



Orwell STP Deck (41)
Alternatives Presentation Meeting
TH 3- Bridge #4 over North Fork Creek

November 23, 2015



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Bridge
Program**
VTRANS

Introductions

Jennifer Fitch, P.E.

VTrans Scoping Project Manager

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VTrans Scoping Engineer

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VTrans Historic Preservation Officer

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Vtrans Historic Preservation Officer

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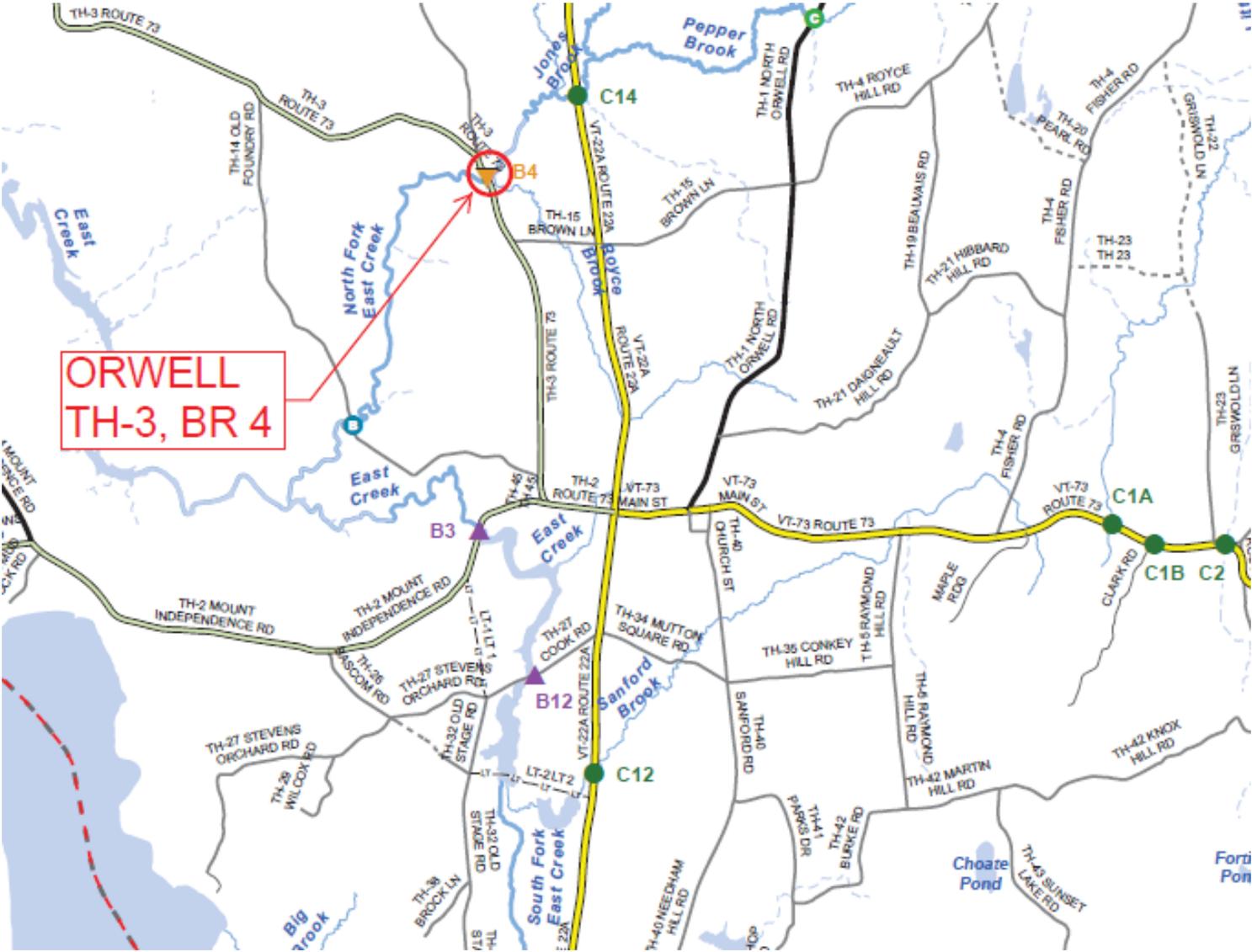
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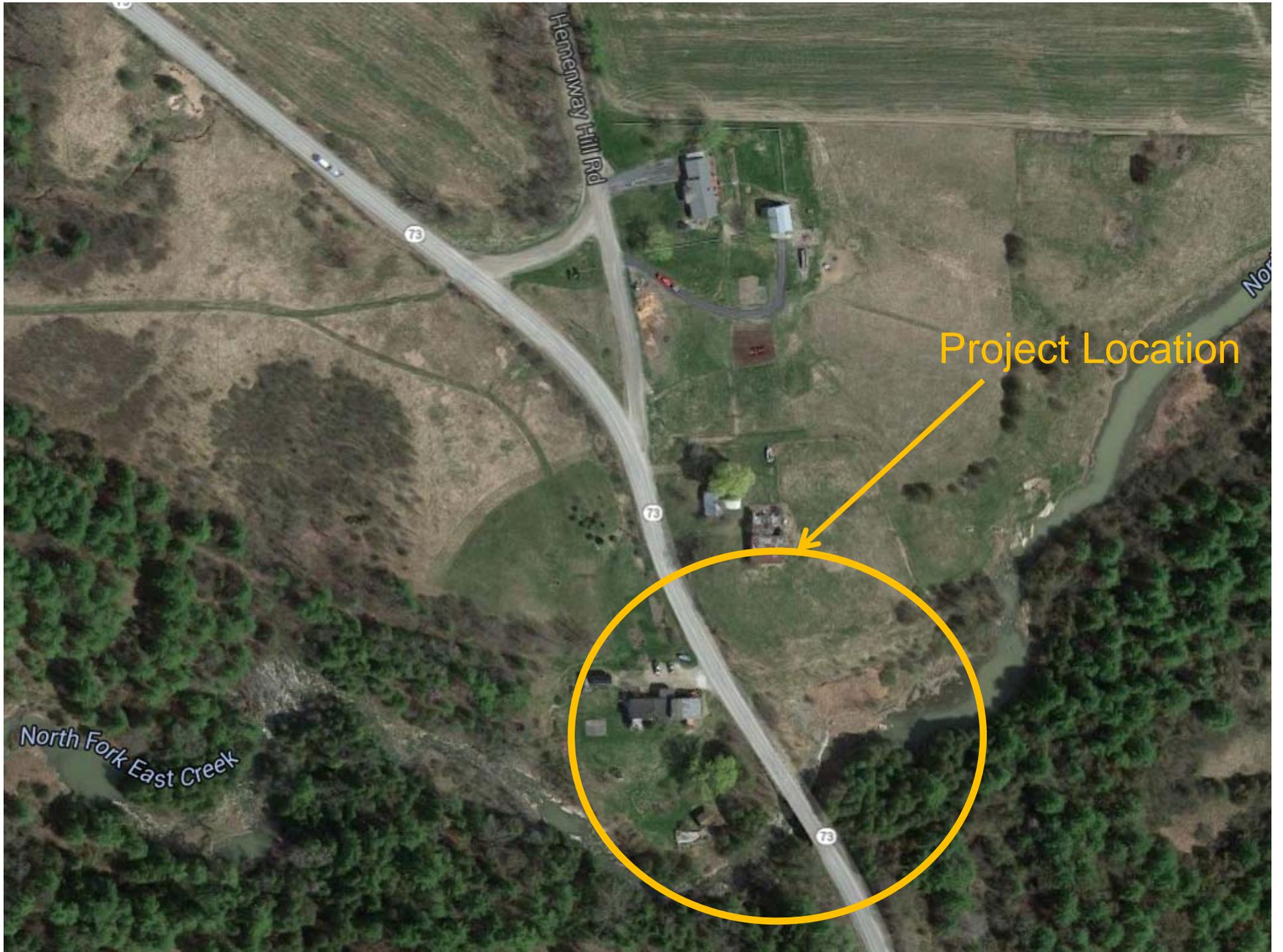
Purpose of Meeting

