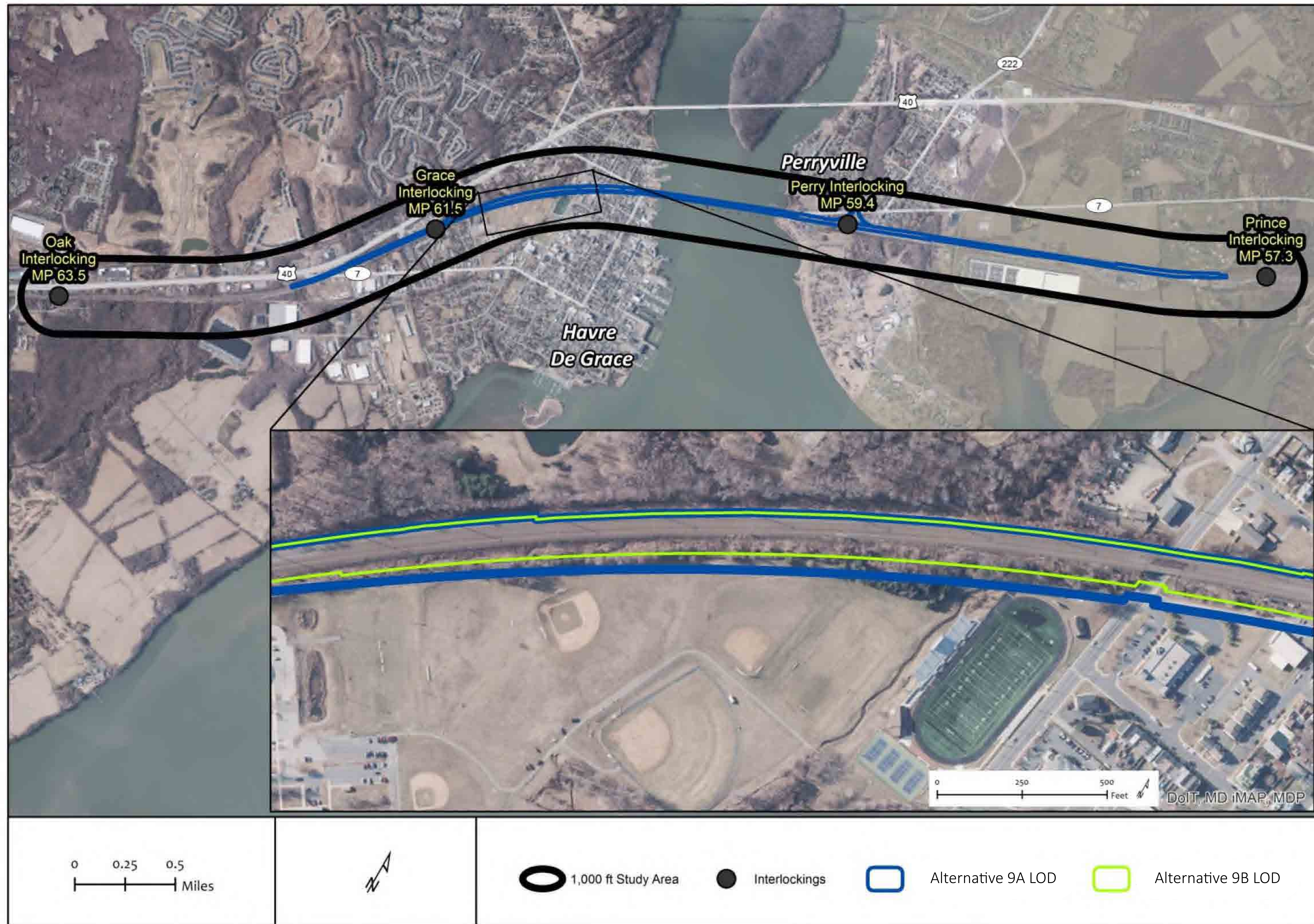
- Provides for a four-track crossing with max authorized speed of 160 mph, consistent with the operational goals and with broader plans along the Northeast Corridor (NEC)
- Environmental impacts are comparable or less than other alternatives with similar benefits
- Investigating potential impact avoidance/minimization and mitigation opportunities (i.e. Perry Interlocking Tower and Havre de Grace MS/HS complex)

