

# SR 0926 Improvement Project Public Meeting

May 7, 2014



## Project Area

# Hurricane Floyd



- **Radley Run Side**  
(East intersection of Creek Road  
and SR 0926)



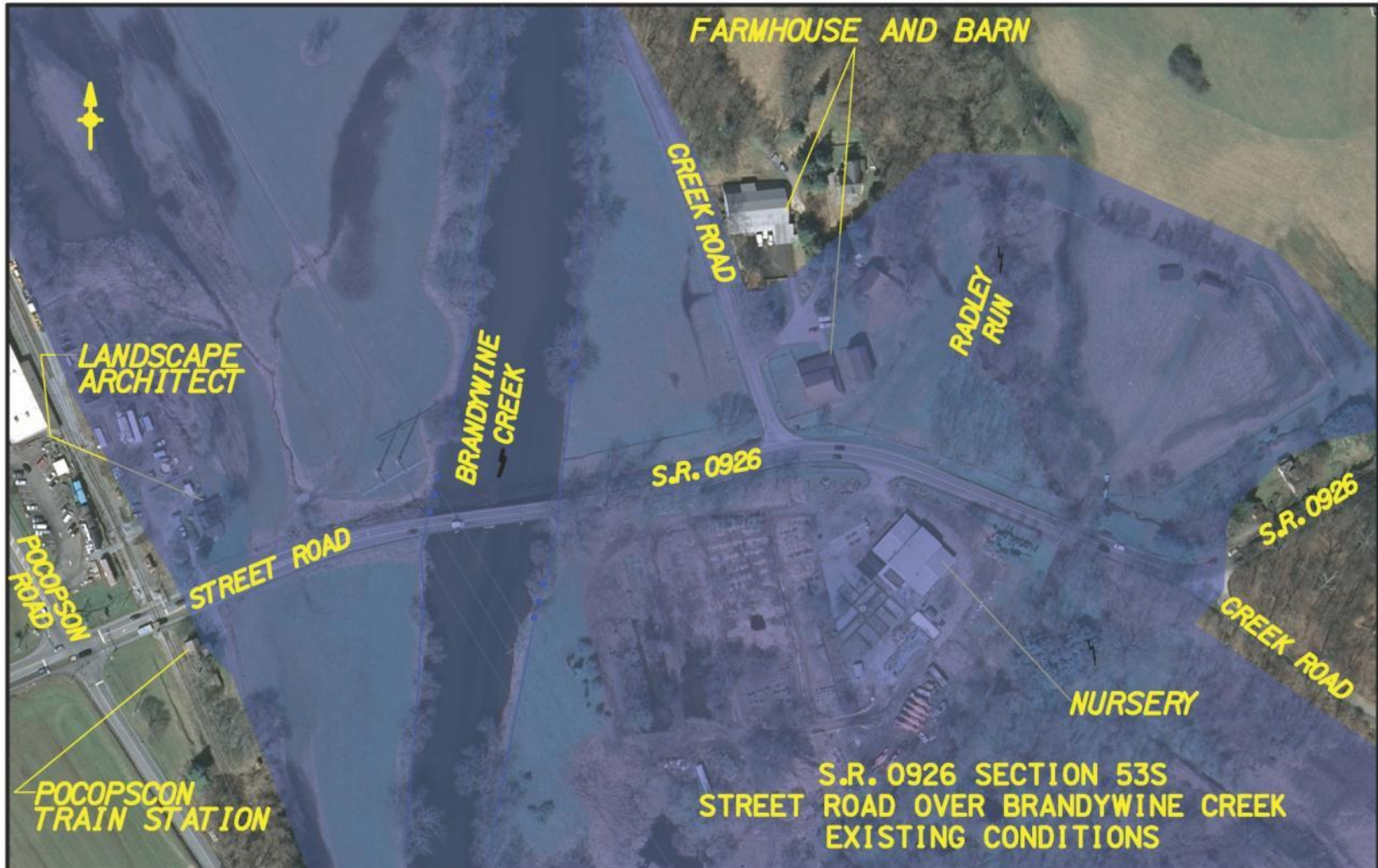
- **Brandywine Creek Side**  
(Standing at rail crossing on west  
side of Brandywine Creek Crossing)