- 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



Location Map





Hemmerway Hill Rd

78

78

78

Project Location

North Fork East Creek

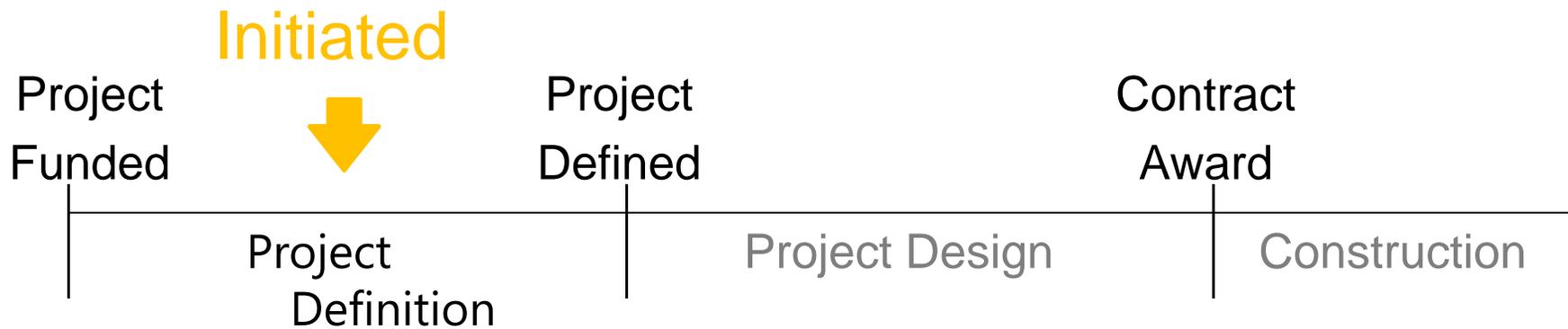
North

Meeting Overview

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



VTrans Project Development Process



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

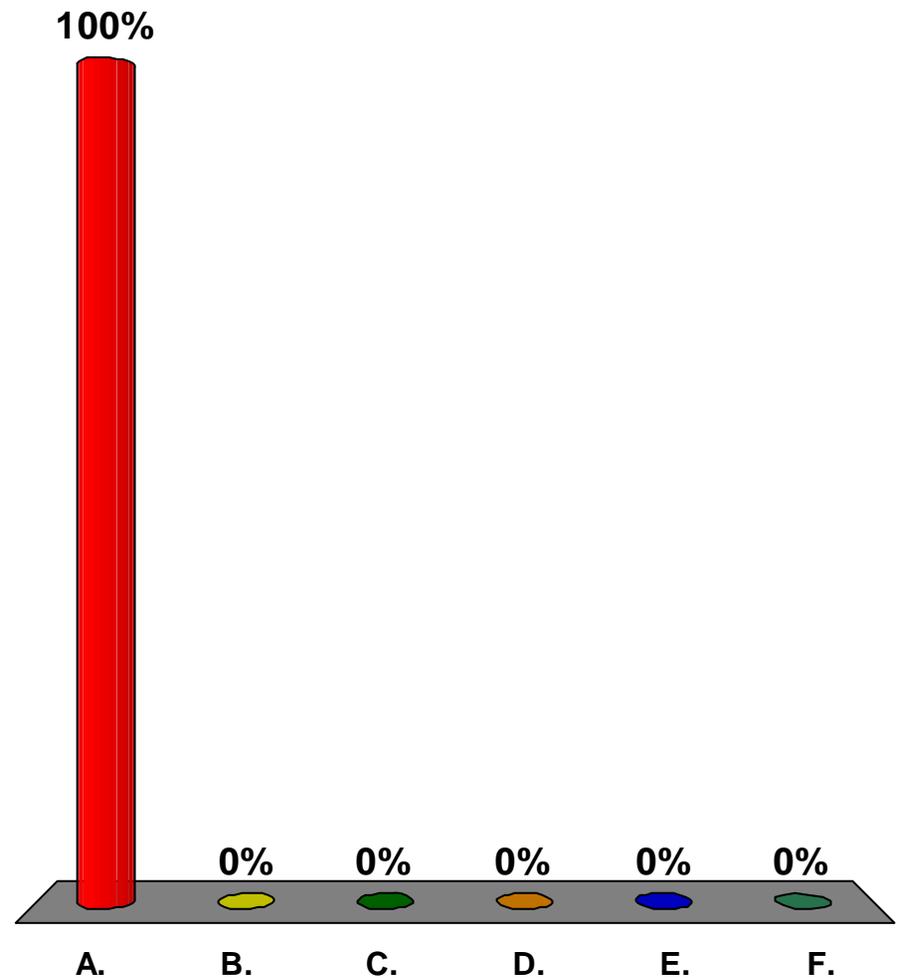
- Quantify areas of impact
- Environmental permits
- Develop plans, estimate and specifications
- Right-of-Way process if necessary



