



Fairfield STP DECK(51)
Regional Concerns Meeting
VT Route 36 – Bridge #6 over Fairfield River

February 22, 2021

Introductions

Rob Young, P.E.

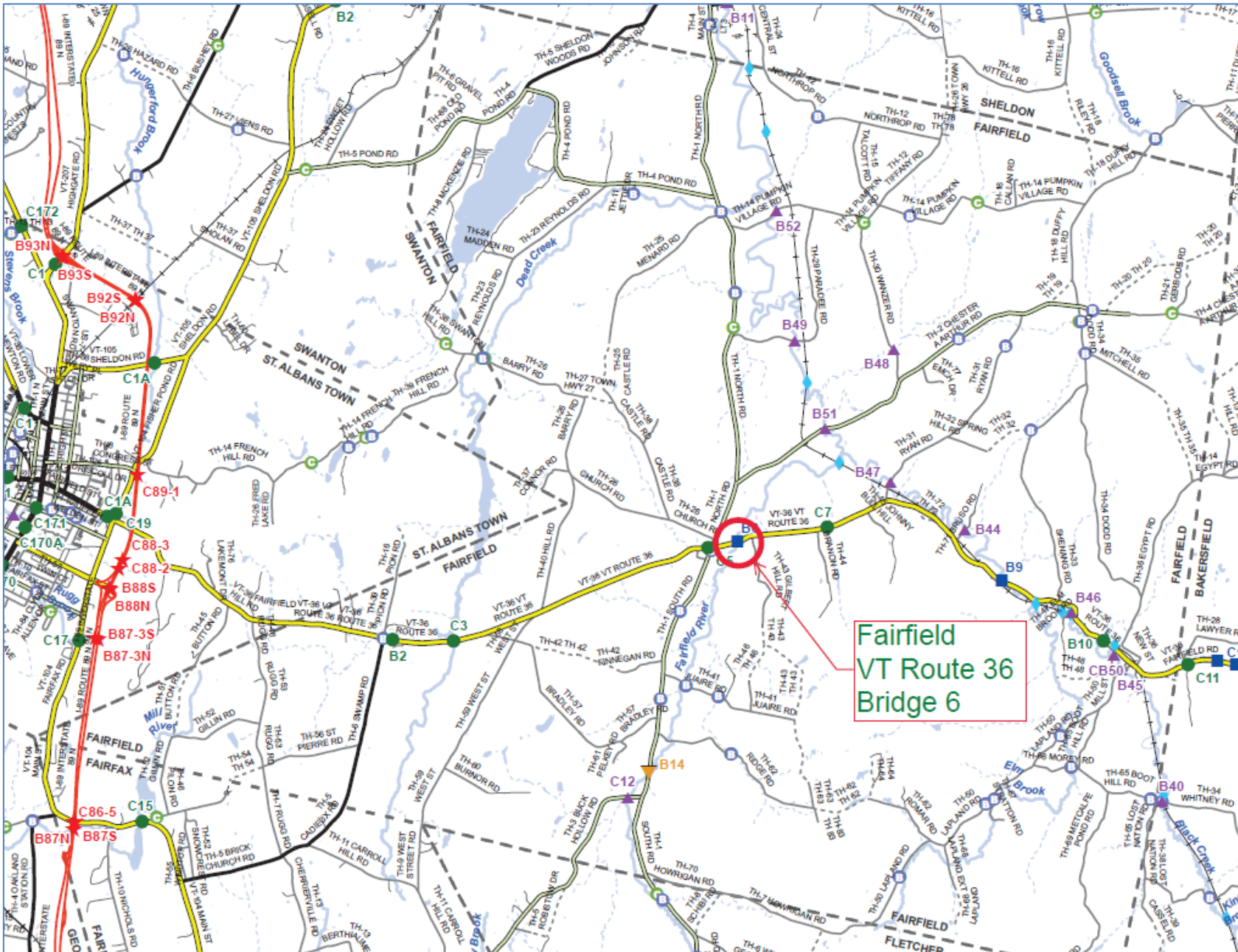
VTrans Project Manager

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 6
Project Location

Fairfield Volunteer Fire
Department, Station

Chesters
Fairfield Vermont
Town Clerk

Fairfield Market

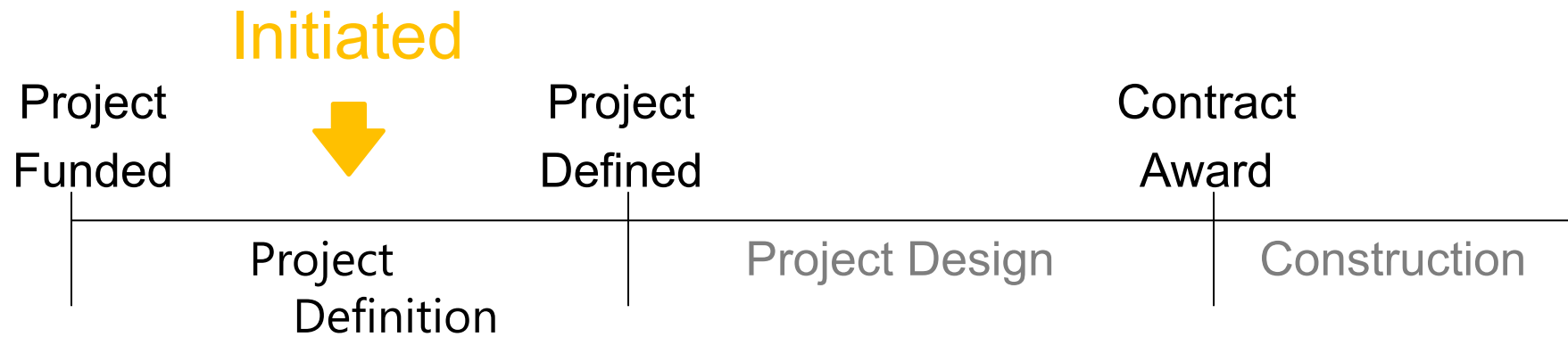
United States
Postal Service

Google

Meeting Overview

