



**Coventry BF 0251(49)**  
**Regional Concerns Meeting**  
**VT Route 14 – Bridge 132 over Stoney Brook**

January 3, 2022

# Introductions

**Robert Klinefelter, P.E.**

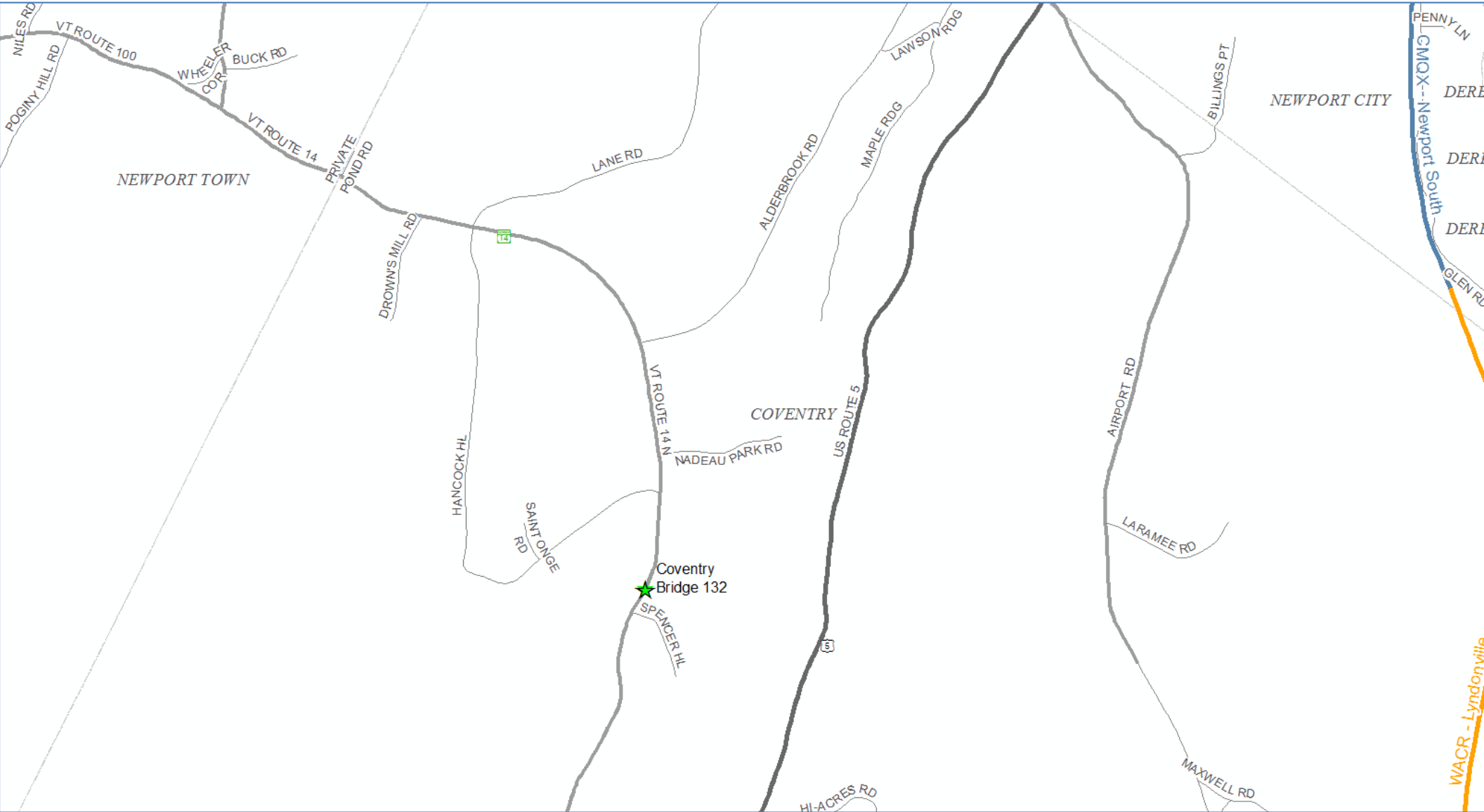
VTrans Project Manager

**Laura Stone, P.E.**

VTrans Scoping Engineer

# Purpose of Meeting

- Provide an understanding of our approach to the project
- Provide an overview of project constraints
- Discuss our selected alternative
- Provide an opportunity to ask questions and voice concerns



