



# PUBLIC OFFICIALS MEETING

US ROUTE 3/NH ROUTE 25 BRIDGE OVER THE PEMIGEWASSET RIVER

ASHLAND - BRIDGEWATER

NHDOT BRIDGE NO. 076/080

NHDOT PROJECT NO. 24904

FEDERAL AID PROJECT X-A003(003)

SEPTEMBER 16, 2019



Ashland – Bridgewater

US Route 3/NH Route 25 Bridge



# PRESENTATION OUTLINE

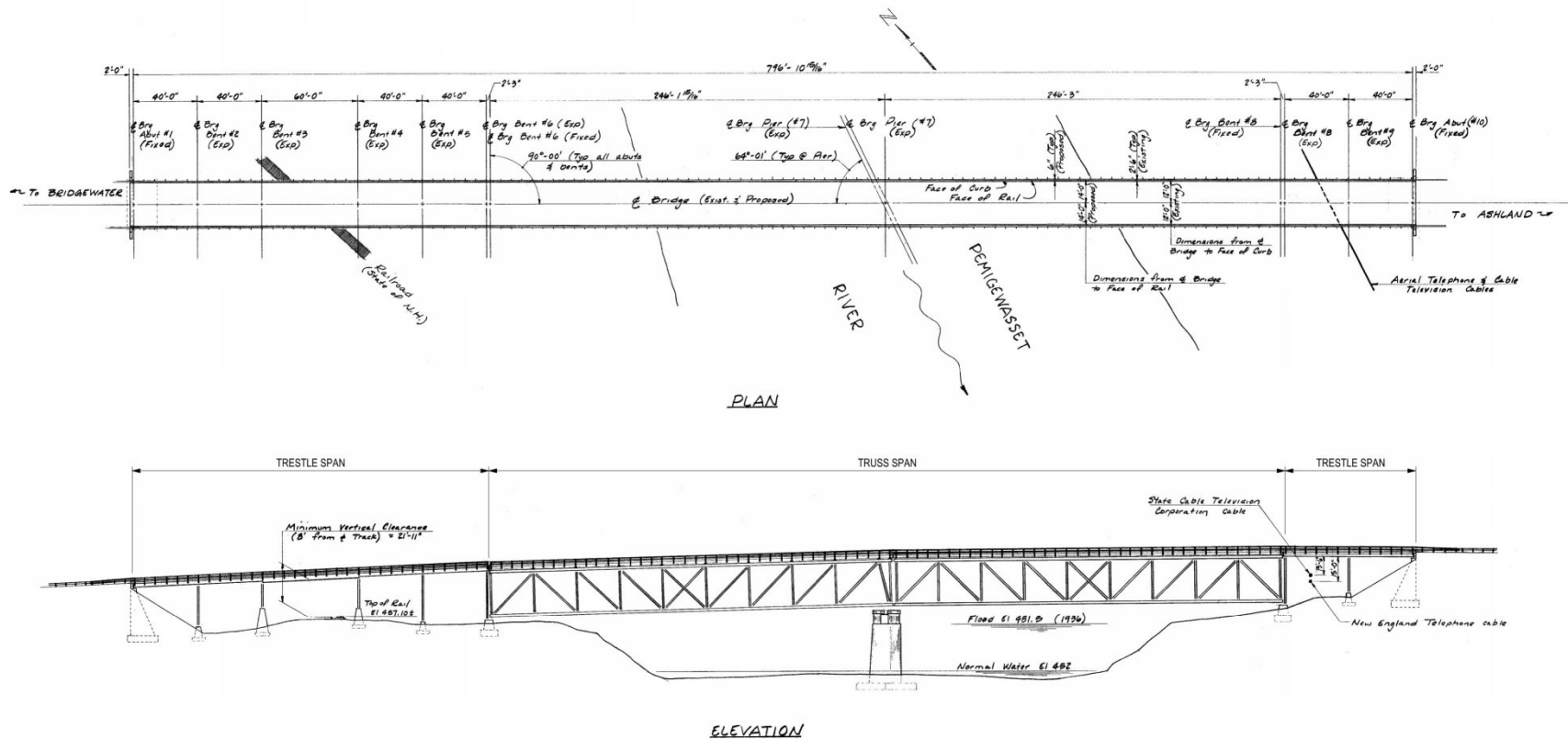
- Location Map
- Existing Bridge Information
- Inspection Findings
- Rehabilitation & Traffic Control Alternatives
- Cultural & Natural Resources
- Abutters & Right-of-Way
- Your Input is Needed
- Next Steps
- Anticipated Schedule
- Questions