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

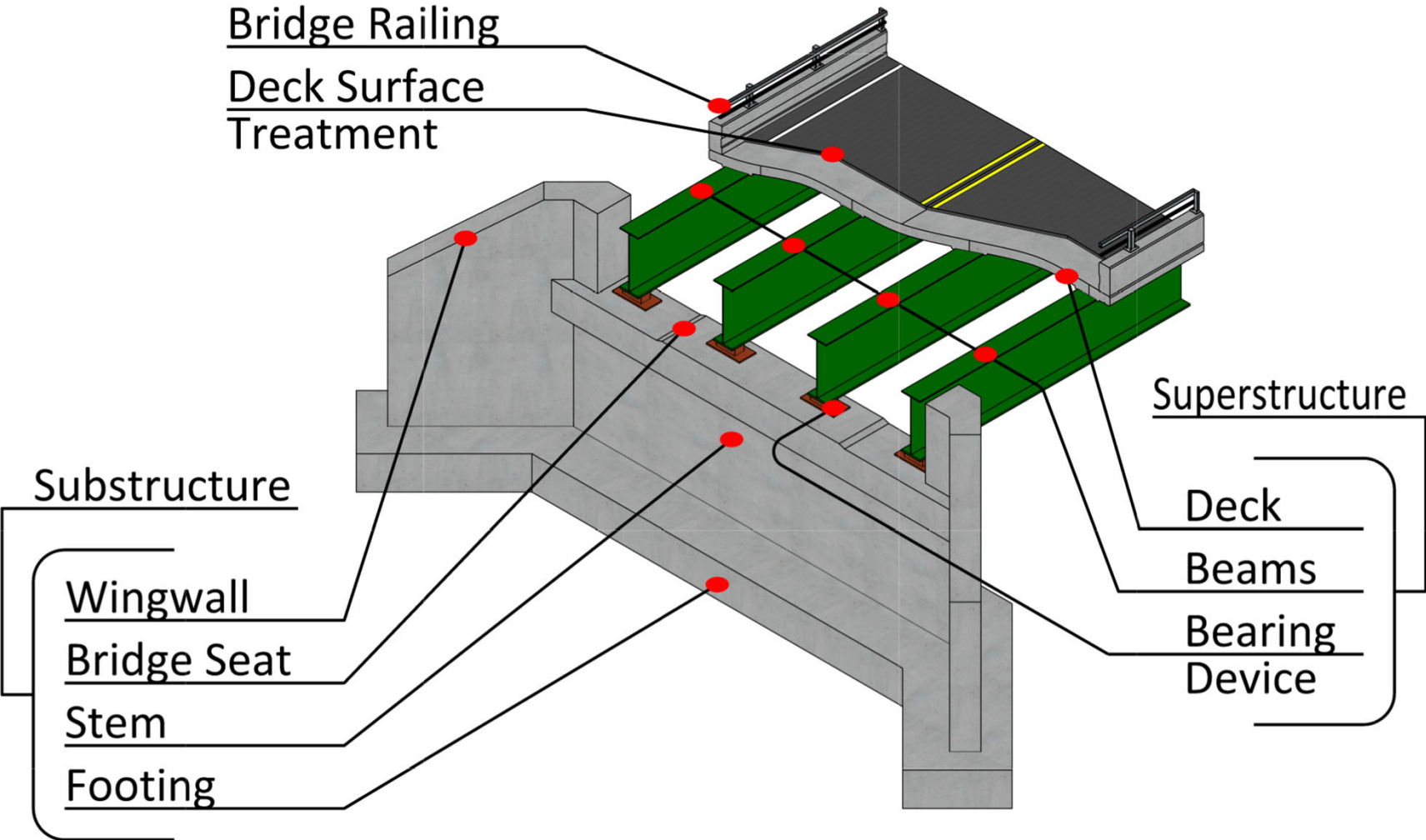
VTrans Project Development Process



- 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

Description of Terms Used



Looking West over Bridge 6

Existing Conditions – Bridge #6

- Roadway Classification – Major Collector
- Bridge Type – 89' Long, Single Span Rolled Beam Bridge
- Ownership – State of Vermont
- Constructed in 1955
- United States Post Office and gas station/market located in southwest quadrant