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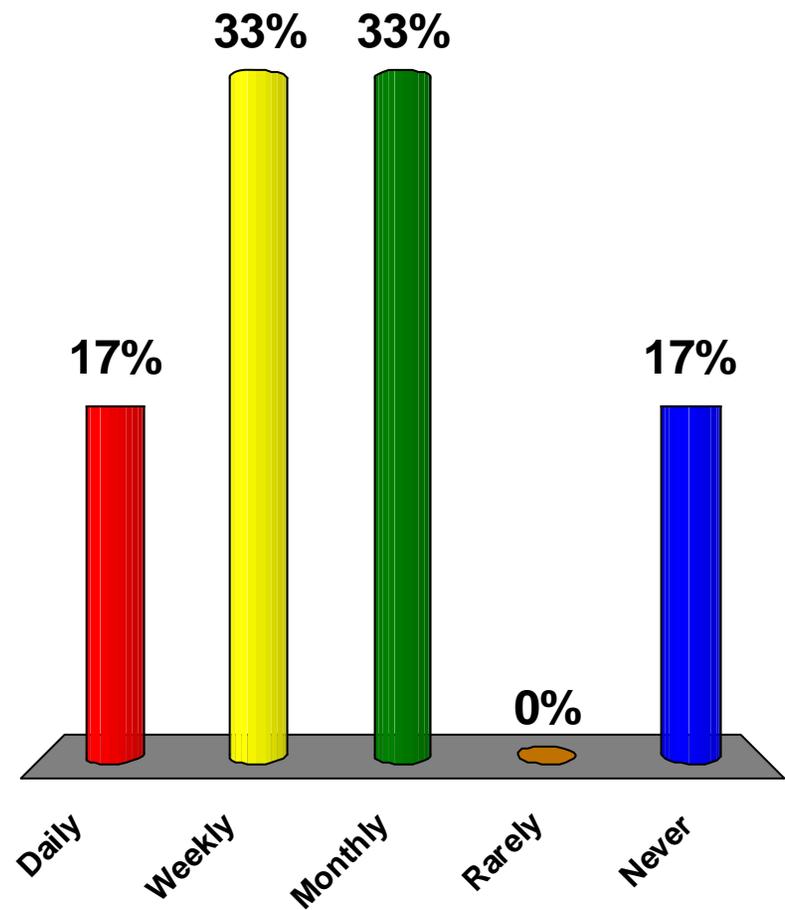
Who are you representing?

