Montgomery STP DECK (40)
Alternatives Presentation Meeting

VT 118– Bridge #19 over Trout River

March 21, 2016

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Introductions

Carolyn Carlson, P.E.

VTrans Scoping Project Manager

Kyle Obenauer

VTrans Historic Preservation Officer

John Byatt, P.E.

CLD Structures Team Leader

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Purpose of Meeting

- Provide an understanding of our approach to the project
- Provide an overview of project constraints
- Discuss alternatives that were considered
- Discuss the recommended alternative
- Provide an opportunity to ask questions and voice concerns

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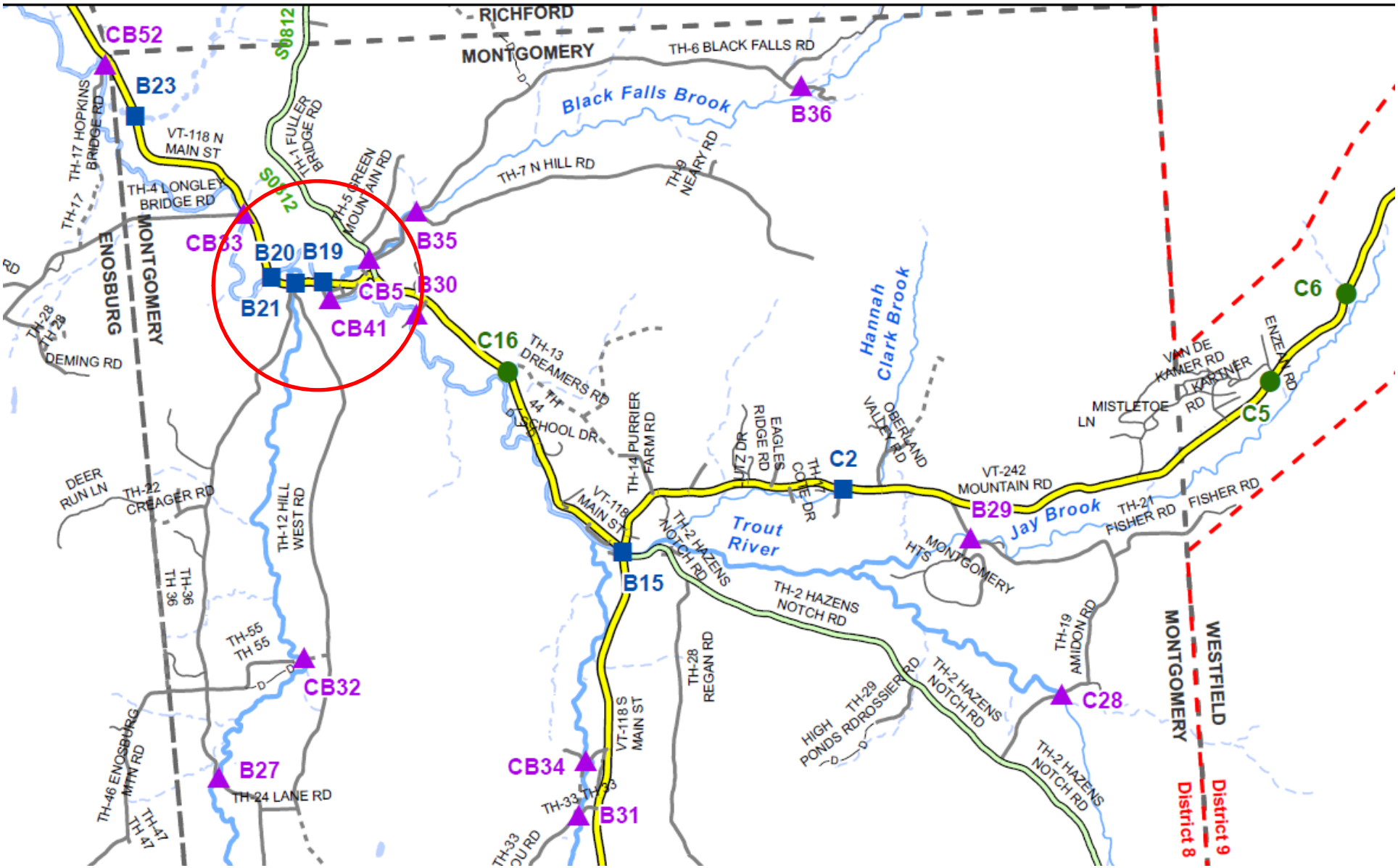
Location Map – Bridge #19