Looking East over Bridge 6



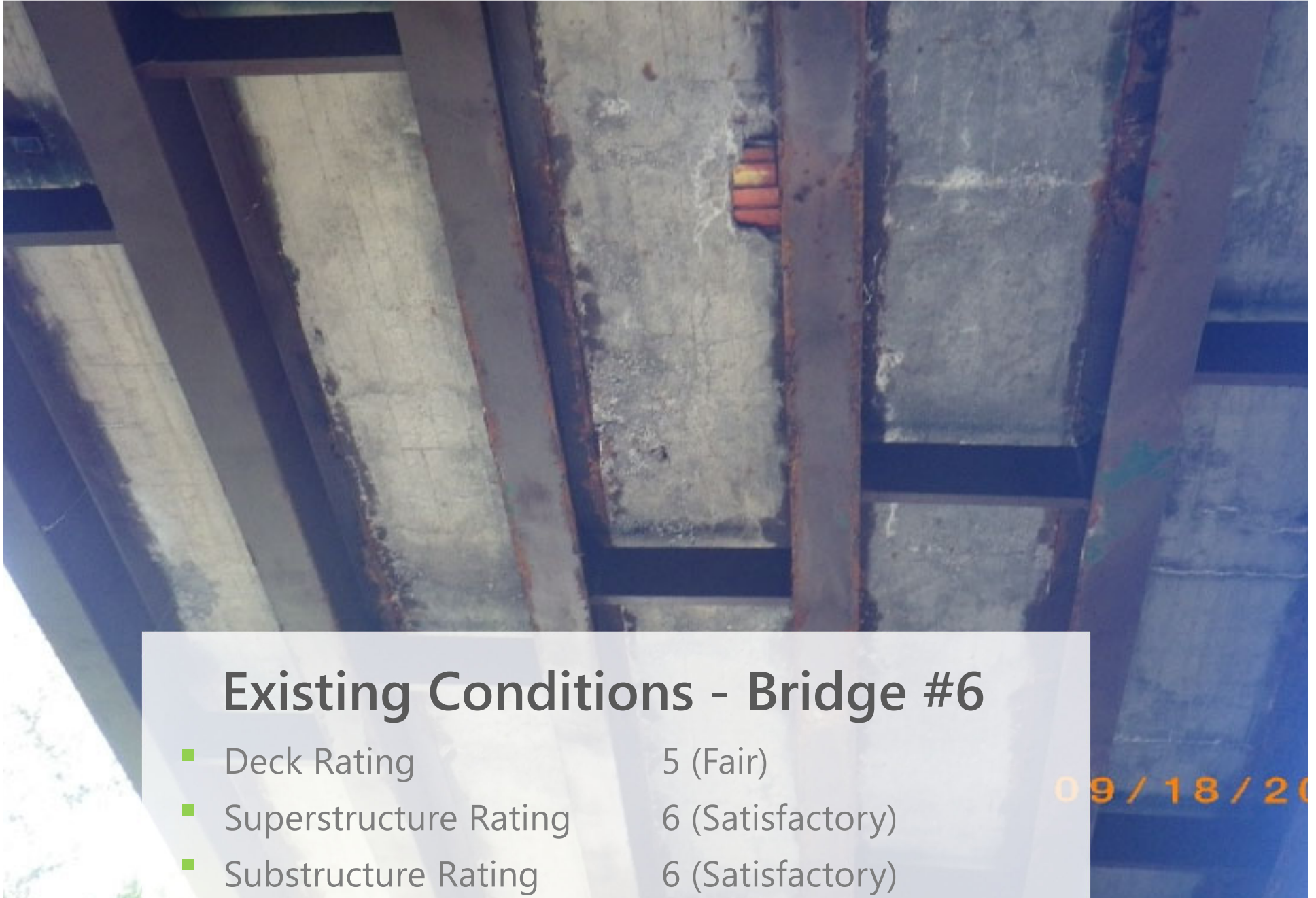
Existing Conditions – Bridge #6

- Aerial Utilities
- The Fairfield Town garage and fire department are located 0.2 miles to the east on VT Route 36

Existing Conditions – Bridge #6

- The reinforced concrete deck is in fair condition. There is extensive saturation throughout with map cracking, light scaling, scattered delaminations, and scattered small spalls along the beam flanges. Additionally, a 1-foot x 2-foot full depth hole has developed.
- The existing rolled beams have moderate paint distress with rusting. There is paint peel and areas of rust scale with minor pitting and section loss along the flanges, beam ends, and fascias.
- The reinforced concrete curtain wall at abutment 2 has a full height vertical shrinkage crack with surrounding delaminations. The reinforced concrete curtain wall at abutment 1 has a full height settlement crack with large surrounding delaminations.