Location Map

Bridge 132  
Project Location



Blake Rd

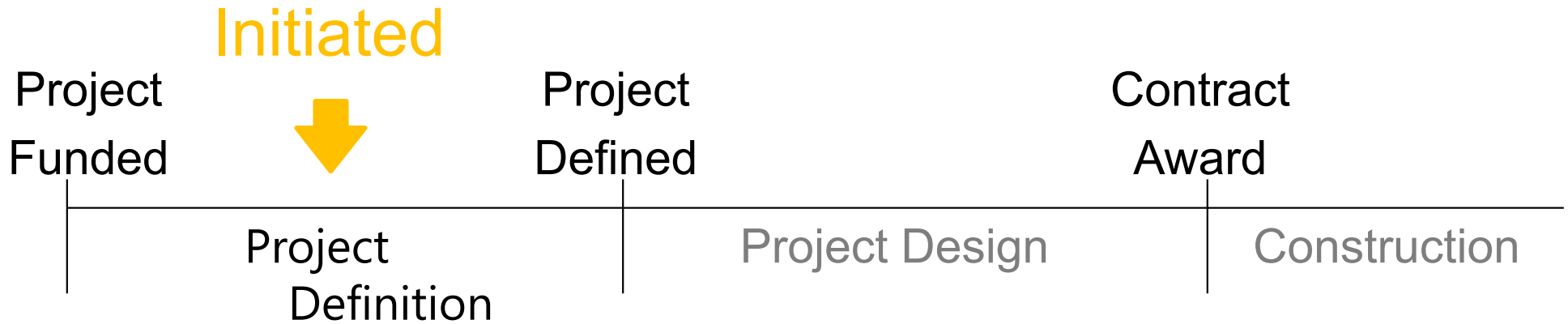
105

14

# Meeting Overview

- VTrans Project Development Process
- Project Overview
  - Existing Conditions
  - Alternatives Considered
  - Selected Alternative
- Maintenance of Traffic
- Schedule
- Summary
- Questions

# VTrans Project Development Process



- Identify resources & constraints
- Evaluate alternatives
- Public participation
- Build Consensus

- Quantify areas of impact
- Environmental permits
- Develop plans, estimate and specifications
- Right-of-Way process if necessary

## Looking North over Bridge 132



## Existing Conditions – Bridge #132

- Roadway Classification – Major Collector
- Bridge Type – 8' Span CGMPPA (Corrugated Galvanized Metal Plate Pipe Arch)
- Culvert Length – 108 feet
- Fill Over Culvert – 4 feet
- Ownership – State of Vermont
- Constructed in 1959



Looking South over Bridge 132



## Existing Conditions – Bridge #132

- Aerial Utilities 

# Existing Conditions – Bridge #132

- The culvert is in serious condition. There are large holes throughout the culvert invert, with the worst area being in the center of pipe where what remains of the invert has broken off and resulting in no support for the barrel above. There is heavy rusting throughout the culvert barrel above the haunch line. The outlet end of the pipe has heavy undermining resulting in minor settlement of the pipe.
- The existing culvert does not meet the minimum hydraulic standard or the calculated bank full width.
- VT Route 14 though the project area is substandard in width for the speed and traffic volumes present.

# Condition Ratings



## Existing Conditions - Bridge #132

■ Culvert Rating 3 (Serious)