# LOCATION MAP





# PLAN AND ELEVATION VIEW



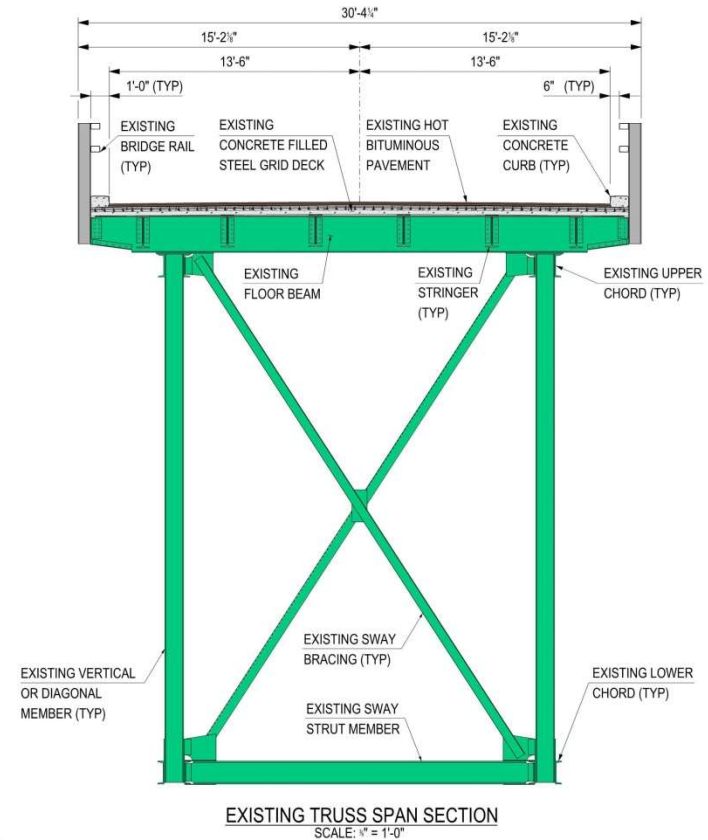
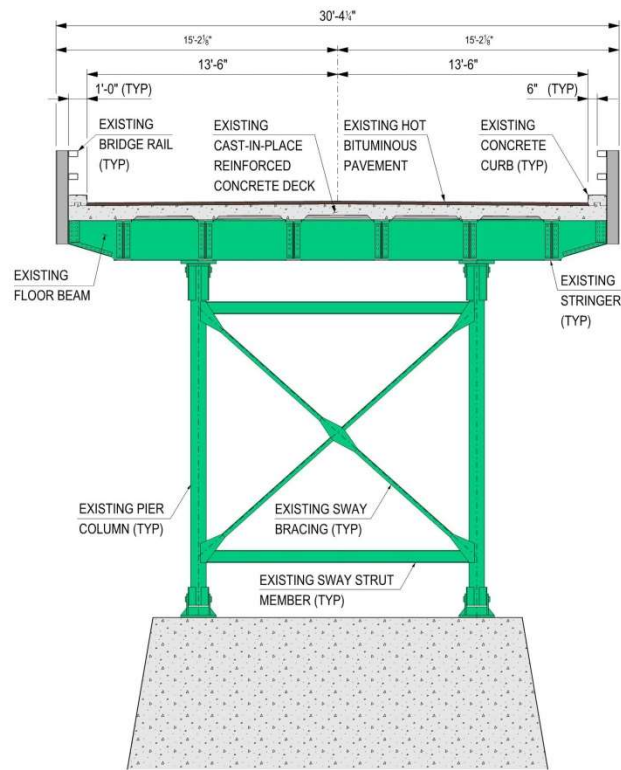
# EXISTING BRIDGE INFORMATION

- Bridge constructed in 1937 & Rehabilitated in 1987
- Bridge Type:
  - 7 Approach Spans: Rolled Beam Stringer & Floorbeam Trestle
  - 2 Main Spans: Straight Back Pratt Steel Deck Truss
- Approach Span Bridge Deck: Reinforced Concrete
- Truss Span Deck: Steel Grid Filled with Concrete
- Substructures: Reinforced Concrete Abutments, Steel Bents and River Pier
- Roadway Width: 27'-0"
  - 2 – 12'-0" Travel Lanes & 1'-6" Shoulders