Condition Ratings



Existing Conditions - Bridge #6

- Deck Rating 5 (Fair)
- Superstructure Rating 6 (Satisfactory)
- Substructure Rating 6 (Satisfactory)

Northern Abutment



Existing Conditions - Bridge #6 10/2019

Southern Abutment



Existing Conditions - Bridge #6

- Stub poured on bedrock

4/10/2019

Backwall



Existing Conditions - Bridge #6

- Cracking

Underside of Deck



Existing Conditions - Bridge #124

- Beams have paint peel

Railing



Existing Conditions - Bridge #6

- Section Loss!

Resources – Looking Downstream from Bridge 6

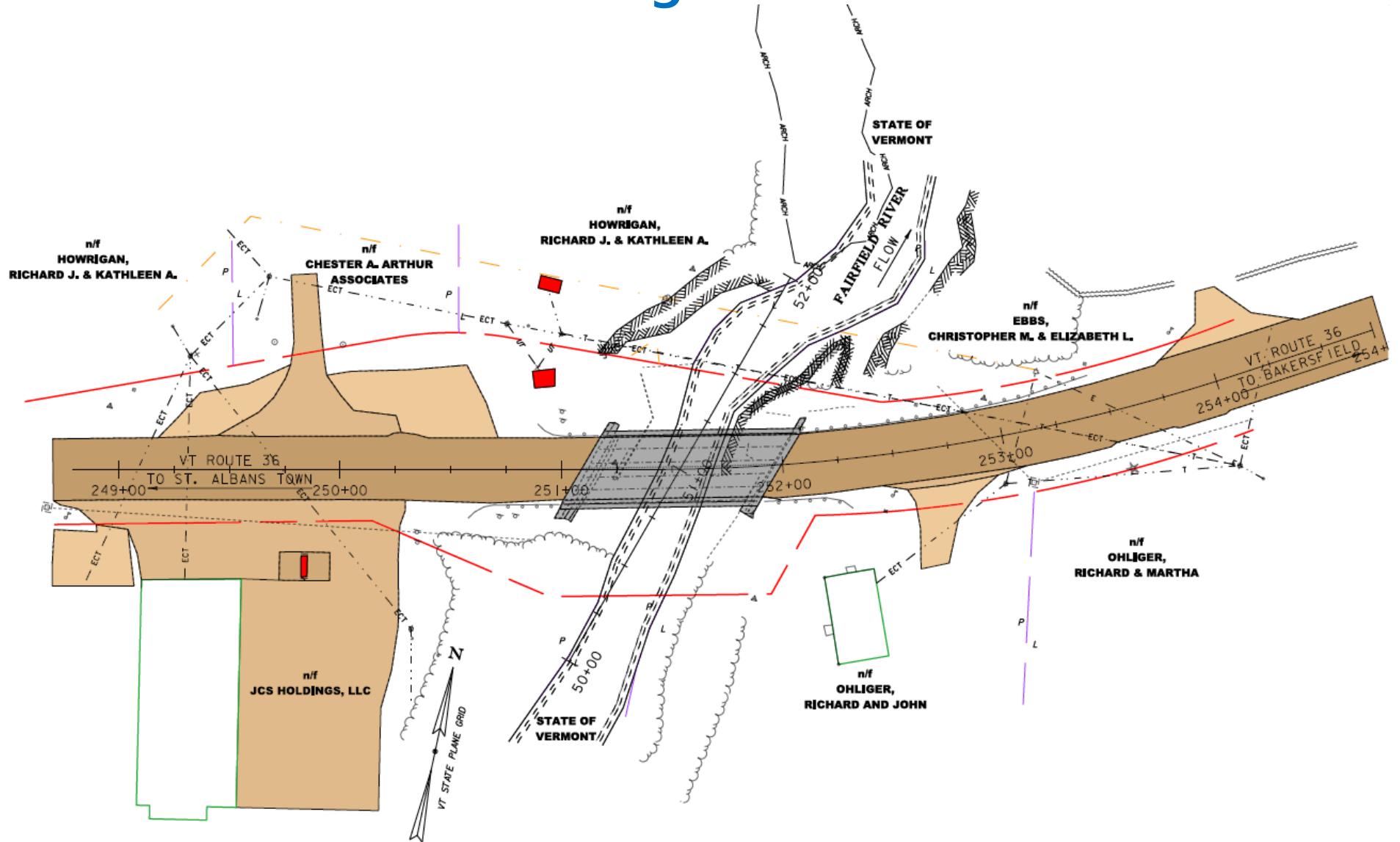


Existing Conditions – Bridge #6

- Bedrock Outcrops
- Hazardous Waste
- Archaeologically sensitive area (Mill remains in NW quadrant)
- Historic Resources (Residence at 4775 Route 36, Residence at 4620 VT-36, Post office at 4796 VT-36)
- Wildlife Habitat
- Northern Long Eared Bat

09/18/2019

Existing Conditions



Design Criteria and Considerations

- Average Daily Traffic
 - 2,000 vehicles per day
- Design Hourly Volume
 - 260 vehicles per hour
- % Trucks
 - 11.4%