## ➤ *Alternative 9B*

- Provides for a four-track crossing with max authorized speed of 150 mph
- Environmental impacts are comparable or less than other alternatives with similar benefits
- Does not require property from Havre de Grace MS/HS complex



# Alternatives Retained for Detailed Study Design Limits





# Land Use—Property Acquisition

- To mitigate all property acquisitions, the project team will coordinate with property owners and comply with all Uniform Act requirements, including relocation services and compensation

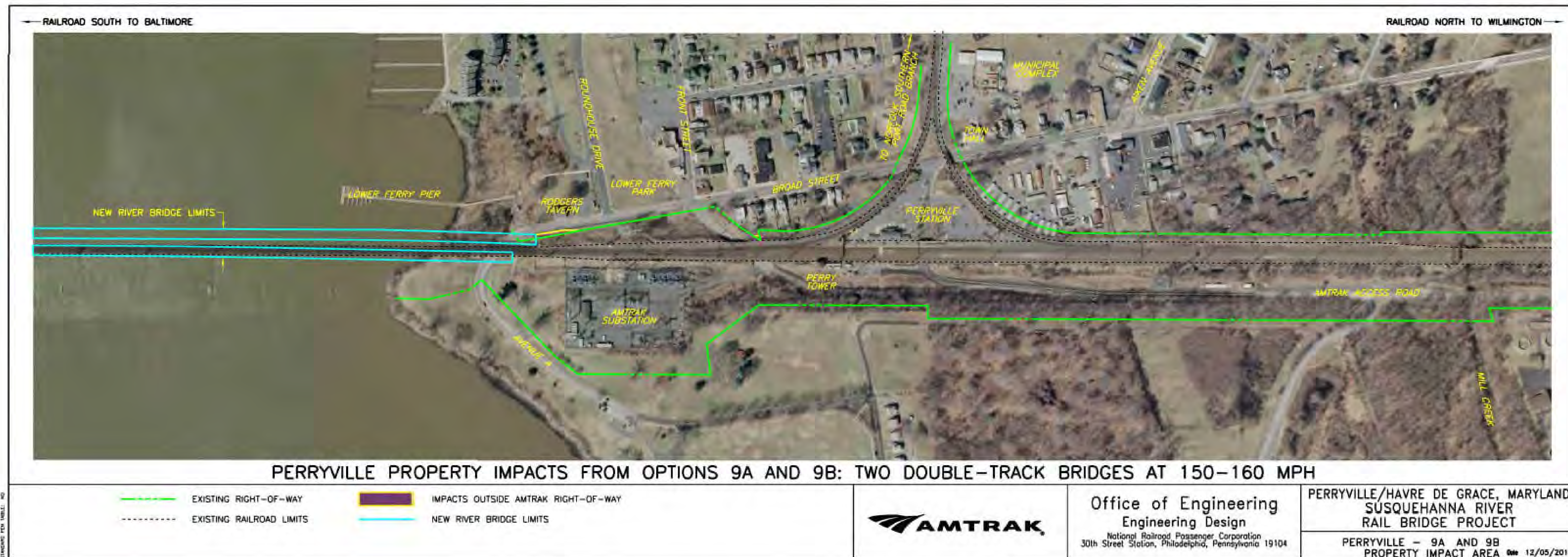
	Alternative 9A	Alternative 9B
<b>Commercial</b>	1.14 acres (full acquisition of a property)	0.30 acres (partial acquisition of a property)
<b>Residential</b>	0.058 acres (including 0.05 acres of undeveloped land)	0.008 acres
<b>Havre de Grace MS/HS Athletic Fields</b>	1.50 acres (2.6%)	None
<b>City-owned Jean Roberts Park</b>	0.01 acres	0.01 acres
<b>Warren Street Public ROW</b>	0.1 acres	None
<b>Broad and Otsego Streets Public ROW</b>	0.034 acres	0.034 acres
<b>Total Potential Property Acquisition</b>	2.84 acres	0.35 acres