Project Location
Black Falls Brook
118
N Main St
118
Comstock Bridge Rd
Bank St
Comstock Bridge Rd
Comstock
Covered Bridge

Meeting Overview

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

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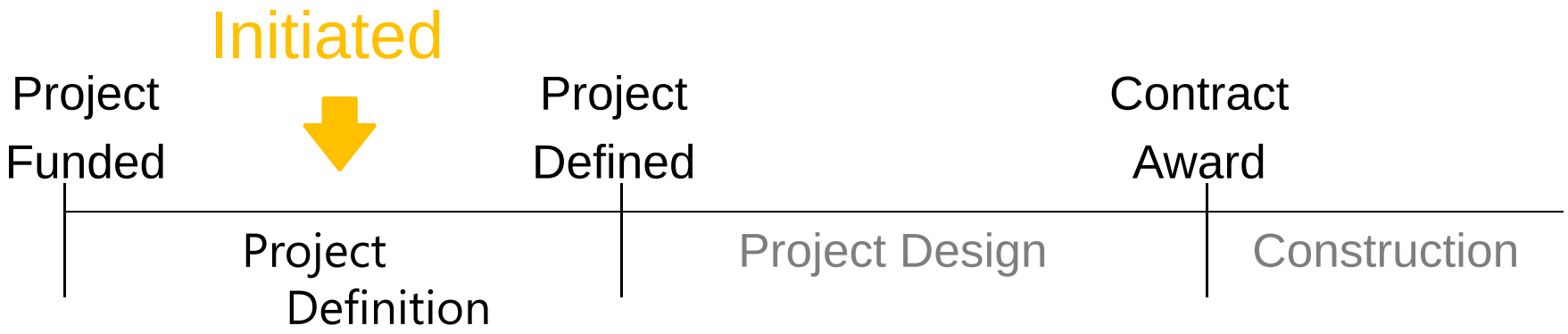
VTrans Project Development Process