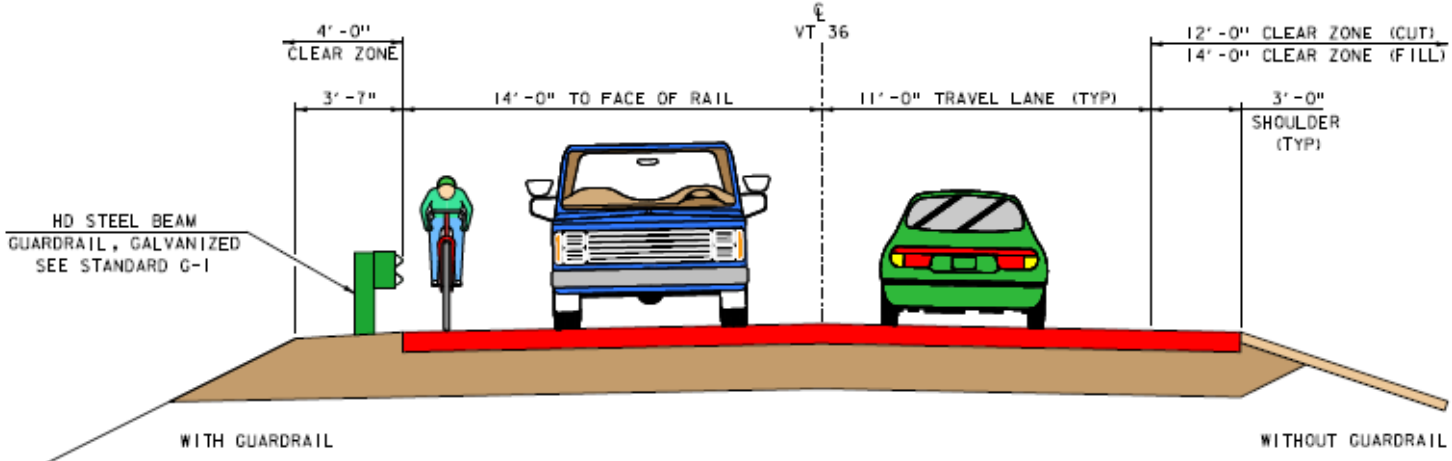
Alternatives Considered – Bridge #6

- No Action
 - Additional maintenance required within 10 years
- Minor Rehabilitation
 - Concrete repair
 - 11'3' typical
 - 15-year design life
- Deck Replacement (ABC and Conventional)
 - New deck and bridge railing
 - 11'3' typical: Meets Minimum Standard
 - 30-year design life
- Deck Replacement with Beam Painting
 - New deck and bridge railing
 - 11'3' typical: Meets Minimum Standard
 - 40-year design life
- Superstructure Replacement
 - New deck and beams
 - 11'3' typical: Meets Minimum Standard
 - 40-year design life

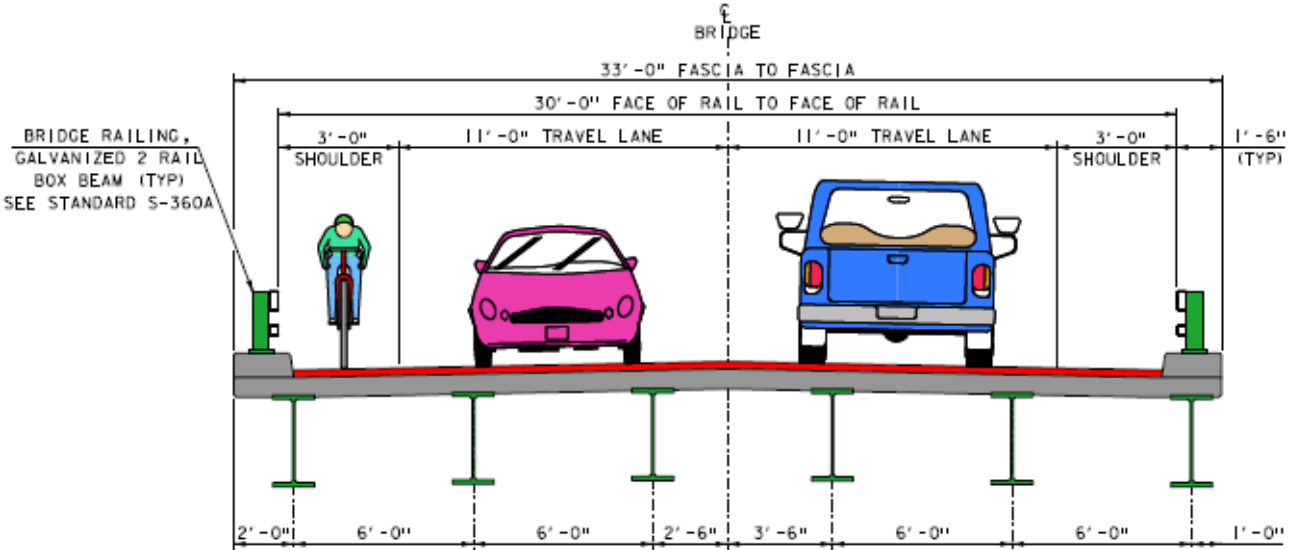
Selected Alternative - Bridge #6

- Deck Replacement
 - Replace the existing deck and railing
 - Match Existing Typical: 11'/3' typical section
 - 40-year design life
 - Right-of-Way potentially needed for guardrail replacement