- A. Municipal Official
- B. Resident
- C. Local Business
- D. Independent Organization
- E. Emergency Services
- F. Other



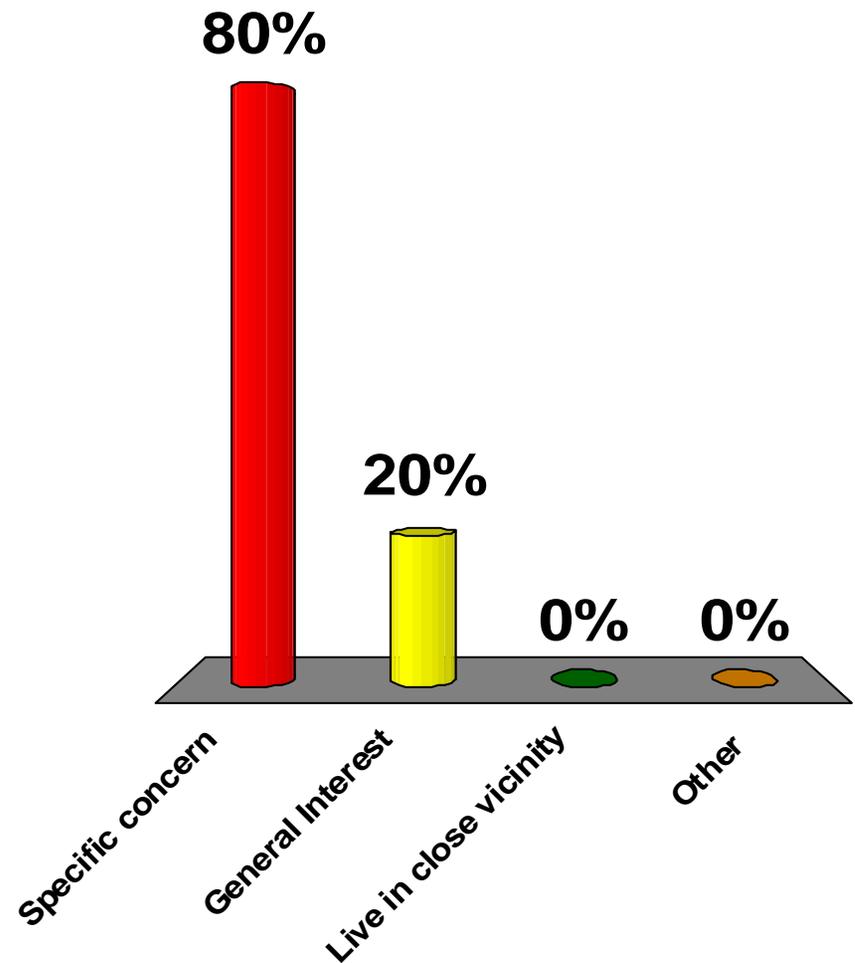
How often do you use this segment of Route 73?

- A. Daily
- B. Weekly
- C. Monthly
- D. Rarely
- E. Never



What is your reason for attending this meeting?

- A. Specific concern
- B. General Interest
- C. Live in close vicinity
- D. Other