# Needs

- **S.R. 0926 Bridge is Structurally Deficient/Functionally Obsolete**
- **Frequent flooding (3-9 times per year) by Brandywine Creek impacts travel time:**
  - Emergency Service Providers
  - Elementary School Access
- **Road does not meet current standards**
  - Site Distance
  - Geometry
  - Cross Section
  - Design-Storm

# Design Considerations

## FEMA Jurisdiction



# Design Considerations

## Design Storm

- **Design Storm is determined by classification of road in relation to probability of overtopping**
- **Probability of overtopping is quantified by 25 year storm, 100 year storm**
  - 25 year storm (4% chance of occurring)
  - 100 year storm (1% chance of occurring)
- **SR 0926 design storm is 25 year (4%) storm**
  - Design team checks the impact of the 100 year (1%) storm

# **Design Considerations Historic Properties**

- **Painter Farm and Mill Complex**
- **Brandywine Battlefield National Historic Landmark**
- **Pocopson Train Station**
- **Two Known Archaeological Sites**

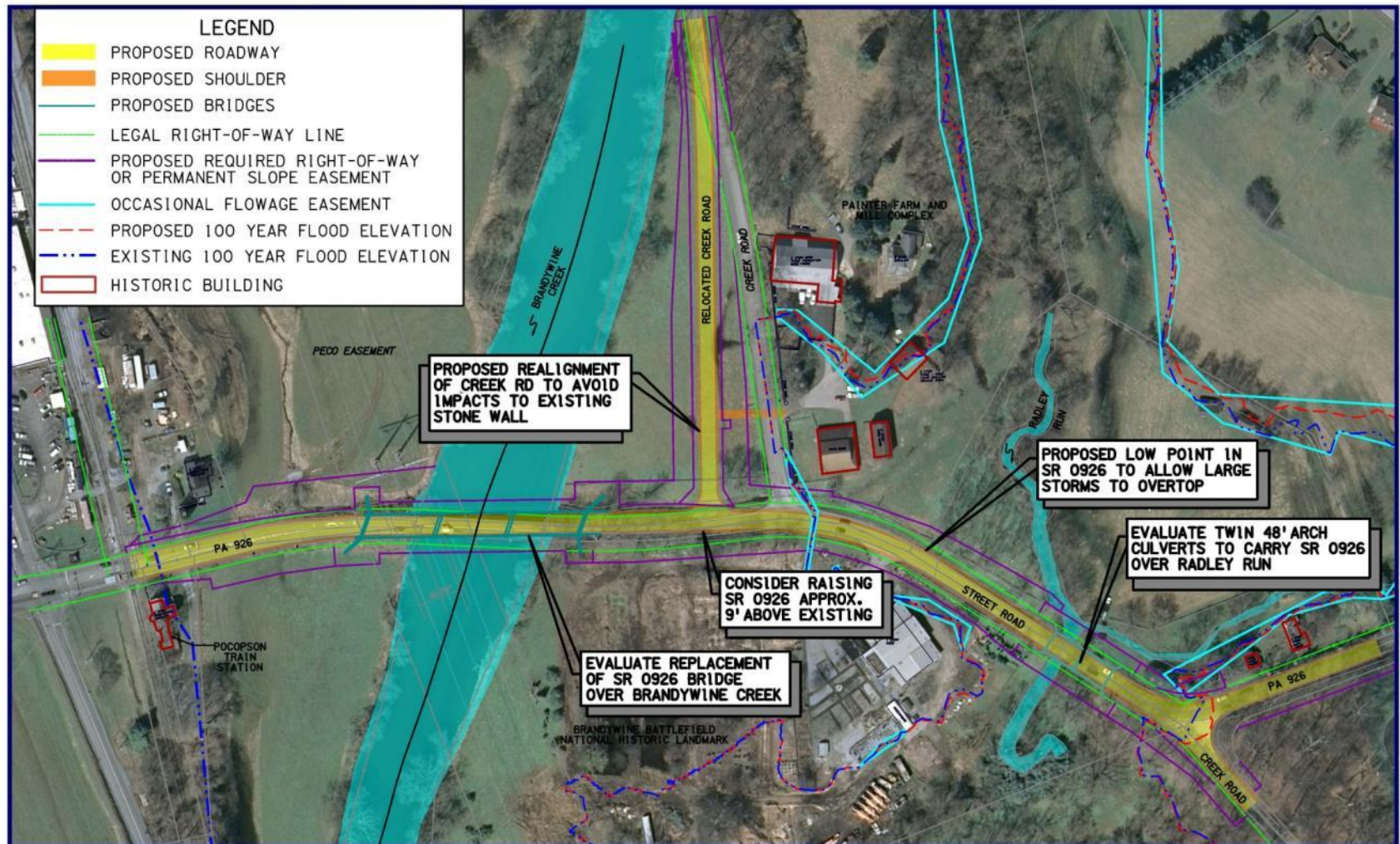
# Design Considerations Historic Properties