## EXISTING BRIDGE INFORMATION

- Overall Length: 800'-11"
- Varying Span Lengths:
  - Approach Spans 1, 2, 4, 5, 8 and 9 = 40'-0"
  - Approach Spans 3 and 4 = 60'-0"
  - West Truss Span (Span 6) = 252'-8"
  - East Truss Span (Span 7) = 240'-0"
- Number of Expansion Joints = 3
  - Located at Piers 6, 7 and 8

# SECTION VIEW



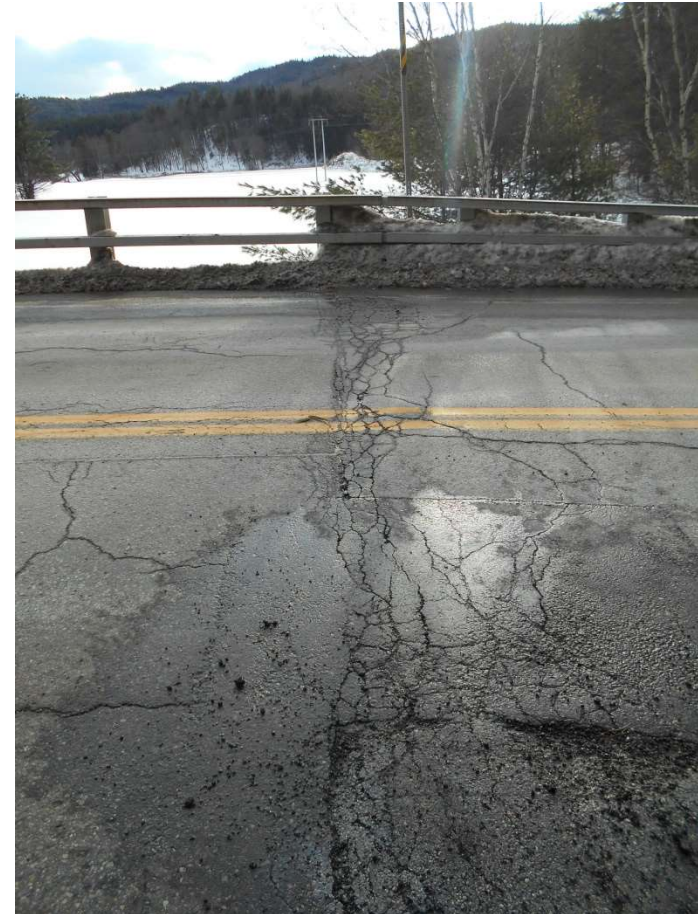
# INSPECTION FINDINGS

- National Bridge Inspection Standard Condition Ratings
  - 9 = Excellent
  - 0 = Failed Condition - Closed
- Overall bridge condition is rated 5 or fair.
  - Deck condition is rated 6 or satisfactory.
  - Superstructure condition is rated 6 or satisfactory.
  - Substructure condition is rated 5 or fair.



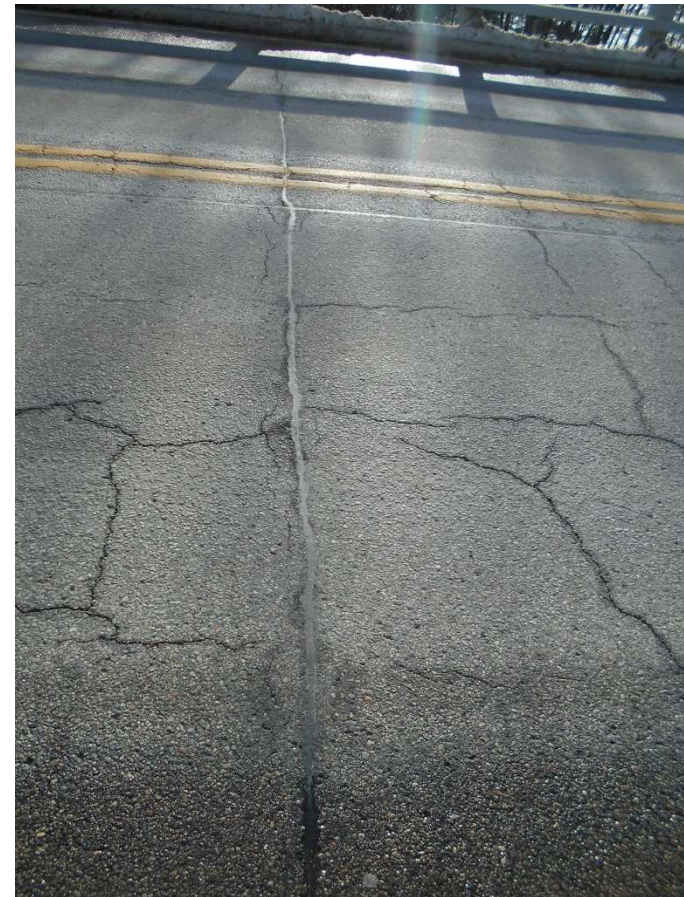
# TRESTLE SPAN BRIDGE DECK & PAVEMENT DETERIORATION