- 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

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Project Overview

- Existing Conditions
- Alternatives Considered
- Recommended Alternative

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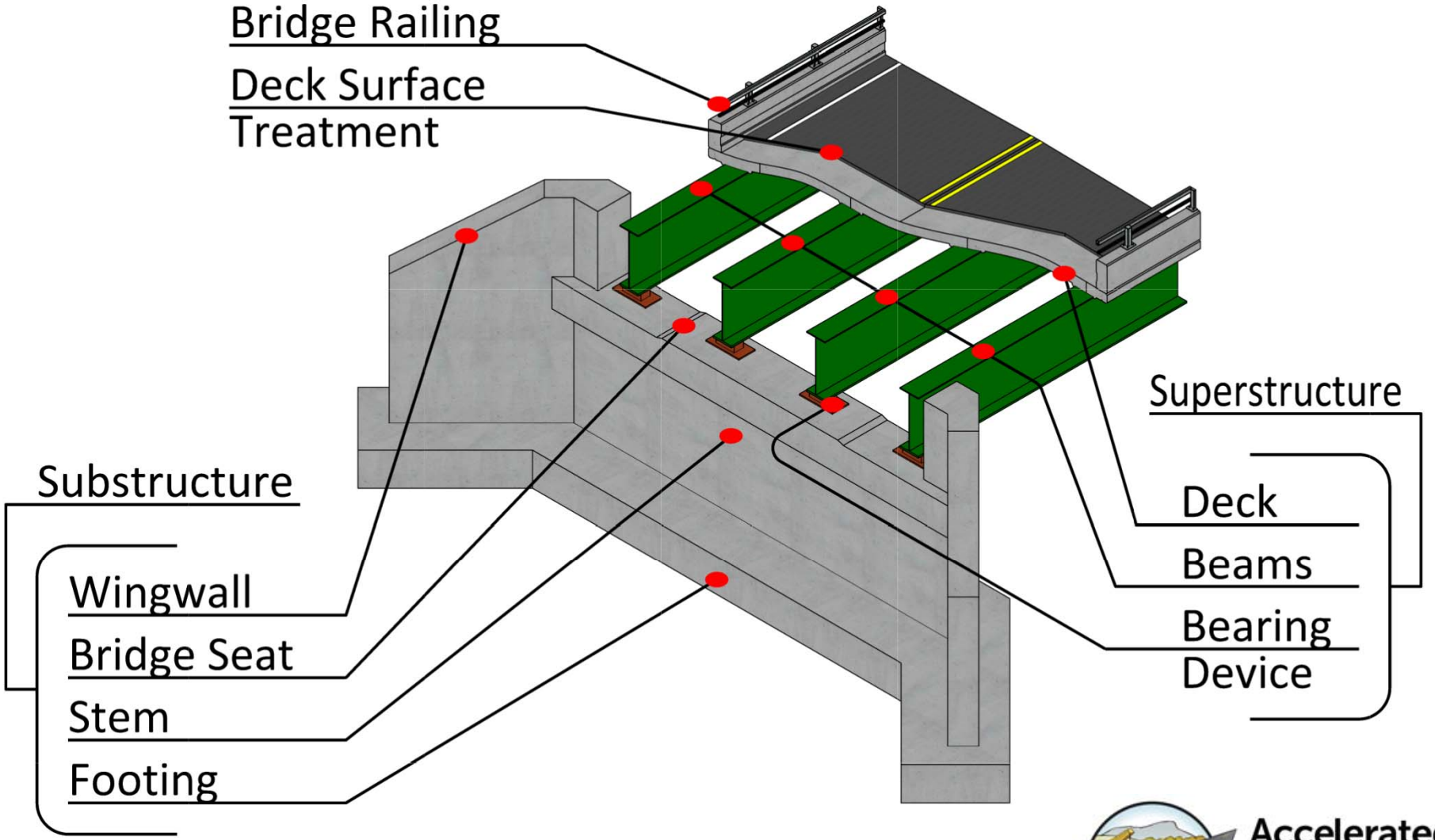
Description of Terms Used



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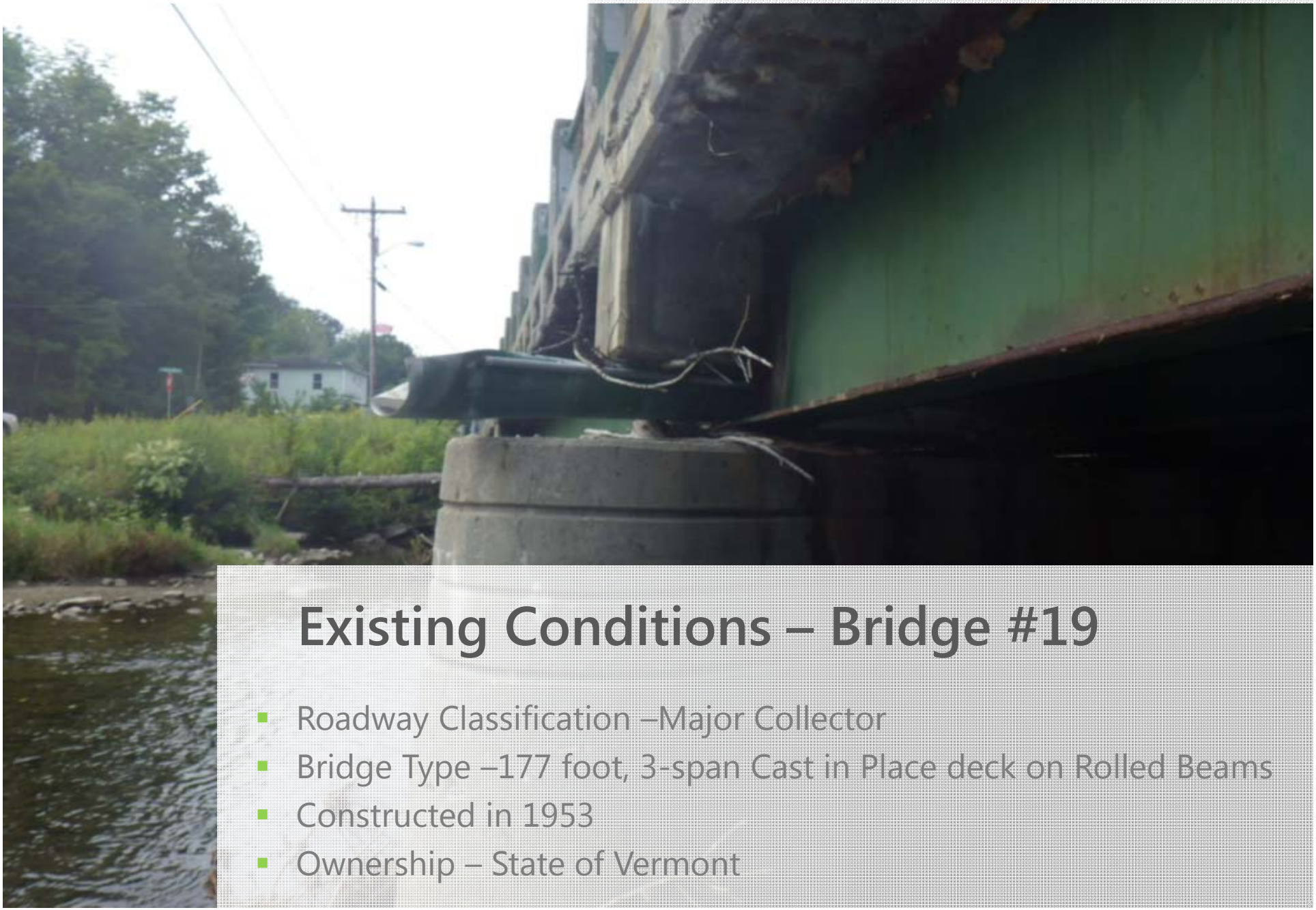
Looking Towards Berkshire and VT 105