# Potential Property Impacts from Retained Alternatives





# Parks/Section 6(f)

	Alternative 9A	Alternative 9B
<b>Amtrak-owned Jean Roberts Park</b>	0.26 acres (100%)	0.26 acres (100%)
<b>City-owned Jean Roberts Park (boat ramp &amp; portion of pier)</b>	0.01 acres (2.26%)	0.01 acres (2.26%)
<b>Havre de Grace MS/HS Athletic Fields*,**</b>	1.50 acres taking (impacts to track, football field, ballfields)	None

*\*Section 6(f) process applies to this property, requiring land replacement*

*\*\*Mitigation will require modification of planned facility upgrades and coordination with Harford County Public Schools*

Note: Section 6(f) of the Land and Water Conservation Fund (LWCF) Act (16 USC 460) requires that any park or recreational resource that received grants from the LWCF is considered a Section 6(f) resource and therefore afforded certain rights. As a result, the conversion of lands improved or acquired through LWCF funding for other uses (i.e. transportation) must be replaced with land of at least the equivalent area, value, and usefulness.





# Section 4(f) Properties

Section 4(f) requires that special effort be made to preserve publicly owned parkland and recreation areas, wildlife / waterfowl refuges and historic sites.

Based on preliminary assessment, the Proposed Project would result in the use of the following Section 4(f) Properties:

Alternative 9A	Alternative 9B
<ul style="list-style-type: none"><li>• Amtrak railroad bridge over the Susquehanna River and overpasses (the Susquehanna River Rail Bridge)</li><li>• Jean S. Roberts Memorial Park</li><li>• Perryville Railroad Station</li><li>• Havre de Grace Historic District</li><li>• Havre de Grace MS/HS athletic fields</li></ul>	<ul style="list-style-type: none"><li>• Amtrak railroad bridge over the Susquehanna River and overpasses (the Susquehanna River Rail Bridge)</li><li>• Jean S. Roberts Memorial Park</li><li>• Perryville Railroad Station</li><li>• Havre de Grace Historic District</li></ul>



# Section 4(f) Properties



<p><b>Legend</b></p> <ul style="list-style-type: none"> <li><span style="color: blue;">○</span> Havre de Grace Middle/High School Athletic Fields</li> <li><span style="color: orange;">○</span> Havre de Grace Historic District</li> <li><span style="color: green;">○</span> Jean S. Roberts Memorial Park</li> <li><span style="color: yellow;">○</span> Rodgers Tavern</li> <li><span style="color: red;">○</span> Perry Interlocking Tower</li> <li><span style="color: cyan;">○</span> Access Road Under Grade Bridge 59.39</li> <li><span style="color: lightblue;">○</span> Alternative 9A LOD</li> <li><span style="color: lightgreen;">○</span> Alternative 9B LOD</li> </ul>		<ul style="list-style-type: none"> <li><span style="color: yellow;">●</span> Susquehanna River Rail Bridge Overpasses</li> <li><span style="border: 1px solid black; width: 10px; height: 10px; display: inline-block;"></span> Perryville Train Station</li> <li><span style="border-bottom: 1px solid black; width: 20px; display: inline-block;"></span> Railroad</li> <li><span style="border: 2px solid black; border-radius: 50%; width: 20px; height: 20px; display: inline-block;"></span> 1,000 ft Study Area</li> </ul>	<p><b>Data Sources</b></p> <p>Historic District and Rodgers Tavern: Maryland Historical Trust</p>		<p><b>Susquehanna River Rail Bridge Project</b></p> <p>Section 4(f) Properties</p>
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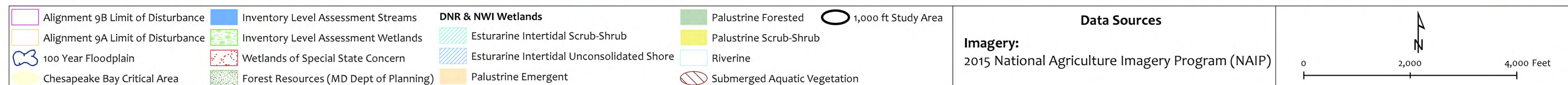
# Summary of Natural Environmental Impacts