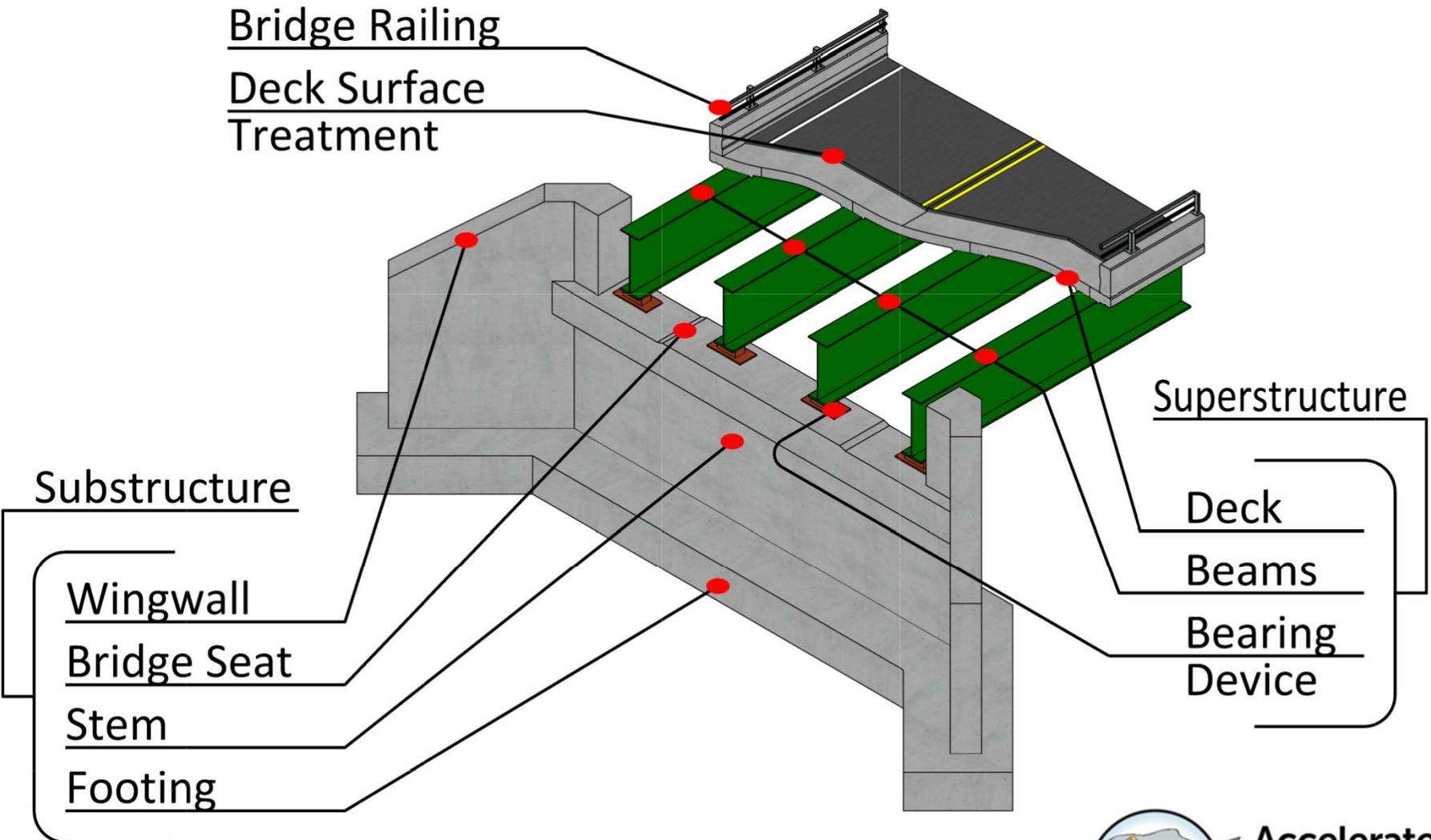


Project Overview

- Existing Conditions
- Alternatives Considered
- Recommended Alternative



Description of Terms Used



Looking North West over Bridge



Existing Conditions – Bridge #4

- Roadway Classification –Major Collector
- Bridge Type –72' Cast in Place deck on Rolled Beams
- Constructed in 1946
- Ownership – Town of Orwell

Existing Conditions – Bridge #4

- Concrete deck has saturation and a temporary patch over exposed reinforcing steel
- Bridge is narrow
- Bridge Railing is substandard



Cracks and Saturation of Deck



Existing Conditions - Bridge #4

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

Looking West



Existing Conditions – Bridge #4

- Bridge and approach Rail are Substandard
- Travel Lane is narrow

Resource Constraints



Existing Conditions - Bridge #4

- Historic Bridge Rail– ornamental concrete posts

Design Criteria and Considerations

- ADT of 340
- DHV of 50
- % Trucks: 10.4
- Design Speed of 40 mph
- Historic bridge Railing
- Underground utility location and possible relocation