Existing Conditions – Bridge #19

- Roadway Classification –Major Collector
- Bridge Type –177 foot, 3-span Cast in Place deck on Rolled Beams
- Constructed in 1953
- Ownership – State of Vermont

Existing Conditions - Bridge #19

- Deck Rating 4 (Fair)
- Superstructure Rating 7 (Good)
- Substructure Rating 6 (Satisfactory)

Existing Conditions – Bridge #19

- Bridge and Approach Rail is Substandard

Existing Conditions - Bridge #19

- Historic Bridge Rail– Concrete Parapet/Metal Railing

Design Criteria and Considerations

- ADT of 2,500
- DHV of 330
- % Trucks: 4.3
- Design Speed of 50 mph
- Historic Bridge Railing

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Alternatives Considered – Bridge #19

- No Action
  - Additional maintenance required within 10 years
- Deck Patching
  - Ruled out due to extent of concrete deterioration
- Deck Replacement
  - Patch bridge seats no major substructure repair
  - Maintain bridge width and improve load capacity

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Alternative 3 Layout

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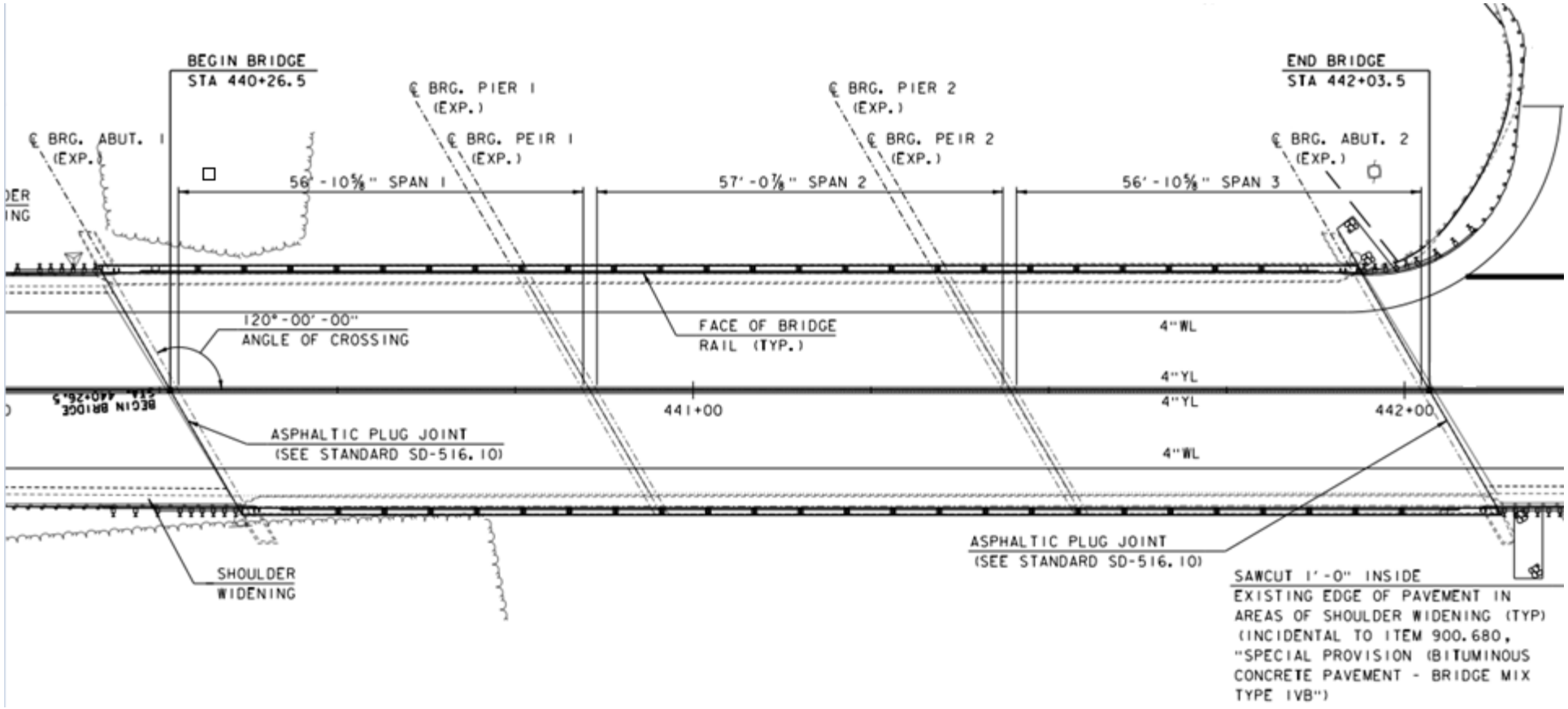