# **Proposed SR 0926 Improvement Project**

- **Evaluate Raising 1700' of SR 0926 approximately 9' to Reduce Flooding**
- **Study Replacement of Existing SR 0926 Bridge over Brandywine Creek**
- **Evaluate Replacement of Existing SR 0926 Culvert over Radley Run culvert**
- **Examine Raising and Realigning 800' of existing Creek Road to Reduce Flooding and Avoid Historic Properties**

# Proposed SR 0926 Improvement Project



# Proposed SR 0926 over Brandywine Creek



# **Proposed SR 0926 at Brandywine Creek Facts**

- **Roadway Approaches Flood 3-9 Times a Year**
- **Existing Bridge – 4 span 190' long structure**
- **Proposed Bridge – Evaluate a 3 span 315' long structure**

Plan view of the 315'-0" concrete beam bridge. The bridge spans Brandywine Creek. Key features include:

- ABUTMENT 1** and **ABUTMENT 2** at the ends of the bridge.
- PIER** structures supporting the bridge spans.
- STREET ROAD** (S.R. 09 26) crossing the bridge.
- BRIDGE BARRIER** along the outer edges of the bridge deck.
- GUIDERAIL** on the left side of the bridge.
- INLET** and **DRAINAGE PIPE** for water management.
- SHOULDER ROADWAY SHOULDER** dimensions: 5'-0" on each side of the 22'-0" roadway.

**ELEVATION**

The diagram shows a side elevation of the bridge structure. It features three spans, each labeled "SPAN 1", "SPAN 2", and "SPAN 3", with a length of 105'-0" each. The total length of the bridge is indicated as 315'-0". A "GUIDERAIL" is shown on the left side. A "BRIDGE BARRIER" runs along the top of the bridge deck. "ROCK PROTECTION" is shown at the base of the bridge piers. The "GROUND LINE" is indicated by a dashed line at the bottom of the structure.

# SR 0926 over Brandywine Creek Existing



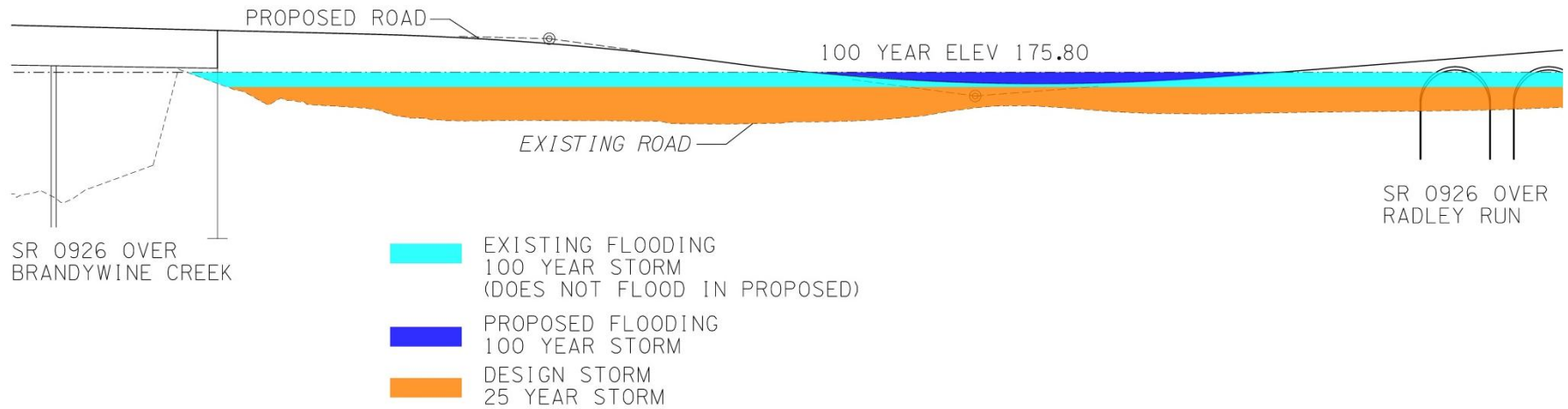
# SR 0926 over Brandywine Creek Proposed