Bridge deck pavement cracking throughout.



# TRUSS SPAN BRIDGE PAVEMENT DETERIORATION

Bridge deck  
pavement  
cracking  
throughout





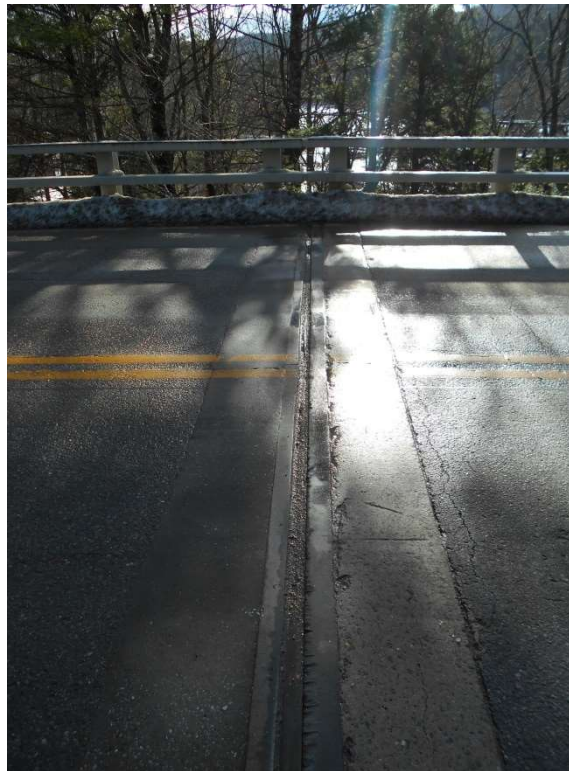
# TRUSS SPAN BRIDGE DECK DETERIORATION

- Deck overhang barrier membrane has failed & the concrete is in poor condition resulting in leakage.
- Deck overhang grid members have significant rusting and section loss.
- Grid members moderate to heavy rusting extends into interior bays.



# EXPANSION JOINT DETERIORATION

Damaged and leaking expansion joints.





# TRESTLE SPAN FLOORBEAM DETERIORATION

Trestle span members have some section losses.





# TRUSS SPAN FLOORBEAM DETERIORATION

- Truss members light to moderate rusting below expansion joints.
- Truss floorbeams exhibit varying degrees of rusting & section loss.



# TRUSS MEMBER CONDITION

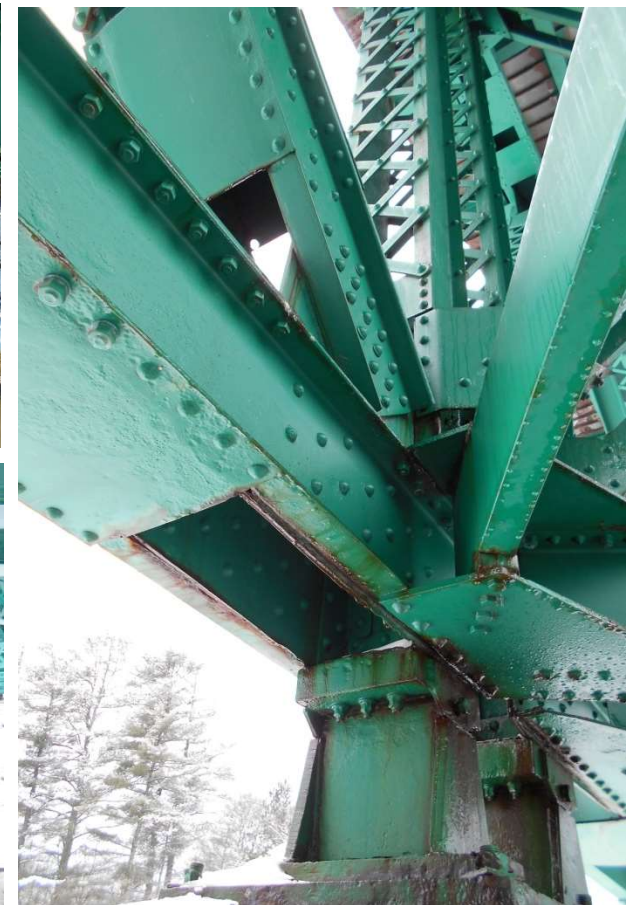
Truss members are rusting & have section losses.