Full Deck Replacement - Bridge #19

- Maintain Bridge Width
- Improve Bridge Railing Safety

Existing Typical Section

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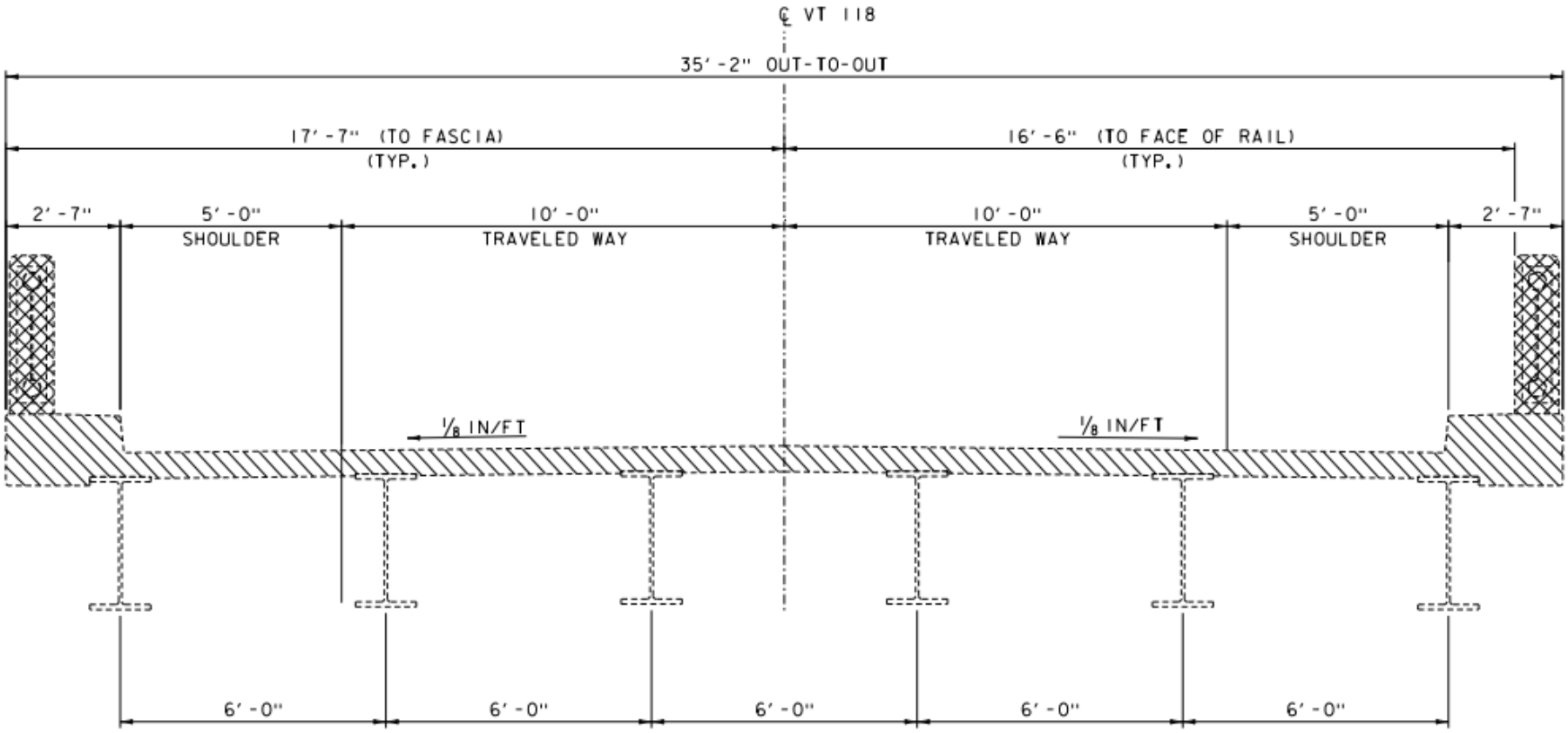

