

Public Information Meeting

**State Project No. 40-141
Rehabilitation of Bridge No. 01138
Route 82 over Connecticut River**

East Haddam and Haddam, Connecticut

Monday, October 2, 2017 at 7:00 pm
Grange Hall
488 Town Street
East Haddam, CT

Connecticut Department of Transportation





Project Location Map





Introductions

Connecticut Department of Transportation

- Theodore Nezames– Manager of Bridge Division
- Rabih Barakat – Transportation Principal Engineer
- Andrew Cardinali – Transportation Supervising Engineer
- Jonathan Kang – Transportation Project Engineer
- Michelle Miller – Project Coordinator

Hardesty & Hanover

- Steven Harlacker – Principal Associate
- Ben Hawthorne – Project Engineer

CME Associates, Inc.

- Anand Seshadri – Senior Project Manager
- Tracey Brais– Project Engineer



Department's Role

- Systematically inspect bridges for deficiencies and schedule the rehabilitation of structures
- Oversee the development of technical drawings and bid documents on projects
- Administration and inspection during construction



Project Needs and Goals

- Maintain a safe crossing of the Connecticut River for vehicles traveling on Route 82
- Rehabilitation of bridge to extend service life
- Improve roadway ride-ability for traveling public
- Improve swing span operation reliability
- Minimize disturbance to the traveling public during construction



Project Overview

- Project is in preliminary design stage
 - We are looking for your input
- Rehabilitation of bridge to repair deteriorated elements
- Preventive maintenance to ensure extended service life



East Haddam Swing Bridge (Bridge No. 01138)

- Built c. 1913; major rehabilitation projects completed in 1988, 1999 & 2007
- Emergency repair project completed in 2016
- Movable, steel truss bridge supported by 2 abutments and 3 piers





East Haddam Swing Bridge (Bridge No. 01138)

Existing Bridge and Roadway Geometry

- Total Structure Length = 885'
- Bridge Curb-to-Curb Width = 24'-6"
- Min. Vertical Clearance above Roadway = 15'-7"
- 2015 ADT: 9,200 vehicles (4% truck traffic)

Existing Condition Ratings

- Deck: "5" Fair
- Superstructure: "4" Poor
- Substructure: "5" Fair
- Structure Evaluation: "4" Poor

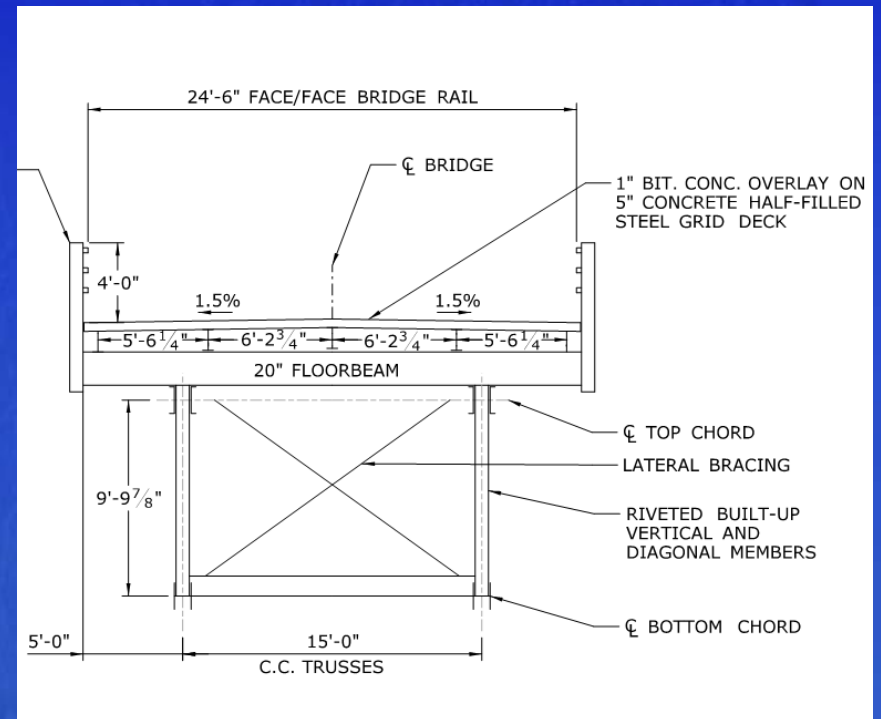
Structure Appraisals

- Deck Geometry: "2"
- Approach Roadway Alignment: "3"
- Waterway Adequacy: "8"
- Scour Critical: "5"





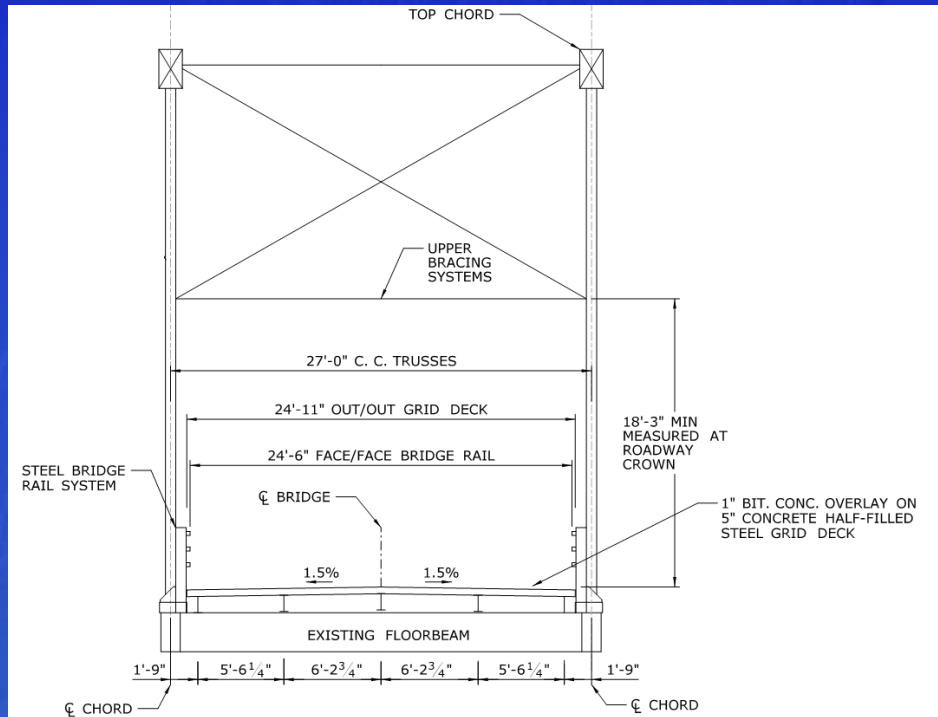
East Haddam Swing Bridge (Bridge No. 01138)