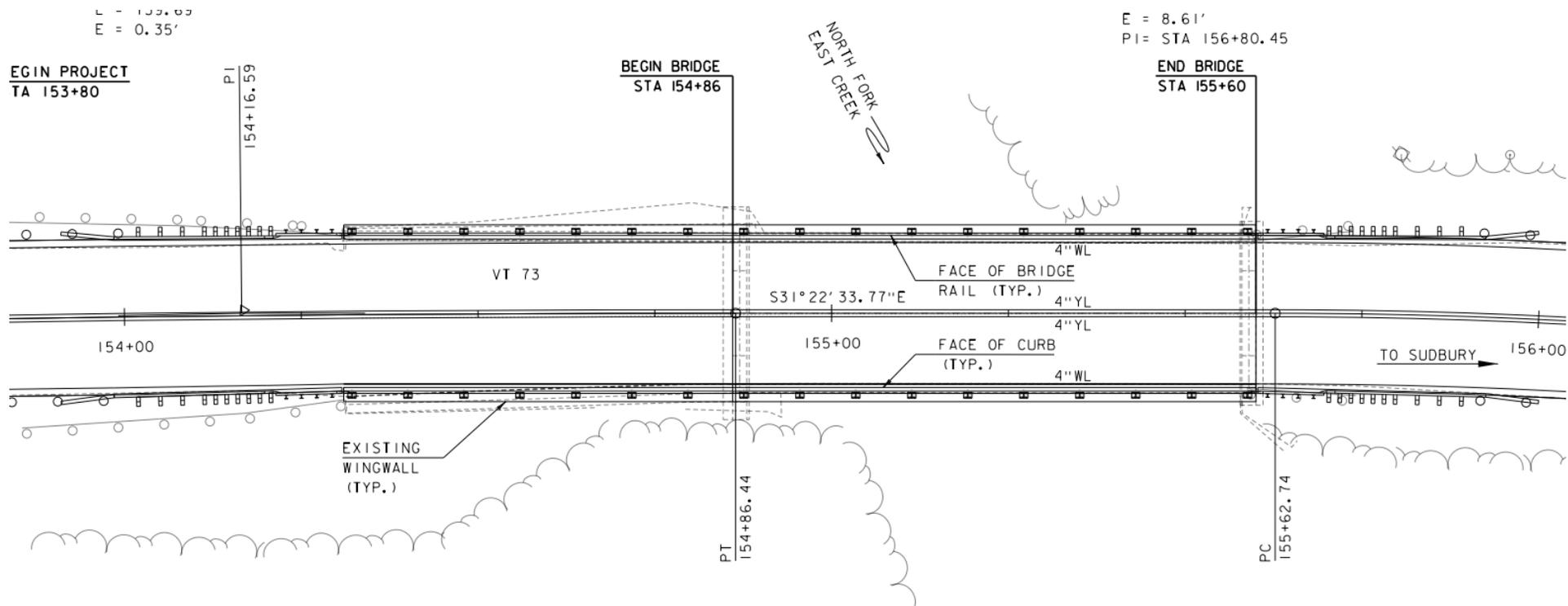


Alternatives Considered – Bridge #4

- No Action
 - Additional maintenance required within 10 years
- Deck Patching
 - Ruled out due to extent of patching required
- Deck Replacement
 - No substructure repair required
 - Improves Bridge width and Load capacity