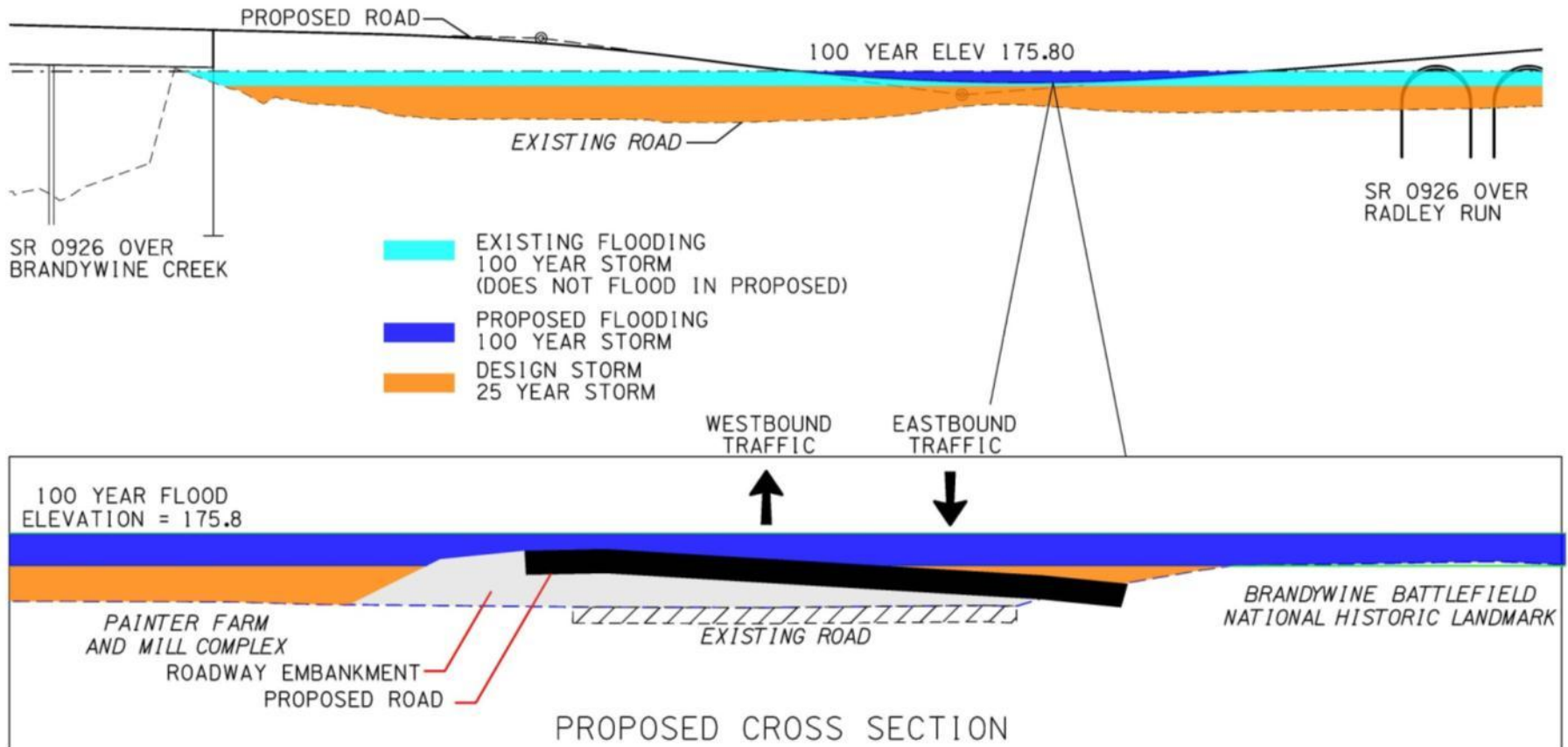
# Proposed SR 0926 and Creek Road Raise/Realignment