Span No. 1: Fixed Deck Truss



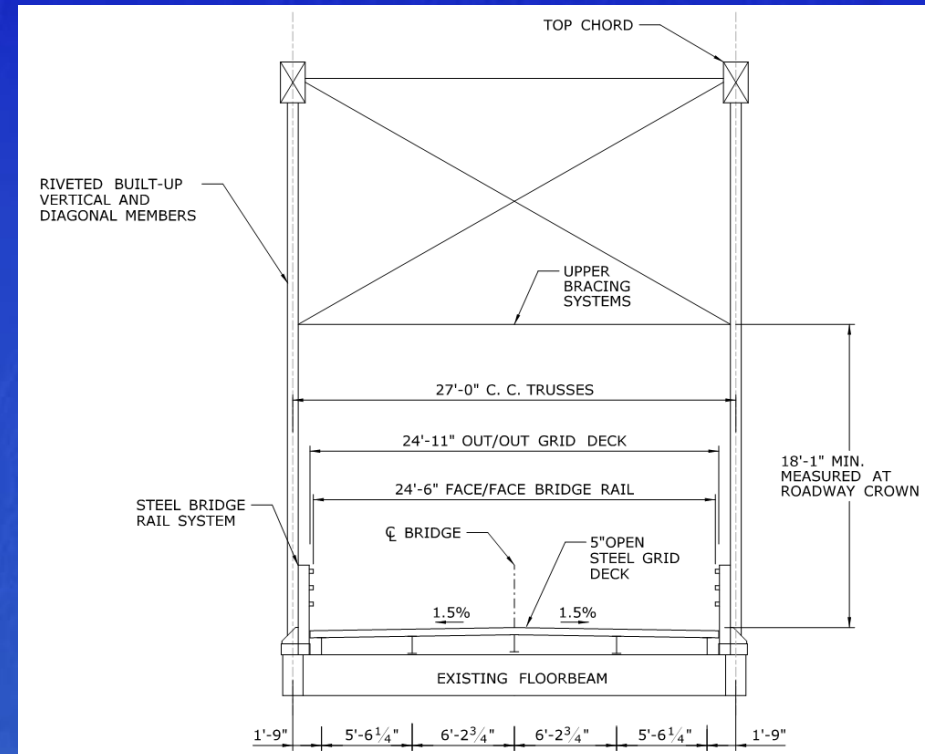
East Haddam Swing Bridge (Bridge No. 01138)



Span No. 2: Fixed Through Truss



East Haddam Swing Bridge (Bridge No. 01138)



Span Nos. 3 & 4: Movable (Swing) Through Truss



East Haddam Swing Bridge (Bridge No. 01138)



East Approach

View Across the Bridge (Looking West)





East Haddam Swing Bridge (Bridge No. 01138)



Top of Deck at Span 2 Contraction Joint

Typical Underside of Deck (Span 1)





East Haddam Swing Bridge (Bridge No. 01138)



Pitting and Section Loss
at Floorbeam – Truss Connections

Perforations through Floorbeam
Web in Span 4





East Haddam Swing Bridge (Bridge No. 01138)



Pier 2 West Elevation

Spall in Pier 2 Cap





East Haddam Swing Bridge (Bridge No. 01138)



West Abutment (Typical)

East Abutment (Typical)





East Haddam Swing Bridge (Bridge No. 01138)



East Machinery Brake Manual
Lever No Longer Locks

Submarine Cables
Missing Protective Jacket





East Haddam Swing Bridge (Bridge No. 01138)

Structural Rehabilitation Measures:

- Steel strengthening repairs
- Deck repair in Spans 1 and 2
- Deck replacement over machinery pit
- New thin overlay on half-filled deck sections
- Bridge rail replacement
- Bearing replacement/repairs
- Localized Painting of Steel Members
- Joint replacement in Span 2
- Substructure patching and masonry repointing





East Haddam Swing Bridge (Bridge No. 01138)

Additional Rehabilitation Measures:

- Replacement of major mechanical system components
- Replacement of the electrical system
- Relocation of the electrical house and operator house staircase