Resource Type	Resource Category	Alternative 9A	Alternative 9B
<b>Environmental Considerations</b>			
<b>Effective FEMA Floodplain Encroachment (acres)</b>	100-Year	2.72	2.15
	500-Year	4.83	4.24
<b>Preliminary FEMA Floodplain Encroachment* (acres)</b>	100-Year	3.09	2.63
	500-Year	3.16	2.69
<b>Wetlands (acres)</b>	Tidal	0.06	0.06
	Nontidal	0.83	0.71
<b>Streams (linear feet)</b>	Relatively Permanent Waterways	3,190	2,943
	Ephemeral	19	19
<b>Wetland Buffers (acres)</b>	Tidal	0.27	0.27
	Nontidal	2.16	1.72
<b>Forest Resources (acres)</b>	-----	2.92	2.08
<b>Chesapeake Bay Critical Area (acres)</b>	-----	6.4	6.1
<b>Susquehanna Riverbed/ Aquatic Biota (acres)</b>	Permanent Impacts	0.37	0.37
	Construction (temp. impacts, including finger piers)	0.23	0.23
<b>Submerged Aquatic Vegetation (acres)</b>	Permanent Impacts	0.08	0.08
	Construction (temp. impacts, including finger piers)	0.48	0.48

\*Preliminary floodplain available for Harford County only



# Environmental Resources





# Historic and Archaeological Resources

- Total acreage of potentially sensitive archaeological areas for Alternatives 9A and 9B — approximately 0.31 acre.
- Team is exploring design measures to minimize adverse effects to historic resources (compatibility of materials, color, retaining walls, aesthetic treatments)
- Coordination with MHT and Section 106 consulting parties is required

Historic Resources	Potential Issues
Susquehanna River Rail Bridge and Overpasses	Removal of existing bridge and alterations to eight historic bridges
Havre de Grace Historic District	Expansion of existing railroad right-of-way will move tracks closer to contributing structures within the Historic District
Rodgers Tavern	Retaining wall will be constructed near Rodgers Tavern
Perryville Railroad Station	<p>Alterations to Undergrade Bridge MP 59.39 (contributing element of NR-eligible station complex)</p> <p>Shifting Perry Interlocking Tower within Amtrak property, instead of demolishing</p>



# Visual and Aesthetic Considerations

- **Visual resources study area is within the State-designated Lower Susquehanna Heritage Greenway (LSHG); multiple natural areas and historic sites with high visual and aesthetic value**
- **The project results in adverse visual impacts to the following resources:**
  - Havre de Grace Historic District from railroad right-of-way expansion and new retaining walls
  - Rodgers Tavern from new bridge approach and retaining wall
  - Eight undergrade bridges; altering stone construction and/or arch design
- **Adverse visual impacts avoided and/or minimized through:**
  - Use of a bridge and pier design that has traditional features and allows greater views under the bridges
  - Design modifications to maximize compatibility with historic materials, features, etc
  - Aesthetic treatments
  - Complying with *Secretary of Interior's Standards for the Treatment of Historic Properties*



# Air Quality

- Regional air pollutant emissions below thresholds (not significant)
- With other corridor improvements, improved regional air quality (from reduced car travel)
- Effects on local air quality are being evaluated