# Proposed SR 0926 Profile Raise

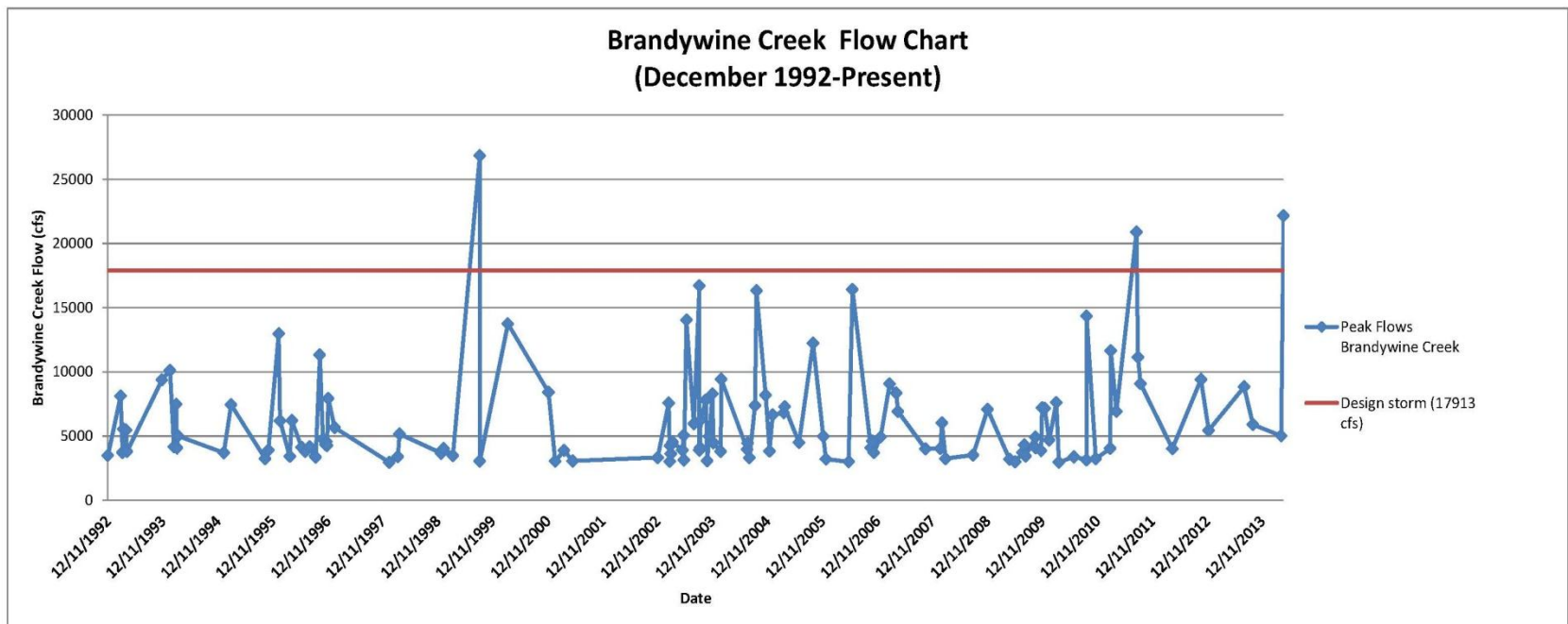


# Proposed SR 0926 Profile Raise



# SR 0926 Overtopping Frequency

- SR 0926 design storm is the 25 year storm (4% probability) (red line)
- The 25 year storm has been exceeded twice since December 1992
  - Hurricane Floyd (1999) and Hurricane Irene (2011)