Proposed Typical Section



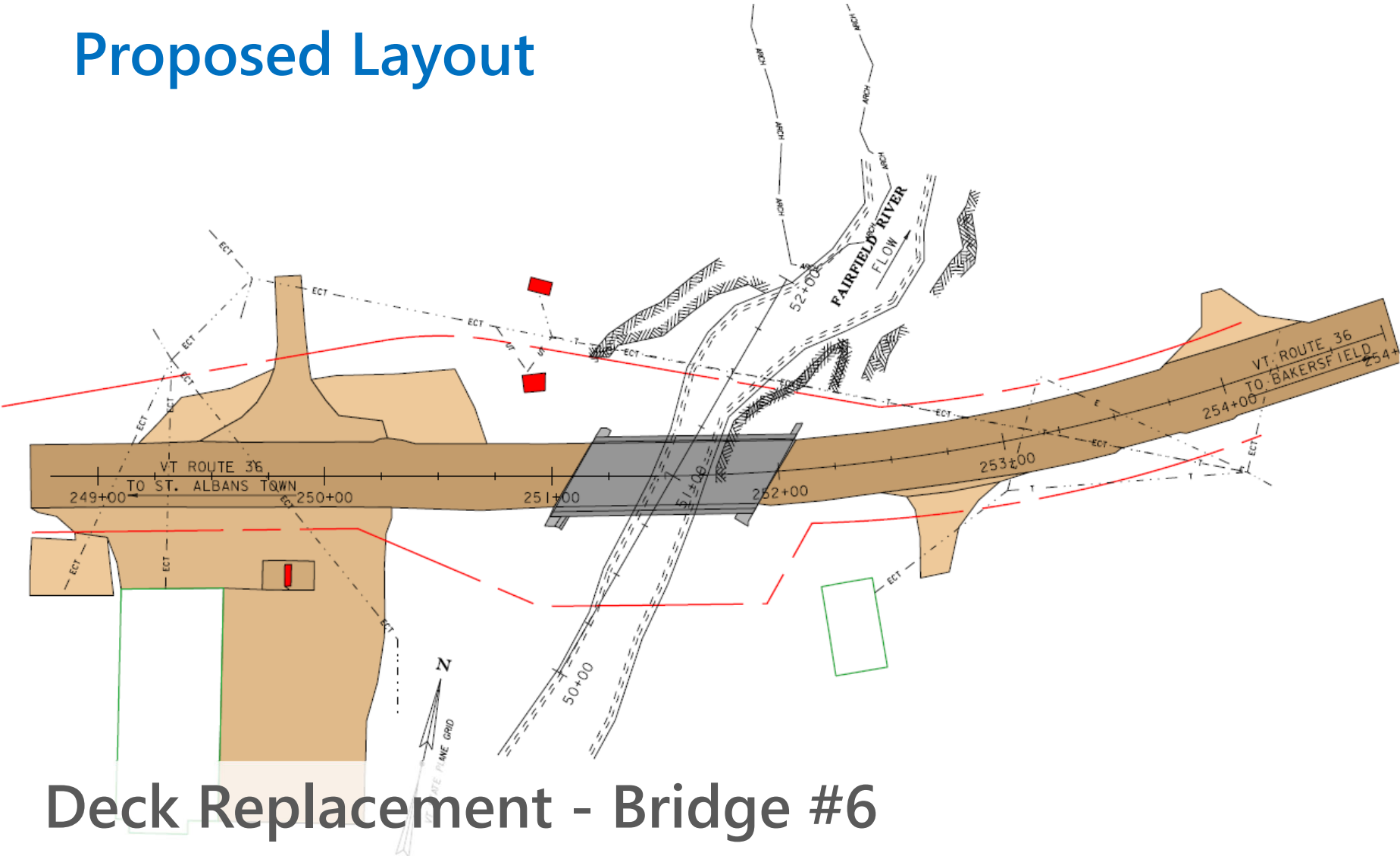
PROPOSED VT ROUTE 36 TYPICAL SECTION



FLOW

PROPOSED DECK REPLACEMENT TYPICAL SECTION

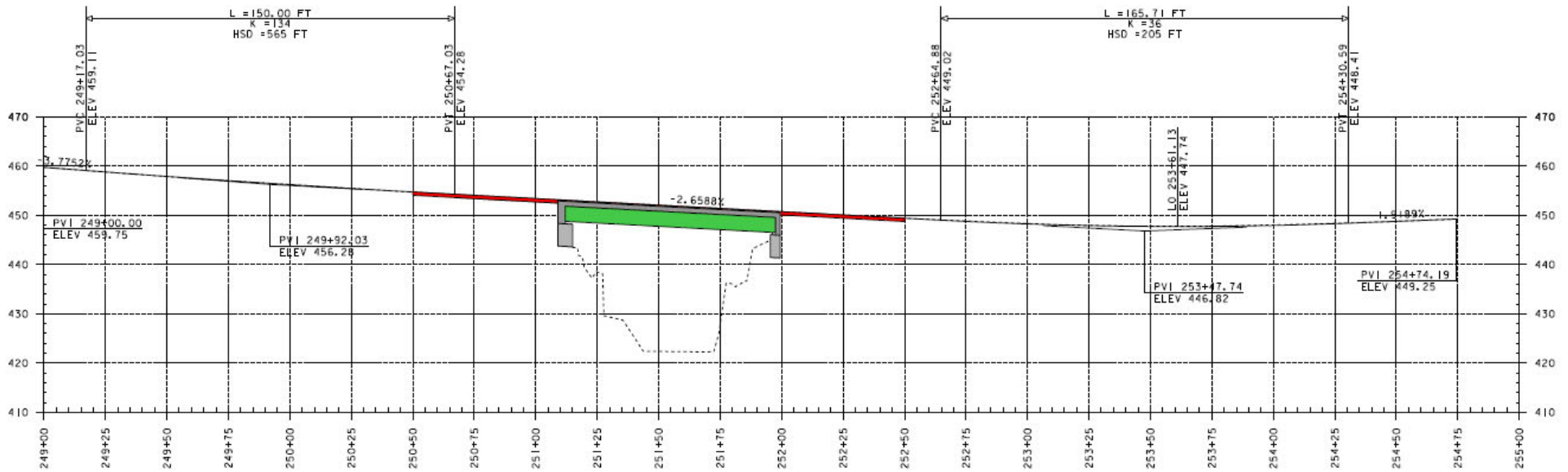
Proposed Layout



Deck Replacement - Bridge #6

- 11'3' typical
- 40-year design life

Proposed Profile



VT ROUTE 36 PROFILE


Deck Replacement- Bridge #6

- Match Existing vertical alignment

Maintenance of Traffic Options Considered

- Offsite Detour
- Temporary Bridge
- Phased construction

Selected Method of Traffic Maintenance