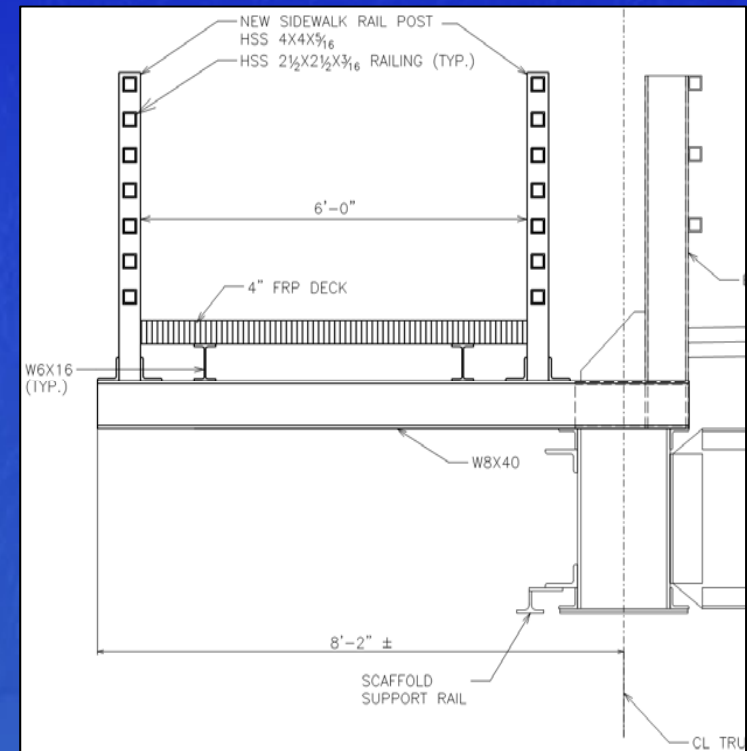


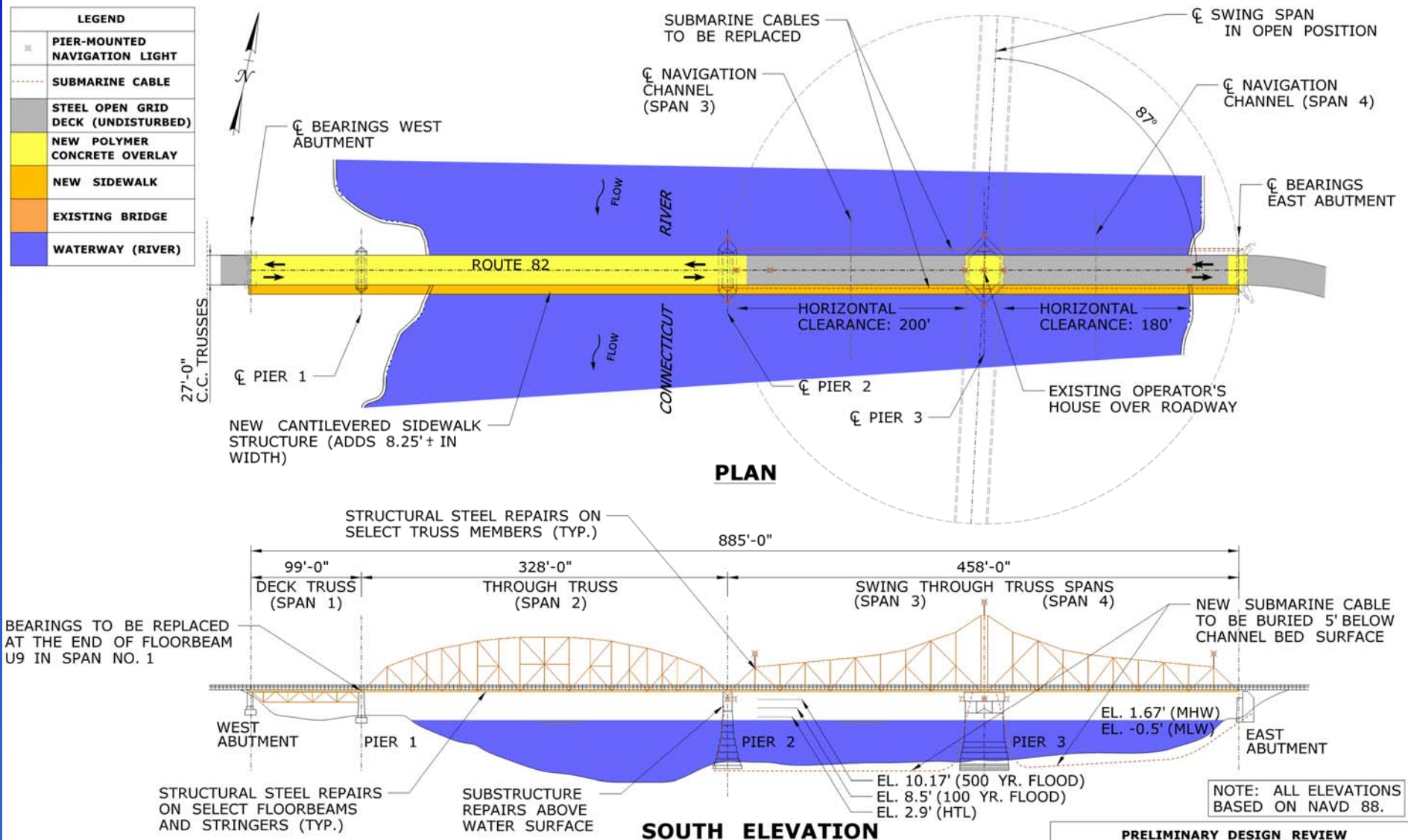


East Haddam Swing Bridge (Bridge No. 01138)

Design of Cantilevered Sidewalk Structure:

- 6' wide, ADA compliant sidewalk on south side of bridge
- Lighter materials are being considered to reduce the added dead load
- Sidewalk load to be accounted for in bridge rehab repair design