*Amtrak train crossing the Susquehanna River Rail Bridge*



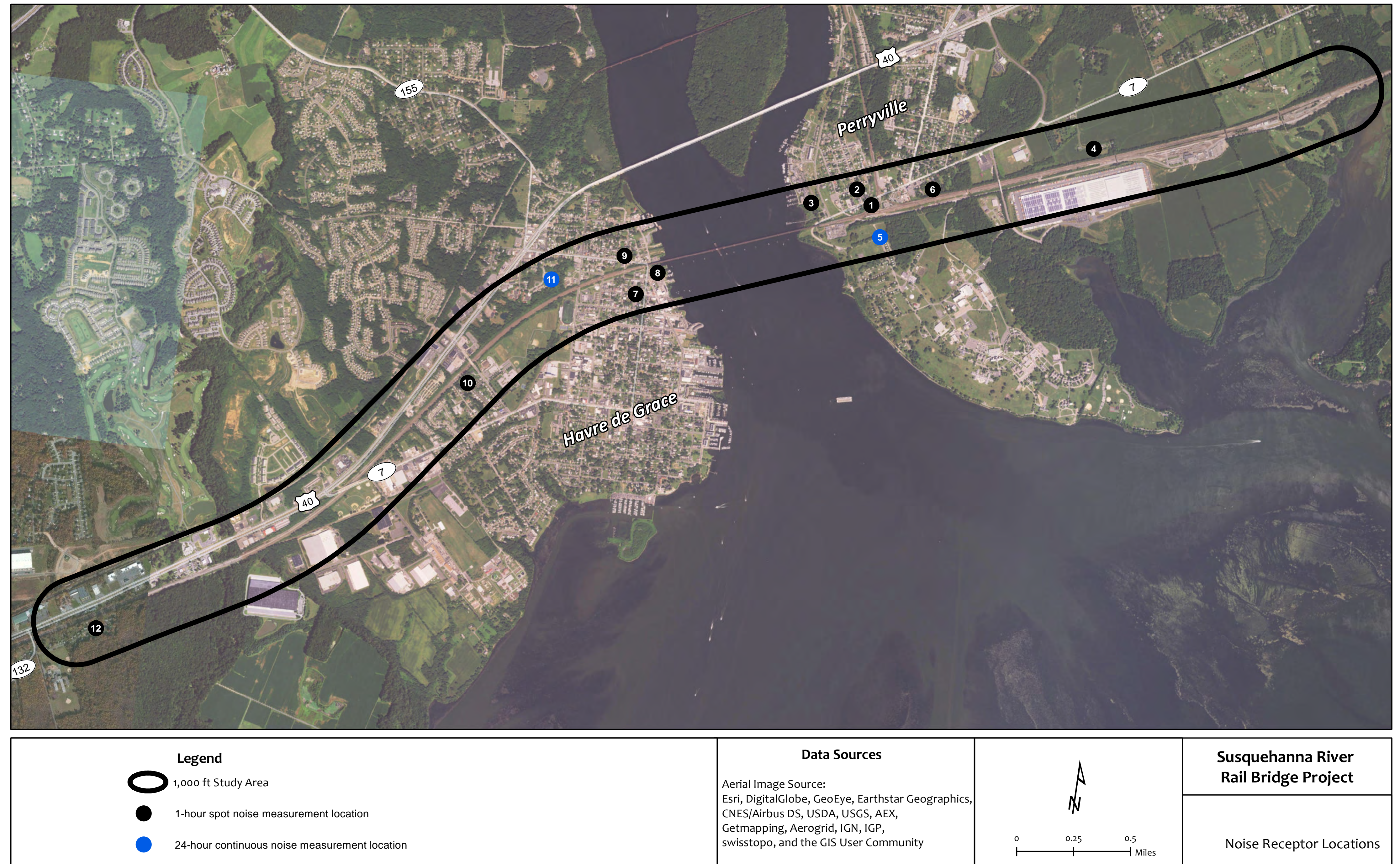


# Noise and Vibration

*Analysis based on FTA and FRA criteria indicates no mitigation is required*

## Predicted Noise Levels:

- No “Severe Impacts” for Alternative 9A or 9B
- “Moderate Impacts” at some locations along railway for both Alternative 9A and 9B
  - Increments would be “barely perceptible” to “readily noticeable”
  - Total levels would be comparable to existing levels in the study area
- Not considered significant



## Predicted Vibration Levels:

- Reach but not exceed impact threshold at nearest sensitive receptor for Alternative 9A and 9B
- Below impact thresholds farther from the railway

## Predicted Ground-Borne Noise Levels:

- Exceed impact threshold for Alternative 9A and 9B at nearest sensitive receptor
- Noise level increment “barely perceptible,” not considered significant
- Below impact thresholds farther from the railway