A photograph of a road closure barrier. The barrier consists of several horizontal white panels with red diagonal stripes. In the center, a white rectangular sign with a black border and the words "ROAD CLOSED" in large, bold, black capital letters is mounted on two white posts. The background shows a concrete curb, a chain-link fence, and green trees under a clear sky.

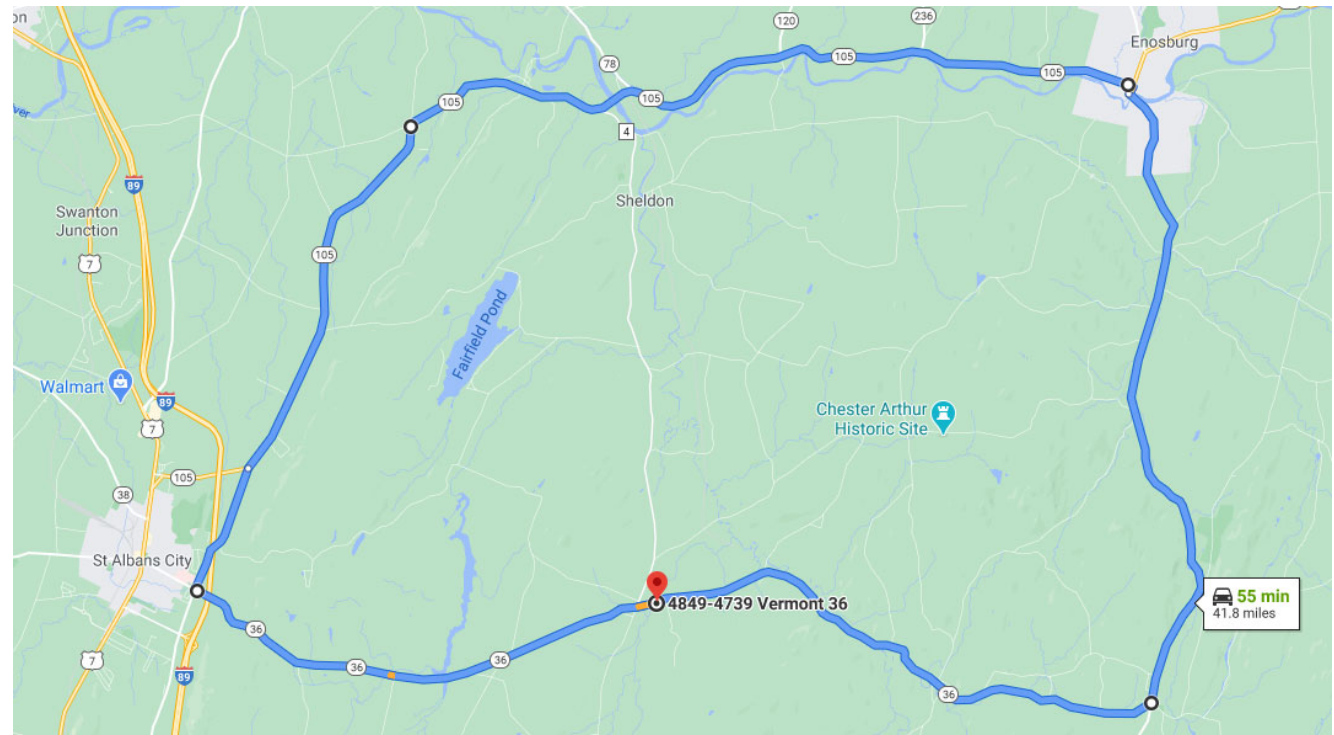
**ROAD
CLOSED**

Road Closure

- Detour chosen and signed by State
- 21-day closure
- 42 miles end-to-end
- Local Bypass route available