Inlet



Existing Conditions - Bridge #132

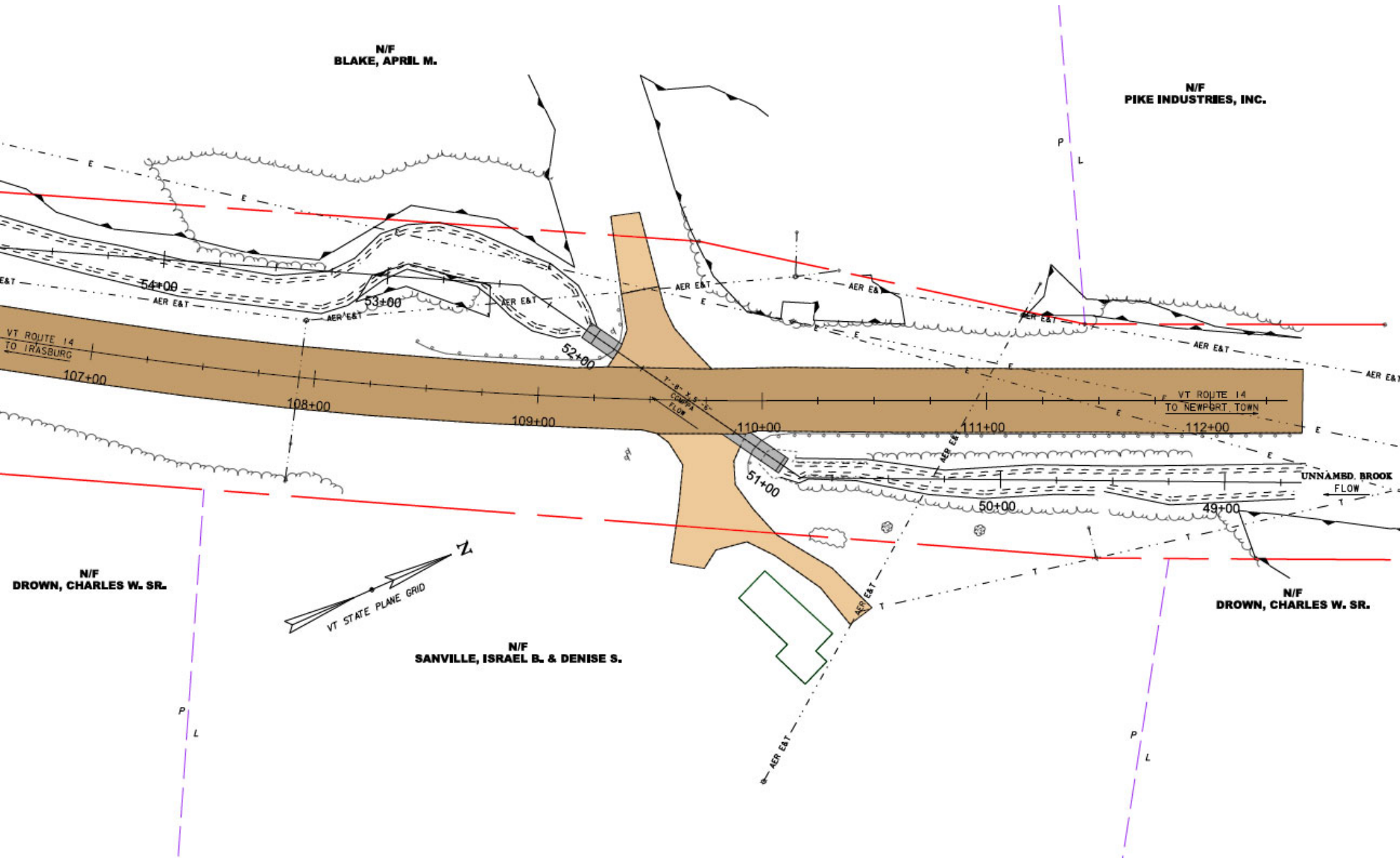
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## Existing Conditions – Bridge #132

- Wetlands
- Wildlife Habitat - AOP

# Existing Conditions



# Design Criteria and Considerations

- Average Daily Traffic
  - 2,400 vehicles per day
- Design Hourly Volume
  - 270 vehicles per hour
- % Trucks
  - 14.9%