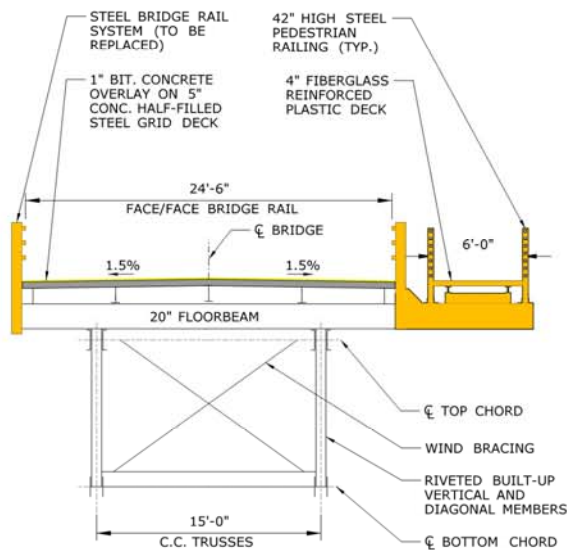




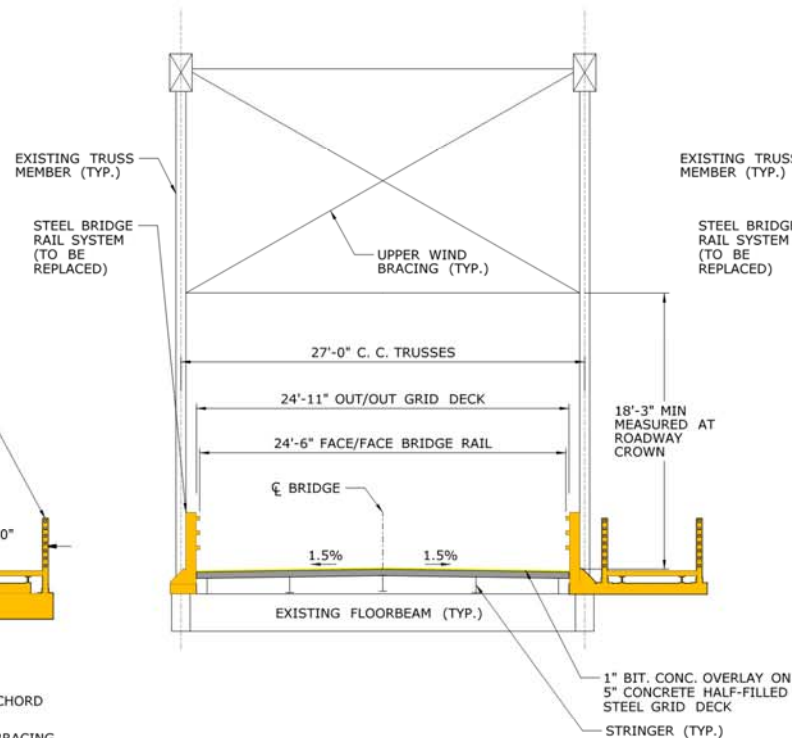


East Haddam Swing Bridge: Typical Cross Sections

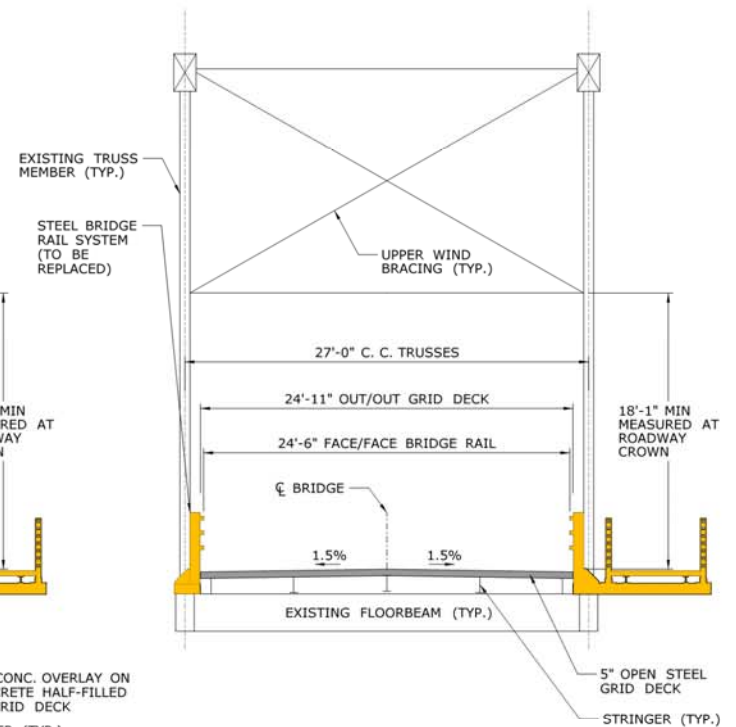
LEGEND	
	STEEL GRID DECK (UNDISTURBED)
	NEW POLYMER CONCRETE OVERLAY
	NEW SIDEWALK



CROSS SECTION- DECK TRUSS
(SPAN 1- LOOKING EAST)
SCALE: 1/4" = 1'



CROSS SECTION- THROUGH TRUSS
(SPAN 2- LOOKING EAST)
SCALE: 1/4" = 1'



CROSS SECTION- SWING TRUSS
(SPAN 3 & 4- LOOKING EAST)
SCALE: 1/4" = 1'



Utility & Environmental Impacts

Utility Impacts

- Lights on bridge will likely be protected in-place
- Electrical conduits that feed the operator house to be replaced
- Navigation lights will remain in-place, may need to be temporarily supported

Environmental Impacts

- Osprey nesting platform on bridge
- State and Federal-listed endangered or threatened species within vicinity of project
- Coordination with CT DEEP, NOAA, US Coast Guard and Army Corps of Engineers

Department of Transportation
Division of Rights of Way
(ROW)

Michelle Miller
Project Coordinator
2800 Berlin Turnpike
P.O. Box 317546
Newington, CT 06131-7546

Connecticut Department of Transportation



Function

- **Acquire all property/property rights necessary for transportation projects.**



Statutory References

- **State of Connecticut**

C.G.S. Sections 13a-73 & 13a-98e

- **Federal**

Uniform Relocation Assistance and Real Properties Acquisition Act of 1970, as amended.