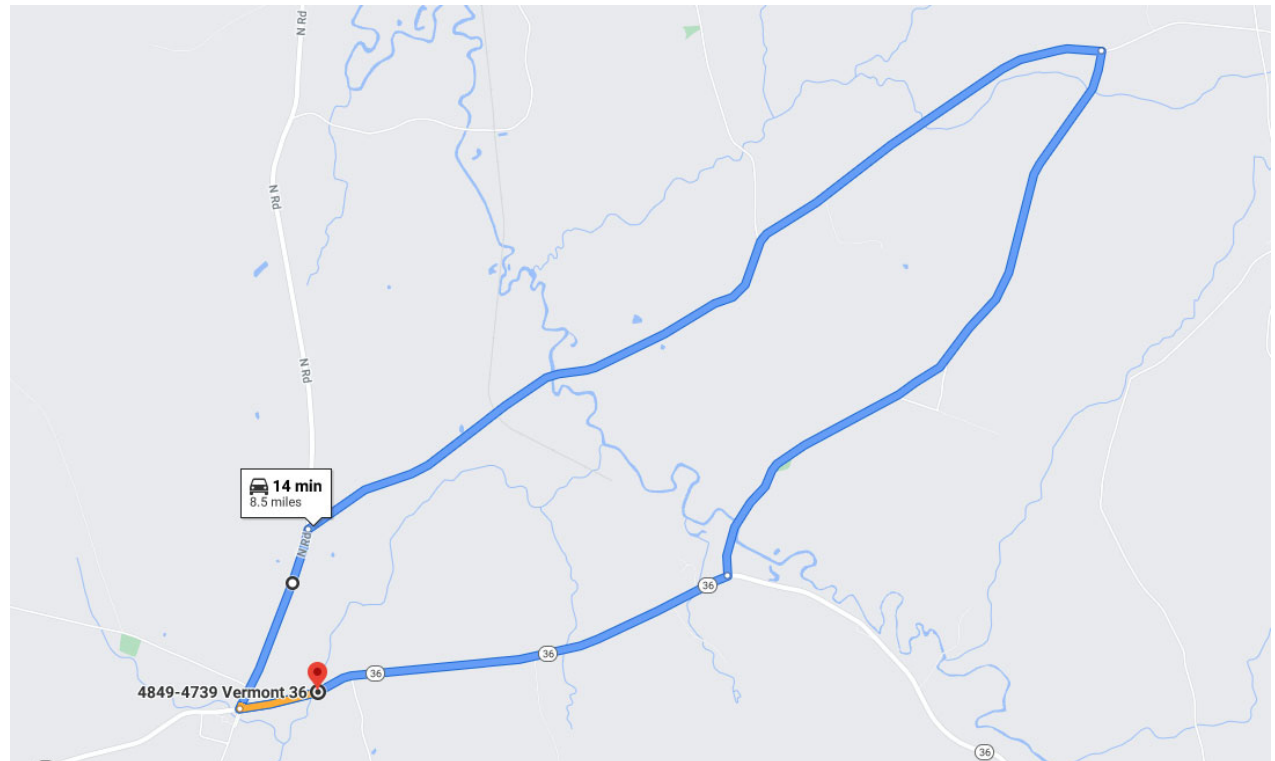
Traffic Control – Regional Detour

- **Regional Detour Route:** VT Route 36, to VT Route 104, VT Route 105, and VT Route 108, back to VT Route 36.
 - 14.6 Miles Through Route
 - 27.1 Miles Detour Route
 - 41.8 Miles end-to-end
 - 12.5 Miles Added



Traffic Control – Local Bypass

- **Local Bypass Route:** VT Route 36, to North Road, Chester A Arthur Road (paved), and Ryan Road (gravel), back to VT Route 36
 - 1.9 Miles Through-Route
 - 6.6 Miles Detour Route
 - 8.5 Miles end-to-end
 - 4.7 Miles Added



Preliminary Project Schedule

- Construction Start – Summer 2024
 - Total Cost Estimate: \$1,170,000

Project Summary: Bridge 6

- Deck Replacement with Traffic Maintained on Offsite Detour
 - Replace the existing deck and railing
 - Partial depth precast deck panels
 - 21-day bridge closure
 - 11' / 3' typical section
 - 40-year design life
 - Small amount of Right-of-Way may be needed for guardrail replacement
 - Impacts to utilities and additional limits outside ROW avoided with bridge closure
 - Construction Year: 2024

For more information:

- <https://outside.vermont.gov/agency/vtrans/external/Projects/Structures/19B218>



Fairfield STP DECK(51) Questions and Comments

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