# TRUSS BEARING CONDITION

Truss bearings are rusting & have section losses.



# WEST ABUTMENT DETERIORATION

Abutment  
concrete spalling  
& cracking.





# TRESTLE SPAN PIER DETERIORATION

Land Pier  
concrete  
spalling &  
cracking.





# RIVER PIER DETERIORATION

- River Pier concrete significant areas of spalling and cracking.
- River Pier has areas of exposed reinforcing steel exhibiting heavy rusting and section loss.



# EAST ABUTMENT DETERIORATION



Abutment  
concrete spalling  
& cracking.



# REHABILITATION ALTERNATIVES ANALYSIS

- Bridge rehabilitation is feasible based on:
  - Current condition of bridge.
  - Deterioration type and level of section losses observed.
  - Expected remaining service life.
- Rehabilitation will extend service life until additional funding is available and replacement is needed.

# REHABILITATION ALTERNATIVES ANALYSIS

- Bridge rehabilitation alternatives analysis will consider and evaluate:
  - Bridge rail replacement.
  - Trestle & Truss Span deck repairs & modification.
  - Truss Span bridge deck replacement.
  - Truss member & floor system repairs.
  - Expansion joint replacement.
  - Paint touchup.
  - Abutment & pier repairs.

# REHABILITATION ALTERNATIVES ANALYSIS

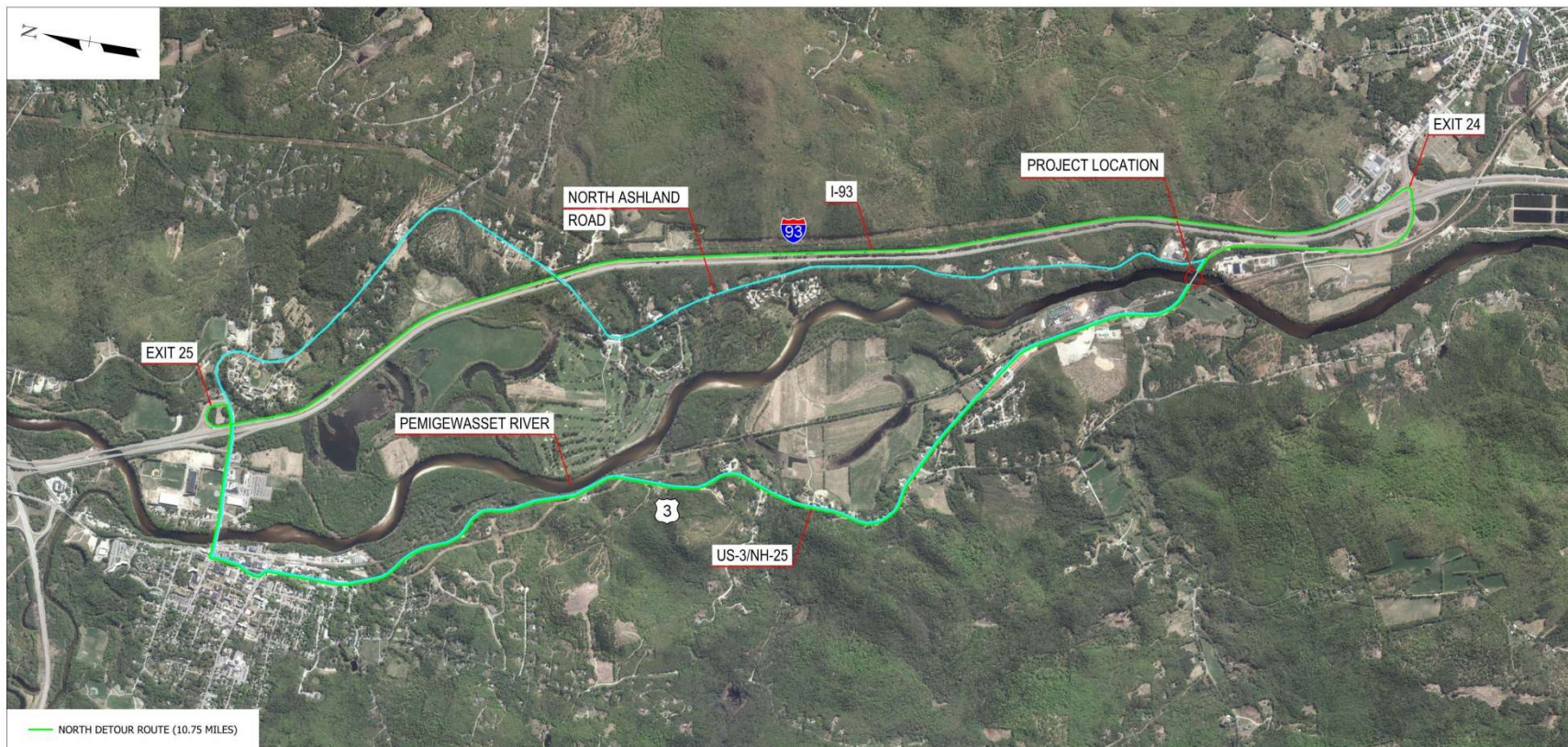
- Rehabilitation alternatives evaluation will include:
  - Initial construction and lifecycle cost.
  - Traffic impact.
  - Public safety.
  - Environmental impacts.
  - Property impacts.
  - Extending remaining service life.
  - Public input.