Property Impacts

- **Total Acquisitions**
- **Partial Acquisitions**
- **Easements**
- **Construction Easements**
- **Rights**

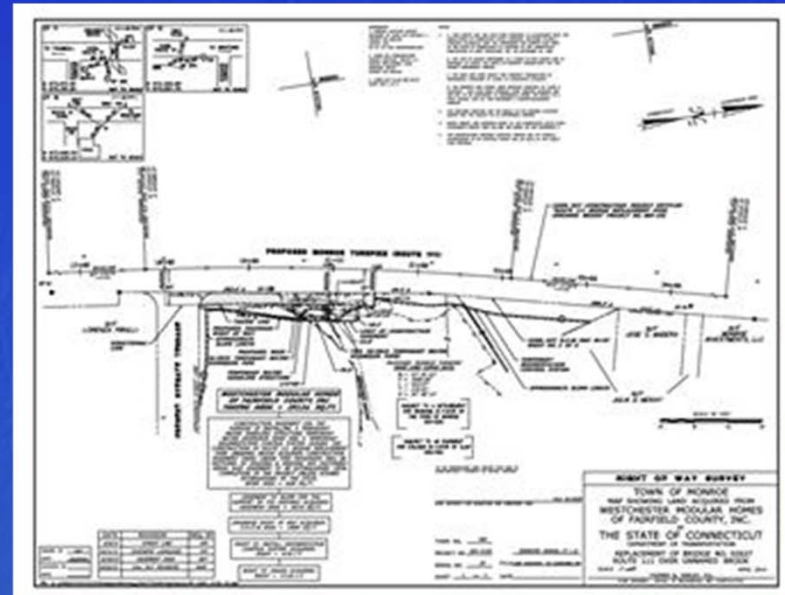


*** Note: Specific impacts are subject to change as the design progresses.**



ROW Acquisition Process

- Letter of Intent to Acquire
- Valuation
- Offer of Just Compensation
- Negotiation
- Acquisition
 - Agreement
 - Eminent Domain/Condemnation
 - » 6 month appeal period



Connecticut Department of Transportation



Timing for Acquisitions

- **All property rights must be acquired by the Project Advertisement Date**
- **Current Project Advertisement Date: 3/27/2019**





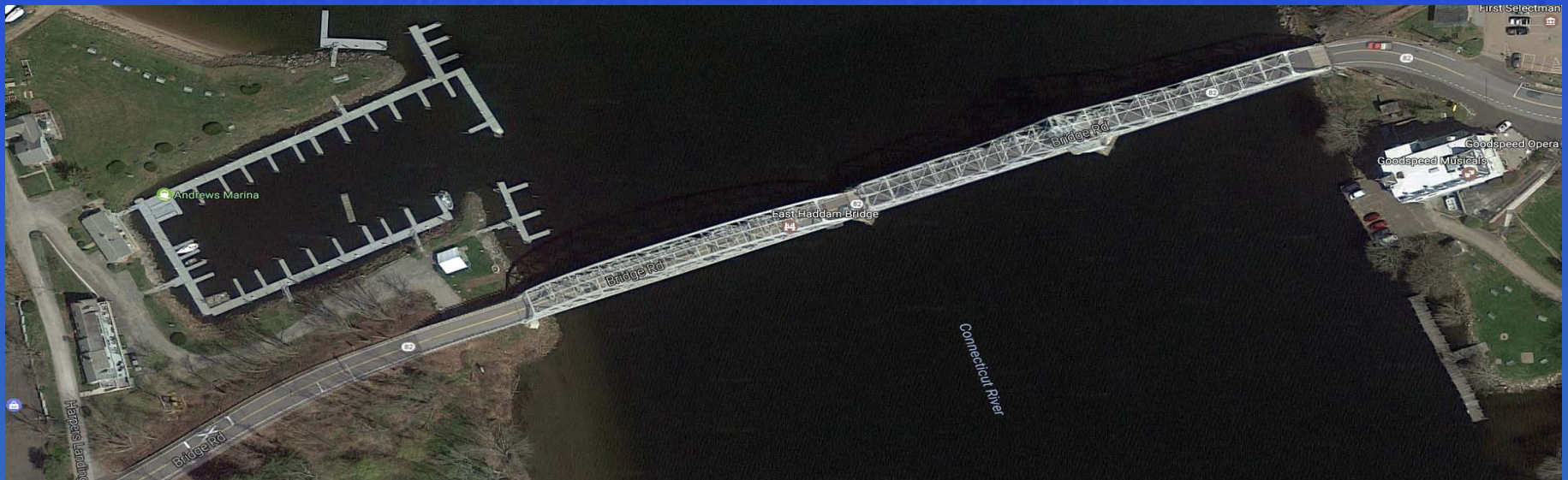
Construction Access & Right-of-Way Impacts

Construction in Span 1

- Work on underside and trusses can be done from ground
- Construction easements may be needed at northwest and southwest corners of bridge