# SR 0926/Creek Road Intersection Existing



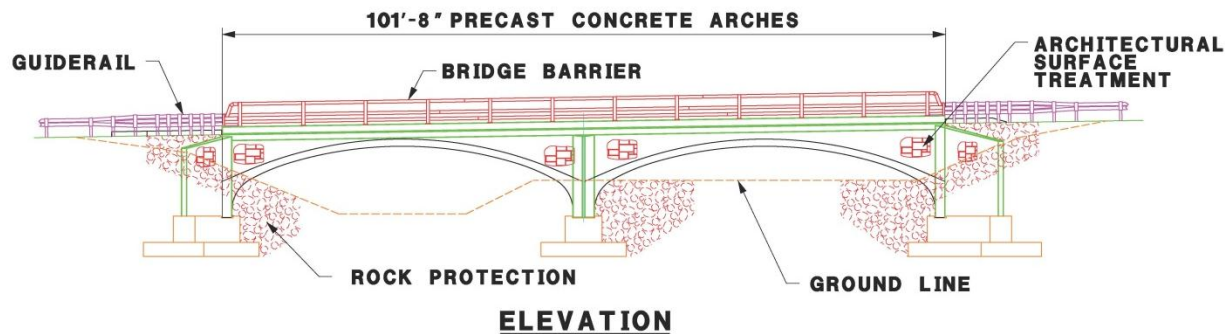
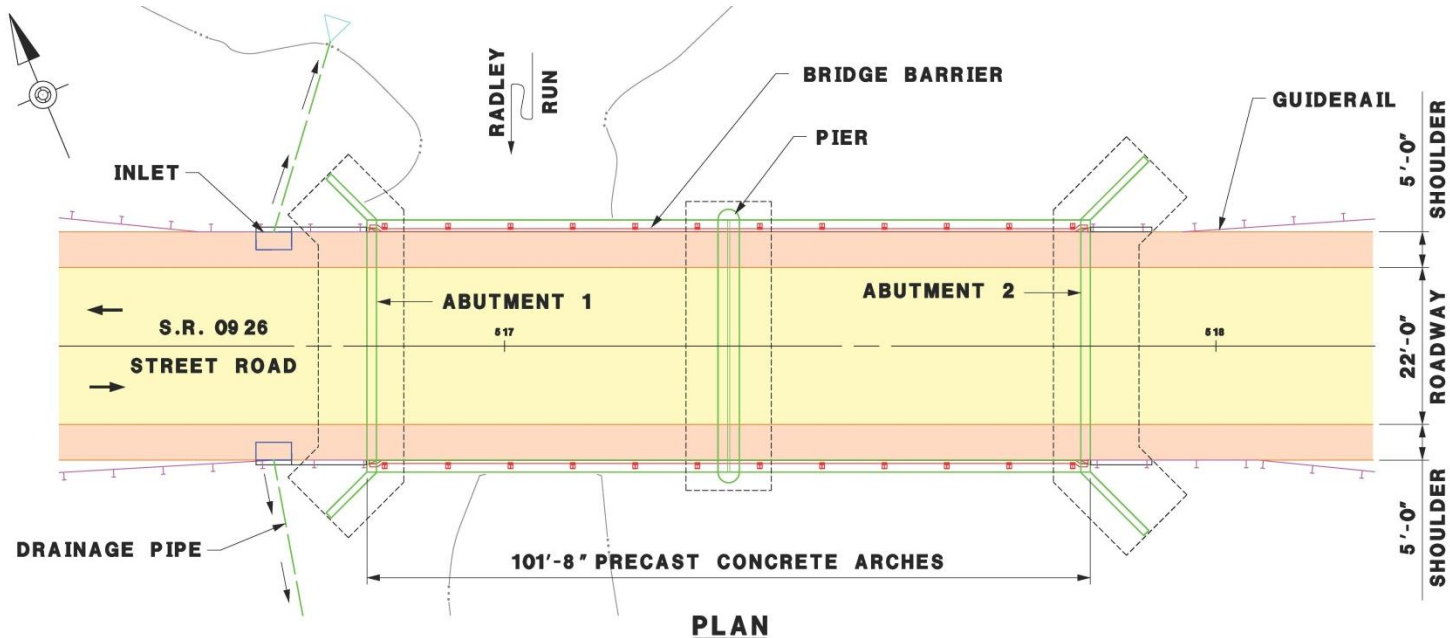
# SR 0926/Creek Road Intersection Proposed