# TRAFFIC CONTROL ALTERNATIVES

- Phased construction.
  - One lane of alternating two-way traffic.
- Bridge closure with detour (one end of the bridge to the other end of the bridge):
  - North detour route is ~11 miles.
  - South detour route is ~18 miles.
- Temporary bridge and diversion not feasible due to bridge length and cost.

# POTENTIAL NORTH DETOUR ROUTE





# POTENTIAL SOUTH DETOUR ROUTE



# CULTURAL RESOURCES

- Project must follow Section 106 of the National Historic Preservation Act
- Section 106 requires consideration of cultural resources, including historic buildings, structures & archaeological deposits
- The NH Division of Historical Resources (NHDHR) acts as the State Historic Preservation Office (SHPO)

# CULTURAL RESOURCES

- Architectural historian:
  - Reviews the project area to identify potential impacts to historic buildings or structures
- Archaeologist:
  - NHDHR will confirm if there are any archaeological concerns within the anticipated project area



## CULTURAL RESOURCES

- Information reported to NHDOT and NHDHR for technical review and consultation, including a *Determination of Effect if any Cultural Resources are Found*.
- Interested persons or organizations may request “Consulting Party” status from FHWA:
  - Contact Jamie Sikora
    - (603) 401-4870
    - [jamie.sikora@fhwa.dot.gov](mailto:jamie.sikora@fhwa.dot.gov)

# NATURAL RESOURCES ABUTTERS & RIGHT-OF-WAY

- Natural Resources
  - Check project limits for natural resources.
- Abutters & Right-of-Way
  - We currently do not anticipate any property rights needed
    - Temporary easements for construction access may be required

# YOUR INPUT IS NEEDED

- Abutter concerns
- Emergency response routes
- Mutual aid from/to adjacent towns
- School bus routes
- Bicycle usage
- River recreational use
- Local events and impacts
- Bridge safety concerns
- Other concerns

## NEXT STEPS

- Evaluate rehabilitation alternatives
- Cultural & natural resource agencies presentation to get input & comments
- Hold 2<sup>nd</sup> Public Information Meeting to present recommended rehabilitation alternative
- Complete National Environmental Policy Act (NEPA) Process for environmental permitting
- Develop preliminary plans
- Develop contract plan & documents

# ANTICIPATED SCHEDULE





# QUESTIONS