Construction in Spans 2 - 4

- Work on underside and trusses to be done from barges and using lane closures





Maintenance & Protection of Traffic

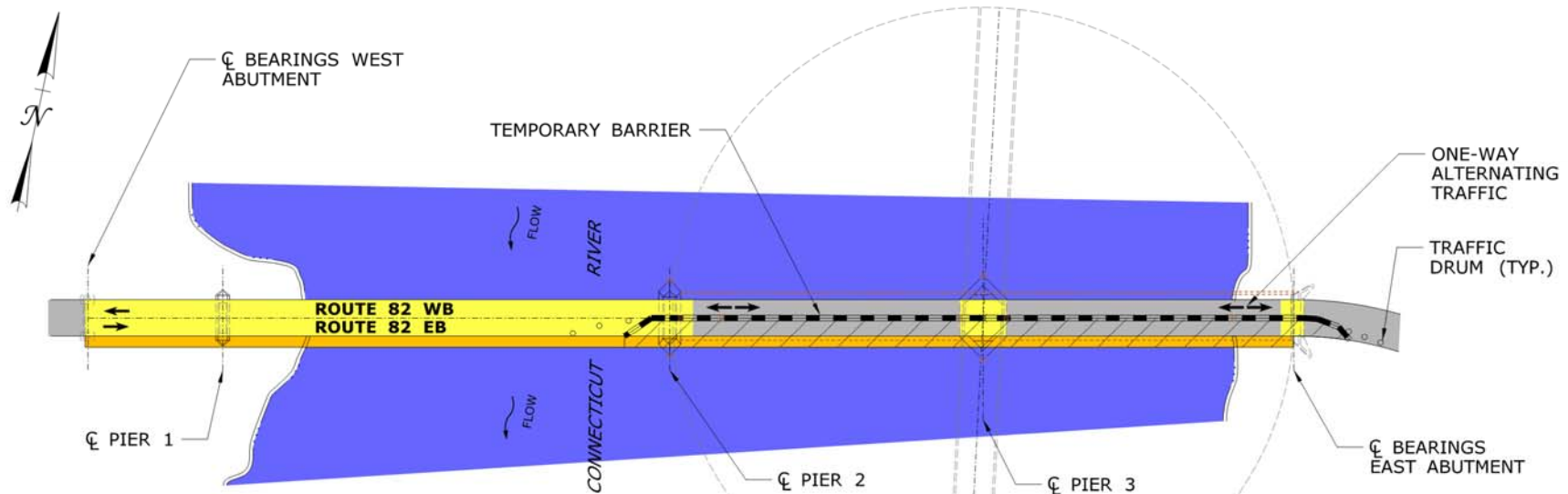
Vehicular Traffic:

- One-way alternating traffic throughout construction
- Work zone limited to one span at time
- Temporary traffic signals to maintain alternating traffic
- Advanced signing to be placed for alternate routes
- Full closures of roadway for half-day periods for 3 weeks to replace span drive

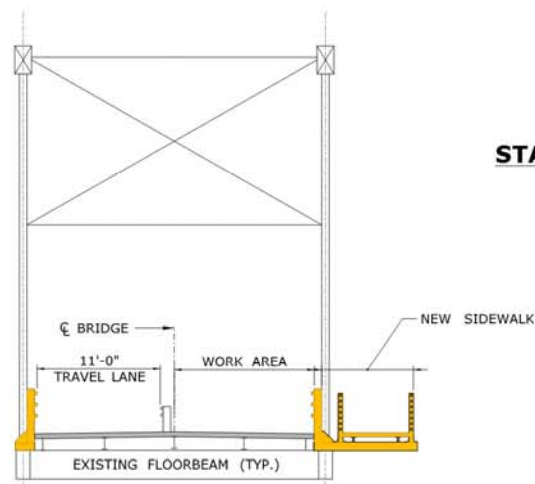
Marine Traffic:

- Swing span operation outage for approximately 4 weeks
- Additional short-term outages may be needed to test mechanical and electrical systems
- Coordination/permit with Coast Guard required





STAGING PLAN- TRAFFIC ON WESTBOUND LANE
 SCALE: 1" = 40'