# Alternatives Considered – Bridge #132

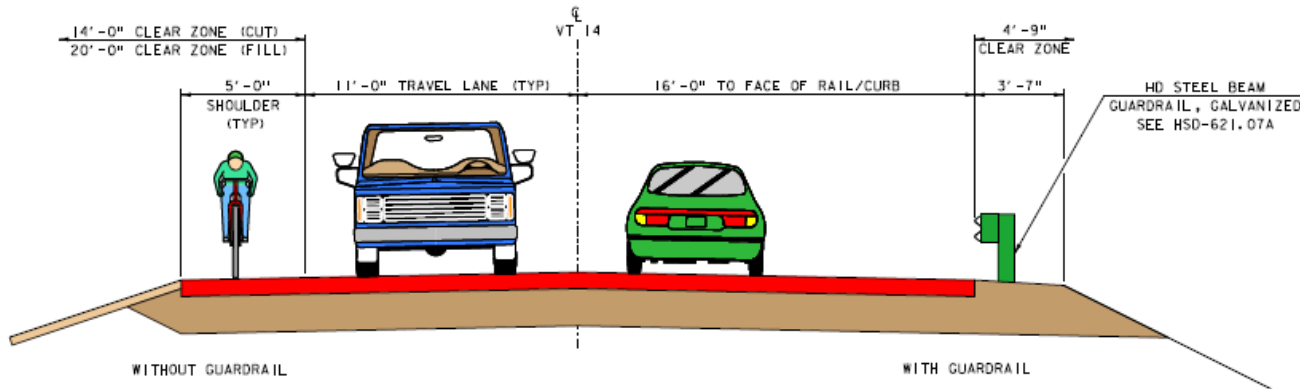
- No Action
  - Additional maintenance required within 10 years
- Slipliner
  - 5' diameter waterway opening – does not meet minimum bankfull width
  - Roadway overtopping at design flood
  - 11'/2.5' typical
  - 50-year design life
- New Precast Box
  - 12' x 6.75' waterway opening
  - 11'/4' typical
  - 75-year design life



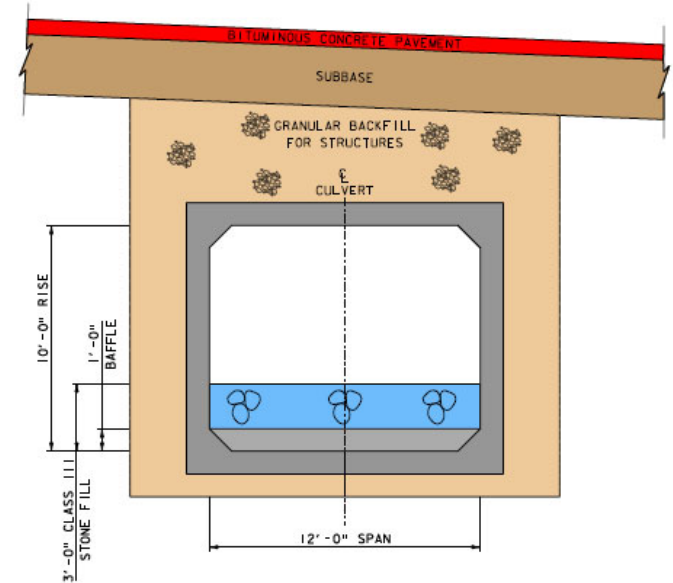
# Selected Alternative - Bridge #132

- Precast Concrete Box
  - 12' x 9.75' box with invert buried 3' for AOP
    - 12' x 6.75' waterway opening
  - 11'¼' typical to meet minimum standards
    - 11'½' is current typical section
  - 75-year design life