# Proposed SR 0926 Twin Arch Culverts over Radley Run



# Proposed SR 0926 Twin Arch Culverts over Radley Run



# SR 0926 over Radley Run Existing



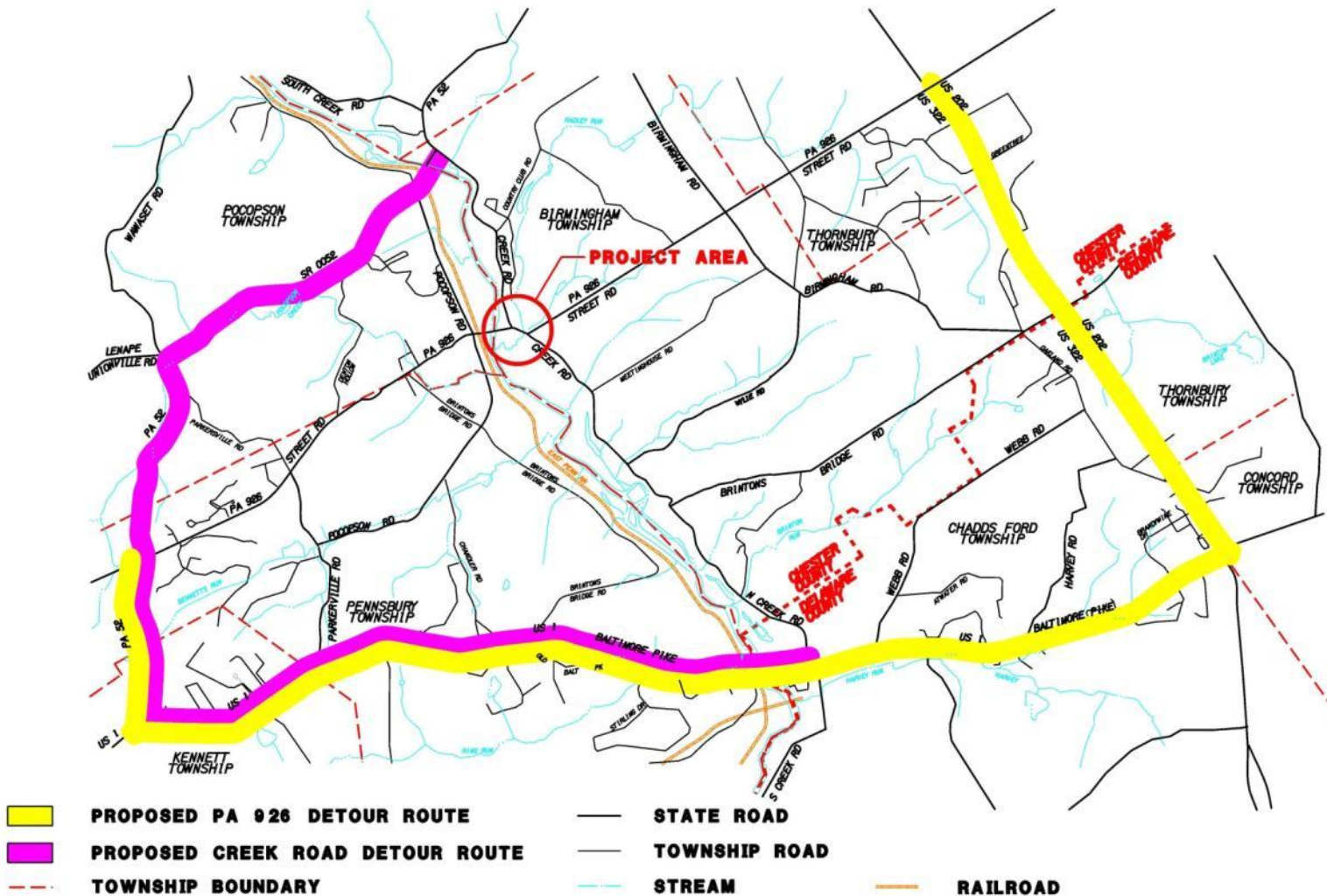
# SR 0926 over Radley Run Proposed



# **Proposed Maintenance and Protection of Traffic during Construction**

- **Construction of proposed project cannot be staged to maintain traffic on SR 0926**
- **Adjacent Historic properties preclude temporary realignment of SR 0926**
- **Project to be constructed under detour**
- **Project will take approximately 18 months depending on start time.**
- **Two detours proposed:**
  - SR 0926 – full duration of project
  - Creek Road – second season of project


# Proposed Detour



# Anticipated Project Schedule

PROJECT TASKS	2013			2014				2015				2016				
	Spring	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer	Fall	
Design	<div></div>															
Award Contract *								<div></div>								
Construction																
SR 0926 Detour (Pocopson Rd to Creek Rd)									<div></div>							
Creek Rd Detour													<div></div>			

\* Subject to Environmental Clearance

Completed 

Planned 

# Questions

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