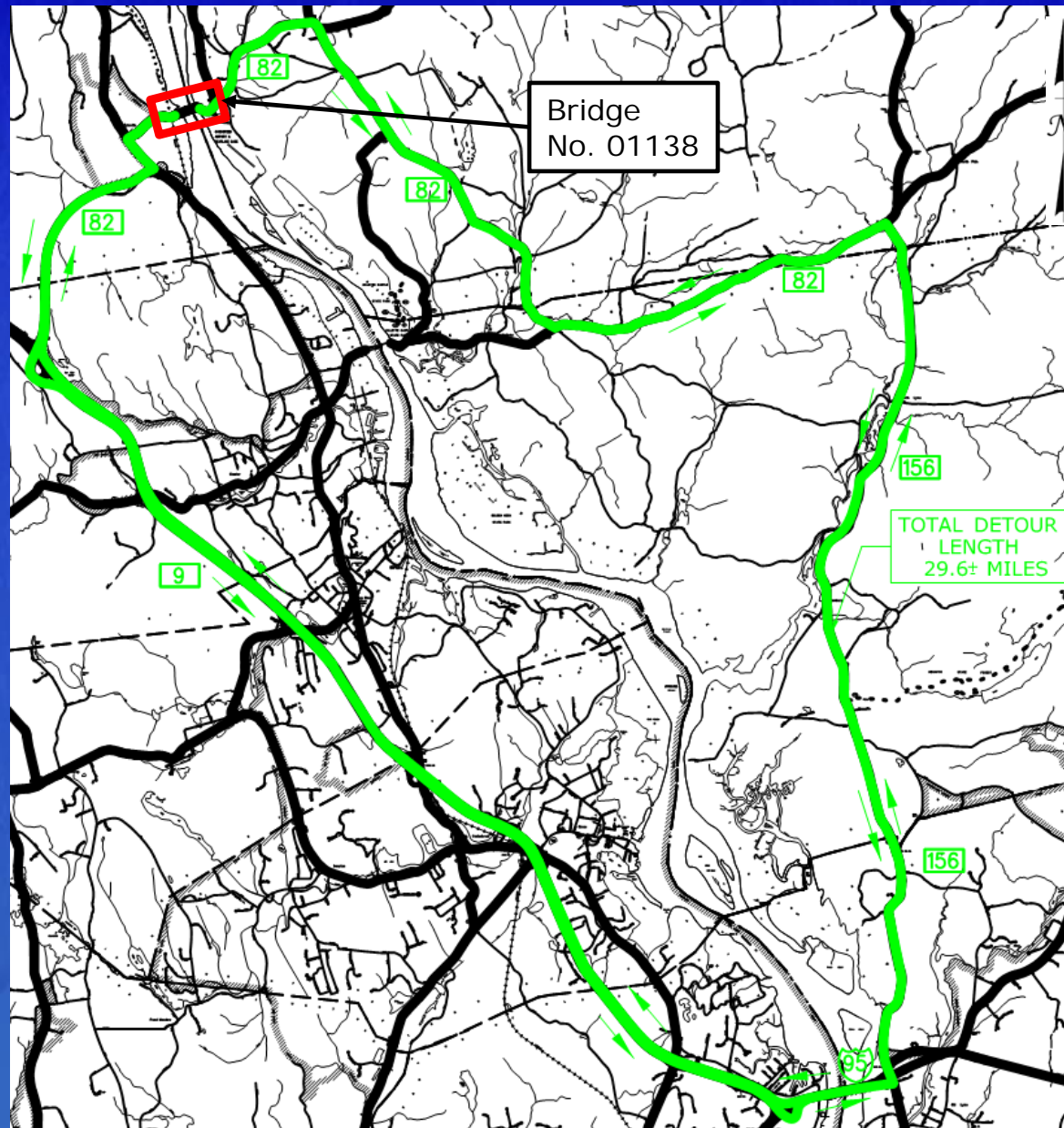
STAGING SECTION- TRAFFIC ON WESTBOUND LANE
 SCALE: 1/4" = 1'

LEGEND	
	PIER-MOUNTED NAVIGATION LIGHT
	SUBMARINE CABLE
	STEEL OPEN GRID DECK (UNDISTURBED)
	NEW POLYMER CONCRETE OVERLAY
	NEW SIDEWALK
	EXISTING BRIDGE
	WATERWAY (RIVER)
	WORK AREA