# Proposed Typical Section



PROPOSED VT ROUTE 14 TYPICAL SECTION

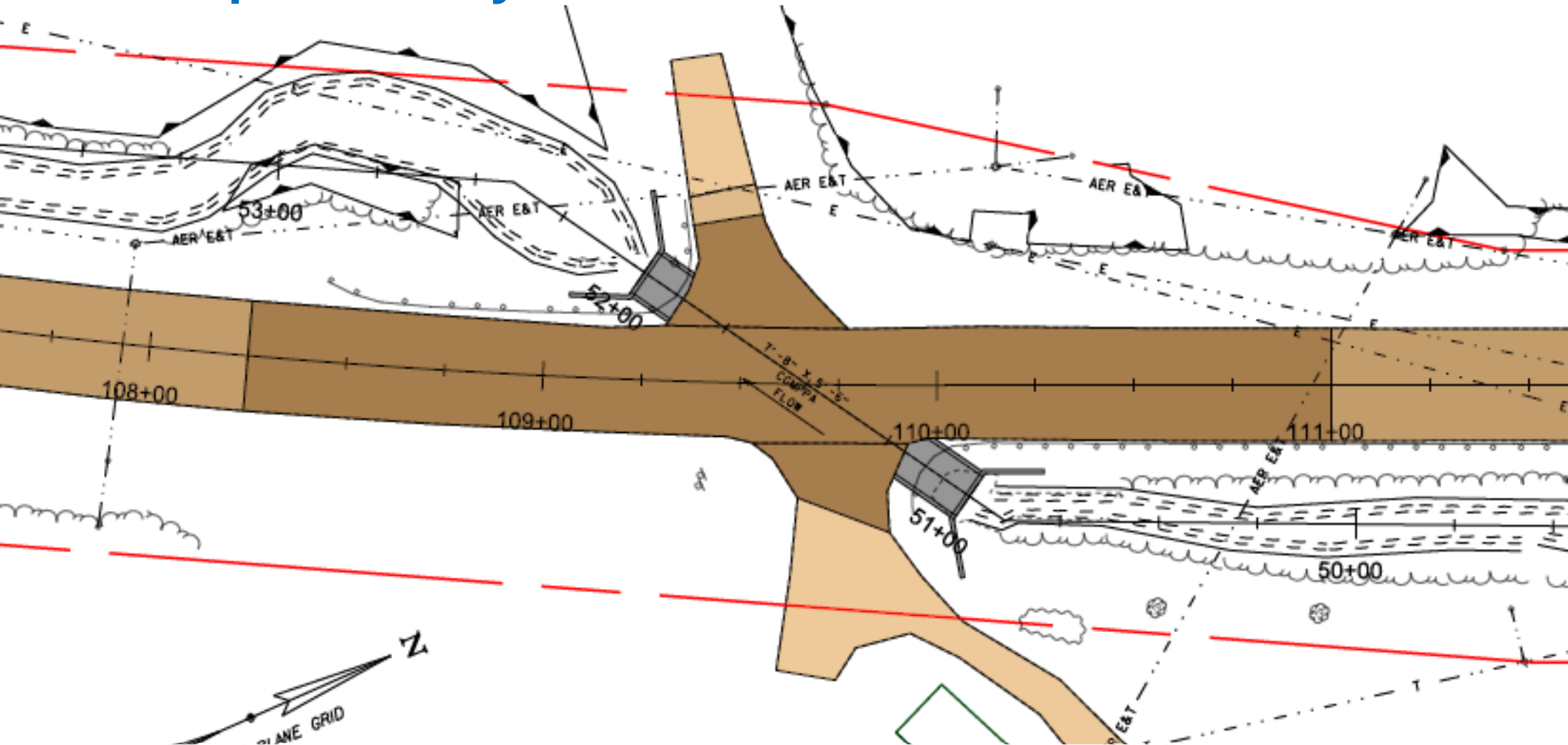


CULVERT TYPICAL SECTION

## New Precast Concrete Box - Bridge #132

- 11'¼' typical section

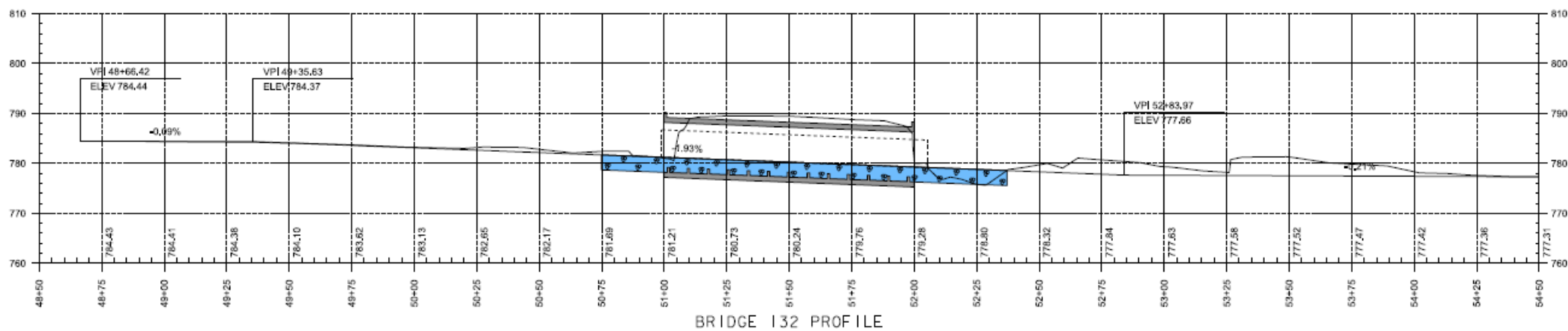
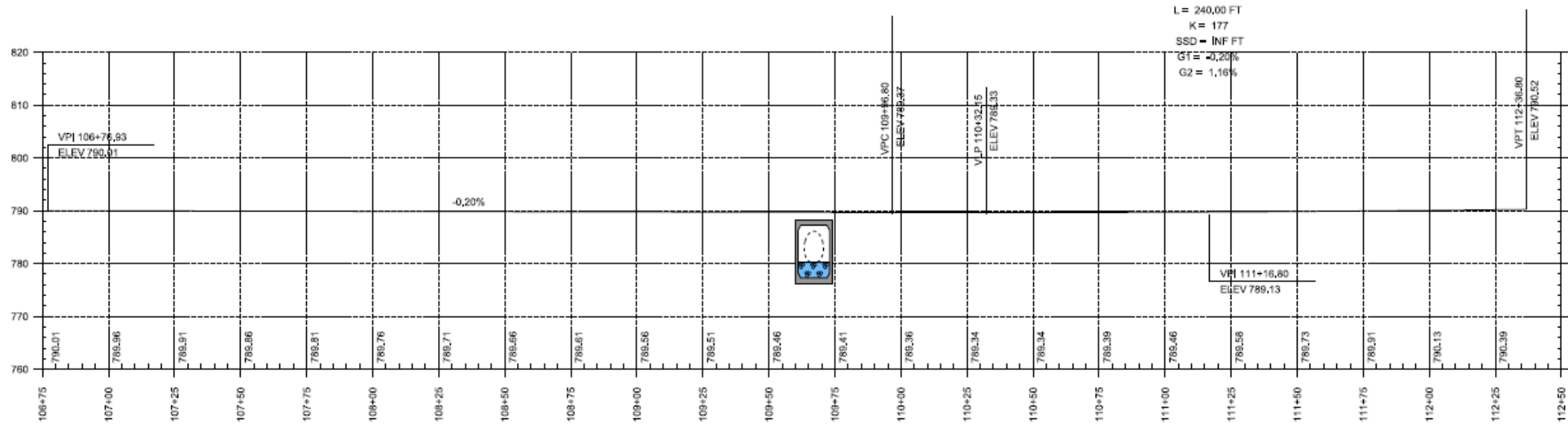
# Proposed Layout



## New Precast Concrete Box - Bridge #132

- 11'¼' typical, 75-year design life
- 12' x 9.75' box with invert buried 3' for AOP
- Meets 12' minimum BFW requirements

# Proposed Profile



# Maintenance of Traffic Options Considered

- Offsite Detour
- Phased Construction
- Temporary Bridge

A photograph of a road closure barrier. The barrier consists of a concrete base with a metal rail and several horizontal panels with red and white diagonal stripes. A white sign with a black border is mounted on the barrier. The sign has the words "ROAD" and "CLOSED" in large, bold, black capital letters, stacked vertically. The background shows a paved road, a concrete curb, and some green foliage under a clear sky.