EXISTING TYPICAL BRIDGE SECTION

SCALE: ½" = 1′-0"

PARTIAL REMOVAL OF STRUCTURE

Proposed Typical Section

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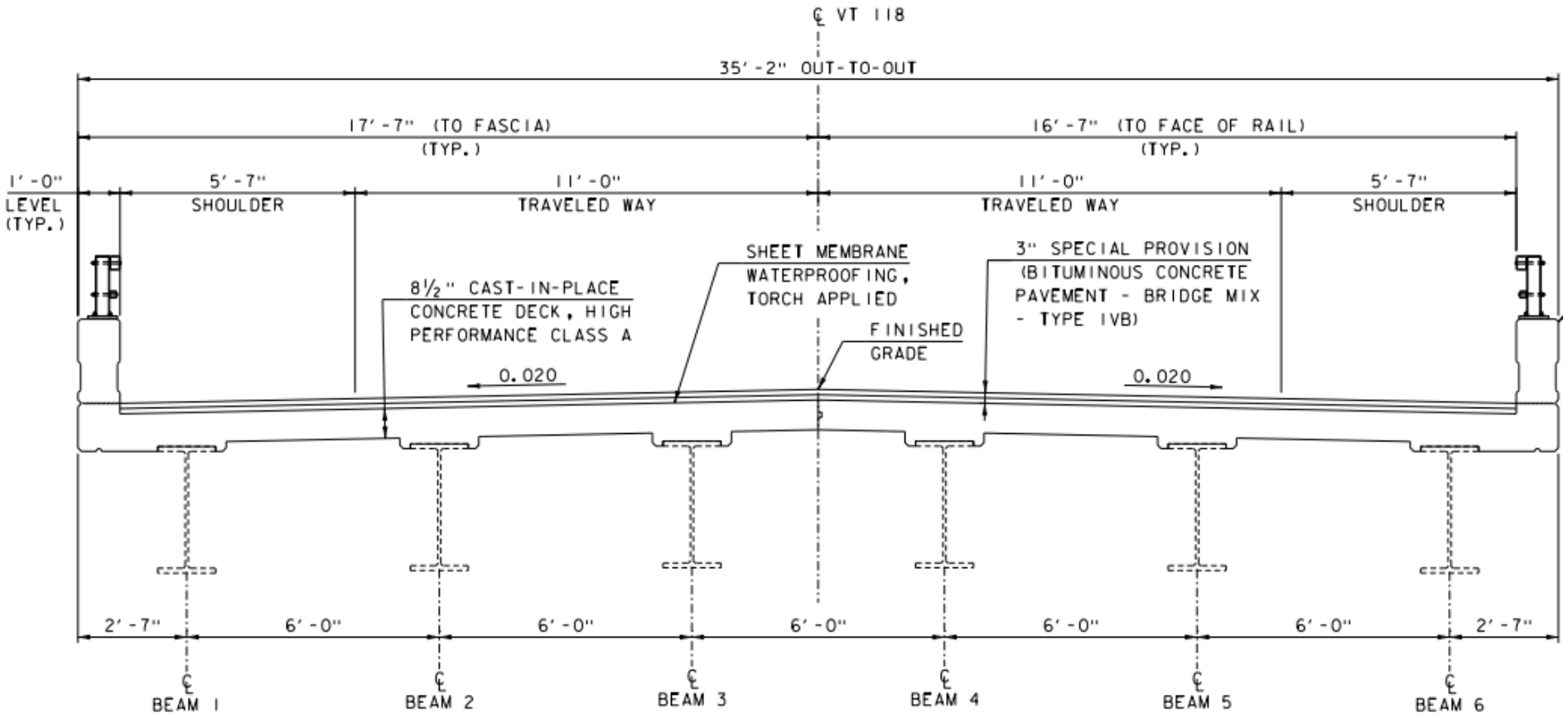