PRELIMINARY DESIGN REVIEW



Detour for Bridge Roadway Closure

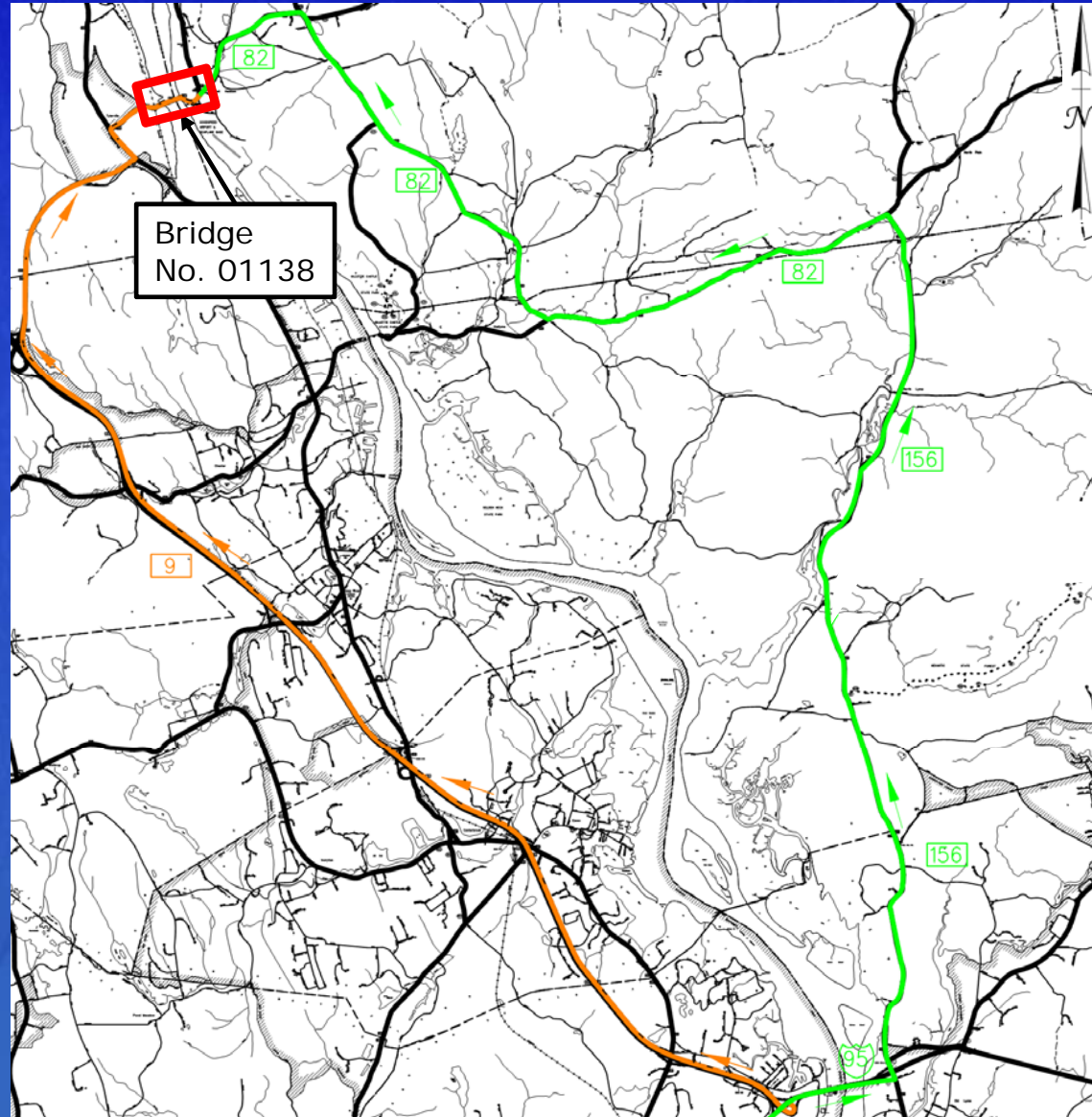




Alternate Route: To East Haddam from I-95

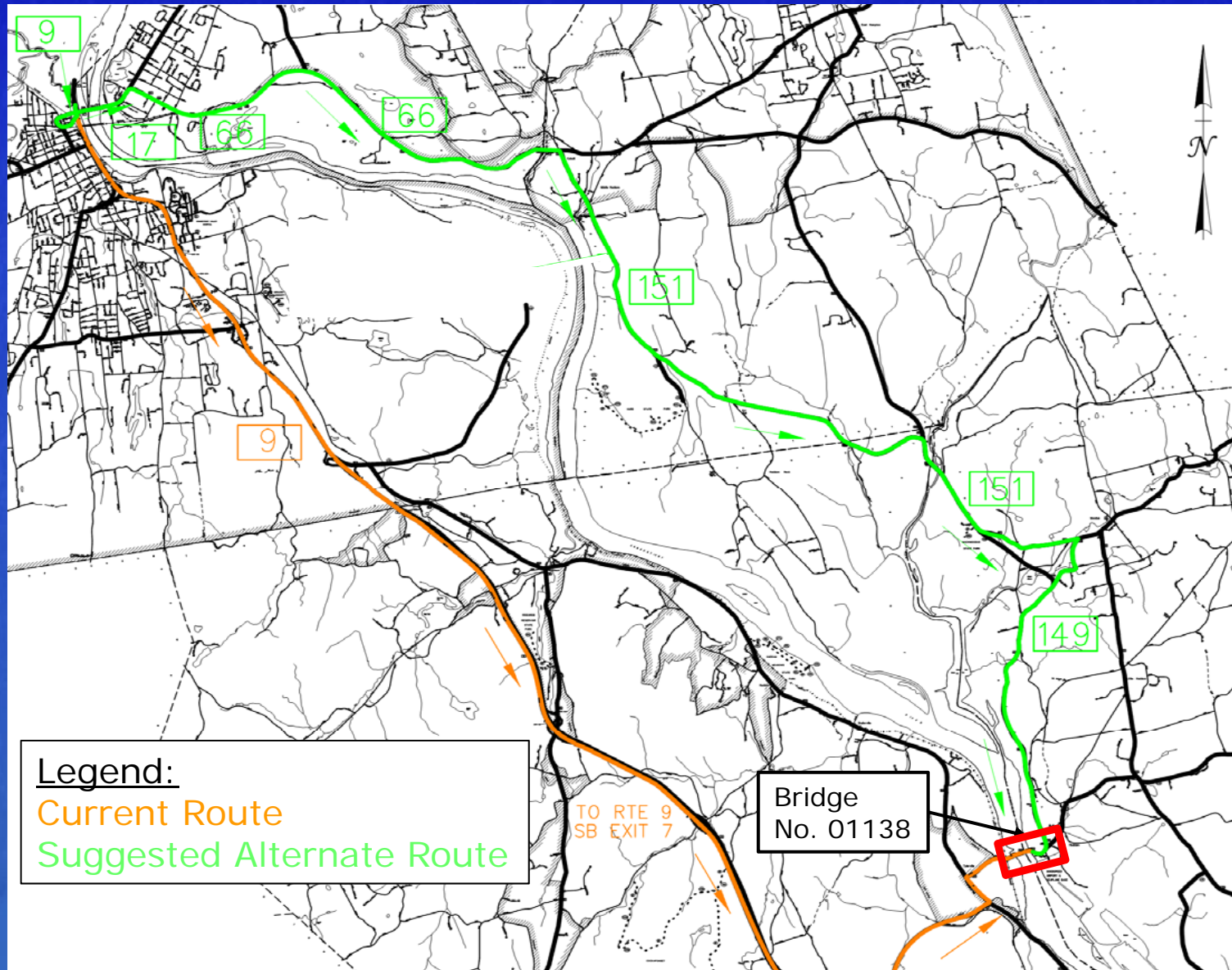
Legend:

Current Route
Suggested
Alternate Route





Alternate Route: To East Haddam From Middletown





Project Cost and Schedule

Schedule

- Construction Start: Late Fall 2019
- Completion: Fall 2021

Cost

- Total construction cost for the project is currently estimated at \$55,000,000
- Rehabilitation of this bridge will be undertaken using State and Federal Funds under the "STP-Rural", "STP-Anywhere" and "State Funded Project" programs.

The cost and schedule are preliminary and are subject to change.



Contact Information

Thank You Questions and Comments

Jonathan Kang – Transportation Engineer III
Connecticut DOT
2800 Berlin Turnpike
P.O. Box 317546
Newington, CT 06131

Email: Jonathan.Kang@ct.gov
Phone: 860-594-2754