# Selected Bridge Type Design: Girder Approach / Arch Main Span



Key Hole Pier Design

*Viewed from Havre de Grace*

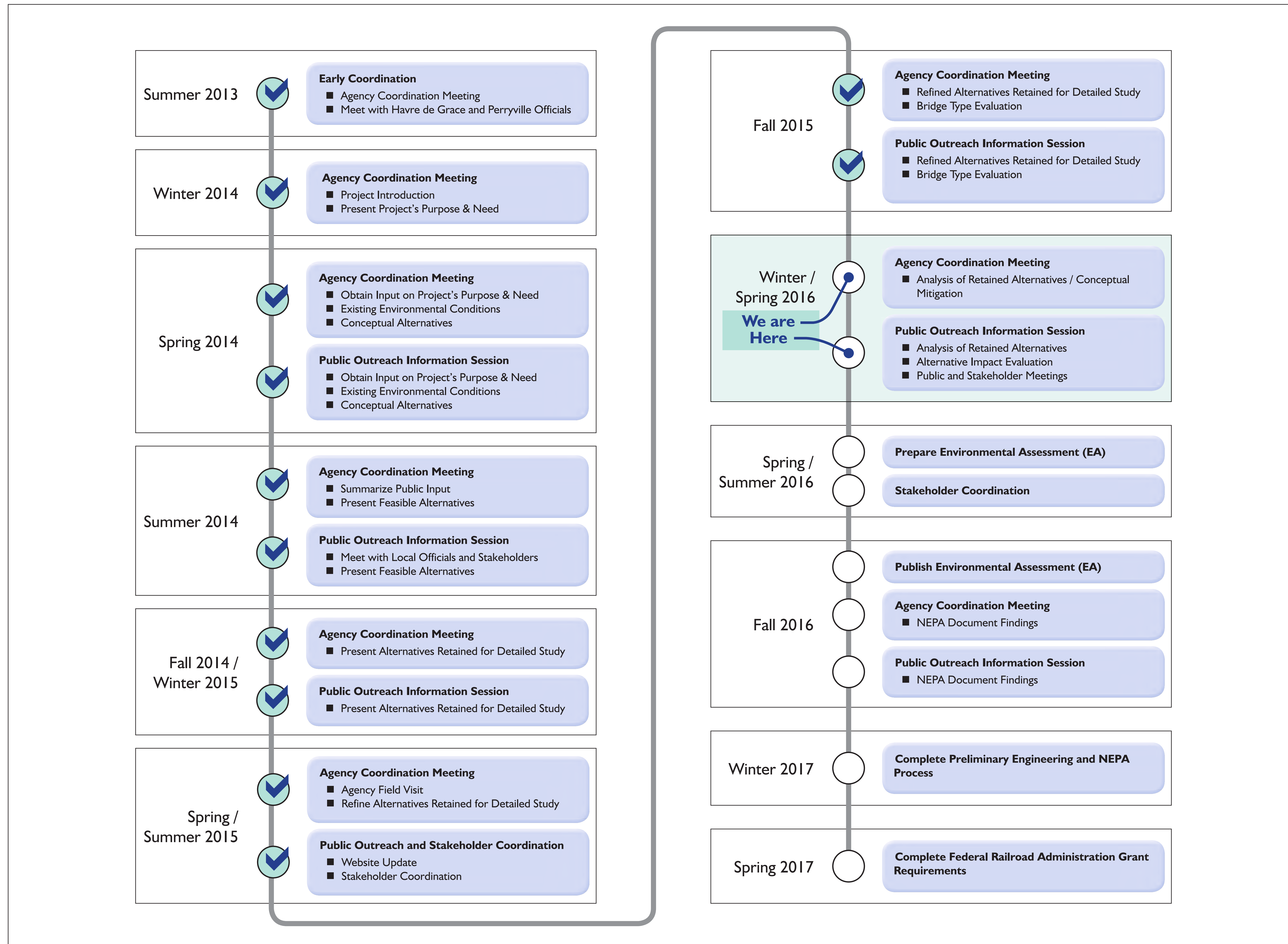


Profile View

*Approach Span/Main Span*



# Anticipated Project Schedule





# Stay Connected

- Visit the project website at [www.susrailbridge.com](http://www.susrailbridge.com) to get project updates, learn more about the project, submit a comment, or join the project mailing list.
- Send a letter to:  
Susquehanna River Rail Bridge  
PO Box 68  
Elkton, MD 21922



*Amtrak train crossing the Susquehanna River Rail Bridge*