TYPICAL BRIDGE SECTION

SCALE: ½" = 1'-0"

Recommended Alternative - Bridge #19

- Deck Replacement
  - Replace the deck with a cast-in-place concrete deck
  - Maintain the existing bridge width
  - Three simple spans with continuous deck (link slab)
  - No Right-Of-Way needed

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What Will the New Bridge Rail Look Like?

Railing Example - Bridge #19

- Metal Rail/Concrete Combination

Maintenance of Traffic Options Considered

- Short Term Road Closure w/ Offsite Detour
  - Signed by State
  - Passenger car/pedestrian route: 0.60 miles end-to-end
  - Regional truck detour route: 41.8 miles end-to-end
- Phased Construction
  - Alternating 1-Way Traffic
- Temporary Bridge
  - Not considered

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ROAD
CLOSED

Local Detour Route for Cars and Pedestrians

- VT 118, to Comstock Bridge Road, back to VT 118

  Through Route: 0.20 Miles

  Detour Route: 0.30 Miles

  Added Miles: 0.10 Miles

  End-to-End: 0.60 Miles

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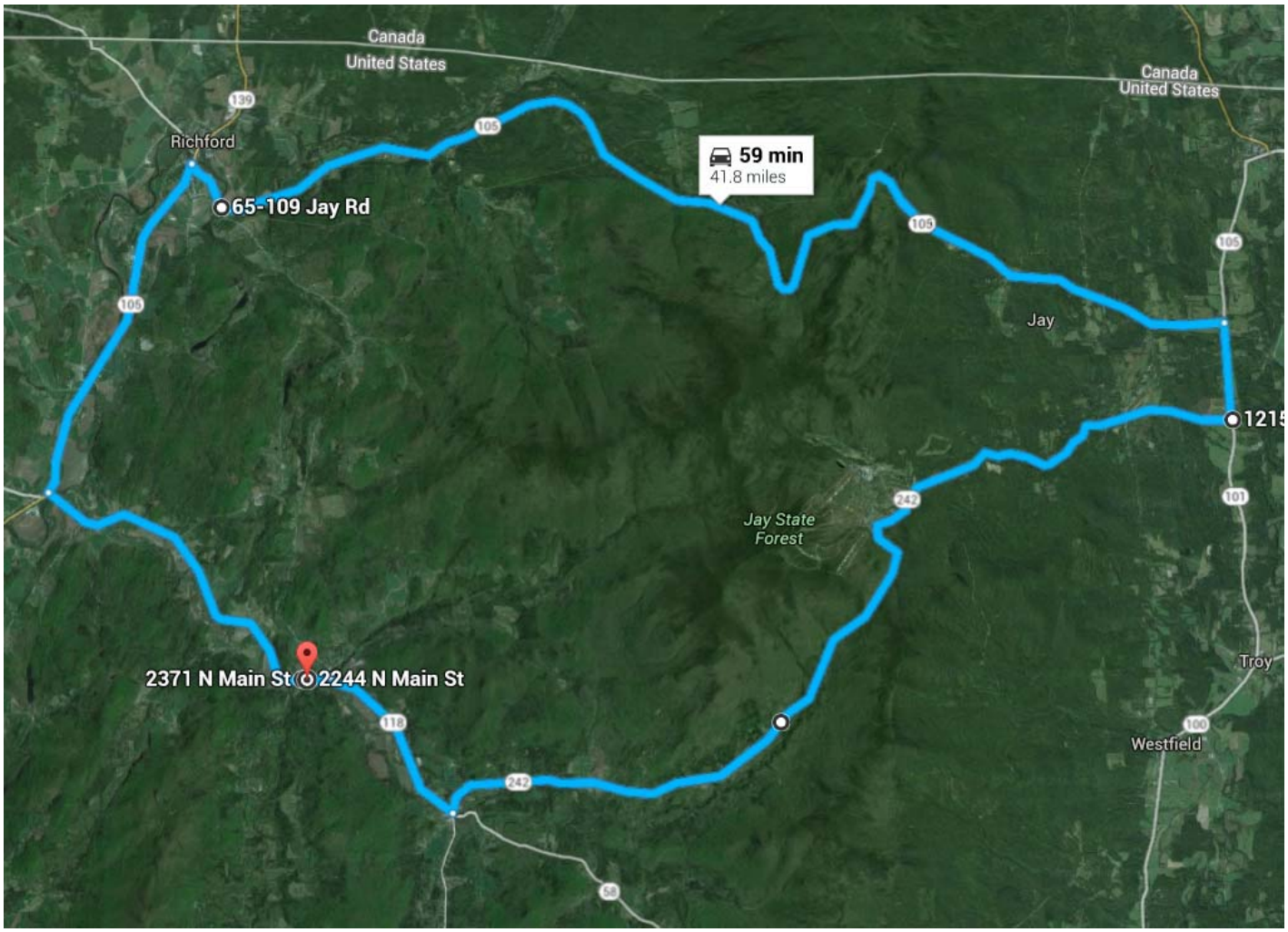
Regional Detour Route for Trucks

- VT 118 North to VT 105 East to VT 101 South to VT 242 West to VT 118 North



Through Route:
7.3 Miles
Detour Route:
34.9 Miles
Added Miles:
27.6 Miles
End-to-End:
41.8 Miles

Phased Construction

- Alternating 1-way traffic maintained
- Bridge closed to pedestrians for construction season

Project Recommendation

- Replace deck with new cast-in-place concrete deck with traffic maintained onsite using phased construction
  - Maintain Existing Bridge Width
  - Increased Load Capacity
  - New Bridge and Approach Rail
  - No Right-Of-Way Needed
  - Construction – Summer 2017

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Alternatives Matrix

Recommended

Montgomery STP DECK (40)	Alt 1	Alt 2	Alt 3
	Do Nothing	Deck Patching	Deck Replacement
	N/A	Offsite Detour	Phased Construction
Total Project Costs (Including Engineering and Contingencies)	$0	N/A	$1,257,000
Town Share	N/A	N/A	N/A
Project Development Duration	0	N/A	2 year
Construction Duration	0	N/A	6 months
Closure Duration (If Applicable)	N/A	N/A	N/A
Geometric Design Criteria	No Change	No Change	No Change
Alignment Change	No	No	No
Utilities	No Change	No Change	Temp-Relocation
ROW Acquisition	No	No	No
Design Life	Less than 10 Years	N/A	40 Years

For more information:

- https://outside.vermont.gov/agency/vtrans/external/Projects/Structures/15b107

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Questions & Comments

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March 1, 2016

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