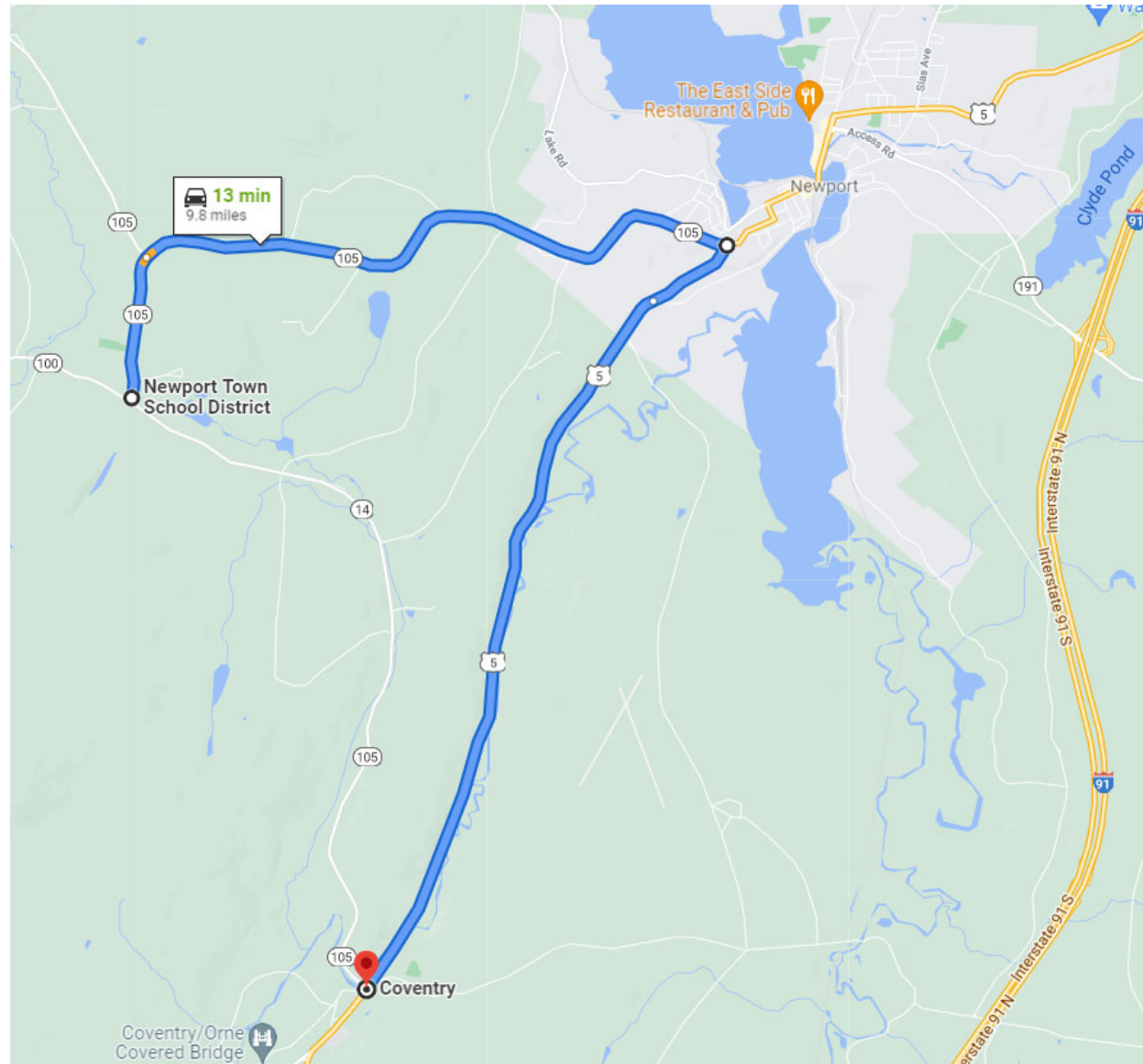
ROAD  
CLOSED

## Road Closure

- Detour chosen and signed by State
- 3-day closure
- Shortest Regional Detour Route is 14.5 miles end-to-end

# Traffic Control – Regional Detour

- **Regional Detour**  
**Route:** VT Route 14, to VT Route 105 and US Route 5, back to VT Route 14.
- Through Route: 4.7 miles
- Detour Route: 9.8 miles
- End-to-end Distance: 14.5 miles
- Added Distance: 5.1 miles



# Preliminary Project Schedule

- Construction Start – Spring/Summer 2024
  - Total Cost Estimate: \$2,600,000



# Project Summary: Bridge 132

- New Precast Concrete Box with Traffic Maintained on Offsite Detour
  - 3-day bridge closure
  - 12' x 9.75' box with invert buried 3' for AOP
    - 12' x 6.75' waterway opening
  - 11'¼' typical to meet minimum standards
    - 11'½' is current typical section
  - 75-year design life
- Utility Relocation Possible (Aerial)
- Right-of-Way needed
- Construction Year: 2024

## For more information:

- <https://outside.vermont.gov/agency/vtrans/external/Projects/Structures/21B025>



# Coventry BF 0251(49) Questions and Comments

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