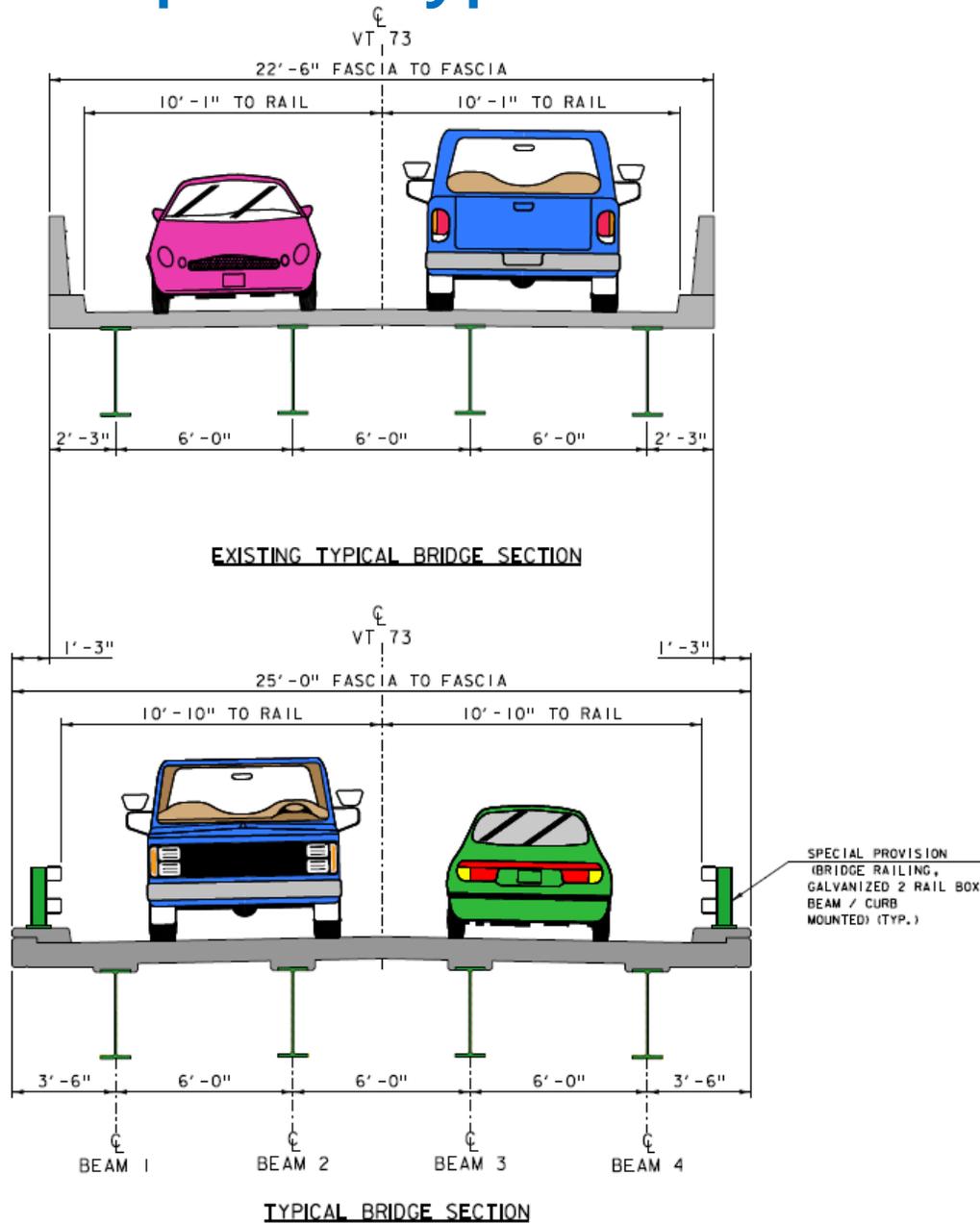
Alternative 3 Layout



Full Deck Replacement - Bridge #4

- Slightly improves bridge width

Proposed Typical Section



Recommended Alternative - Bridge #4

- Deck Replacement
 - Replace the Deck with a cast-in-place concrete deck
 - Improve the existing bridge width as much as possible
 - 72' single span
 - Underground utility location and possible relocation as needed
 - No ROW needed



What Will the New Bridge Rail Look Like?



Railing Example - Bridge #4

- Curb Mounted 2 Rail box beam

Maintenance of Traffic Options Considered

- Short Term Road Closure w/ Offsite Detour
 - Signed by town
 - By closing the bridge to traffic during construction, the local share is reduced by 50%
- Phased Construction
 - N/A Bridge is too narrow to phase
- Temporary Bridge
 - Not considered for maintenance projects due to cost and need to expedite project delivery





Road Closure

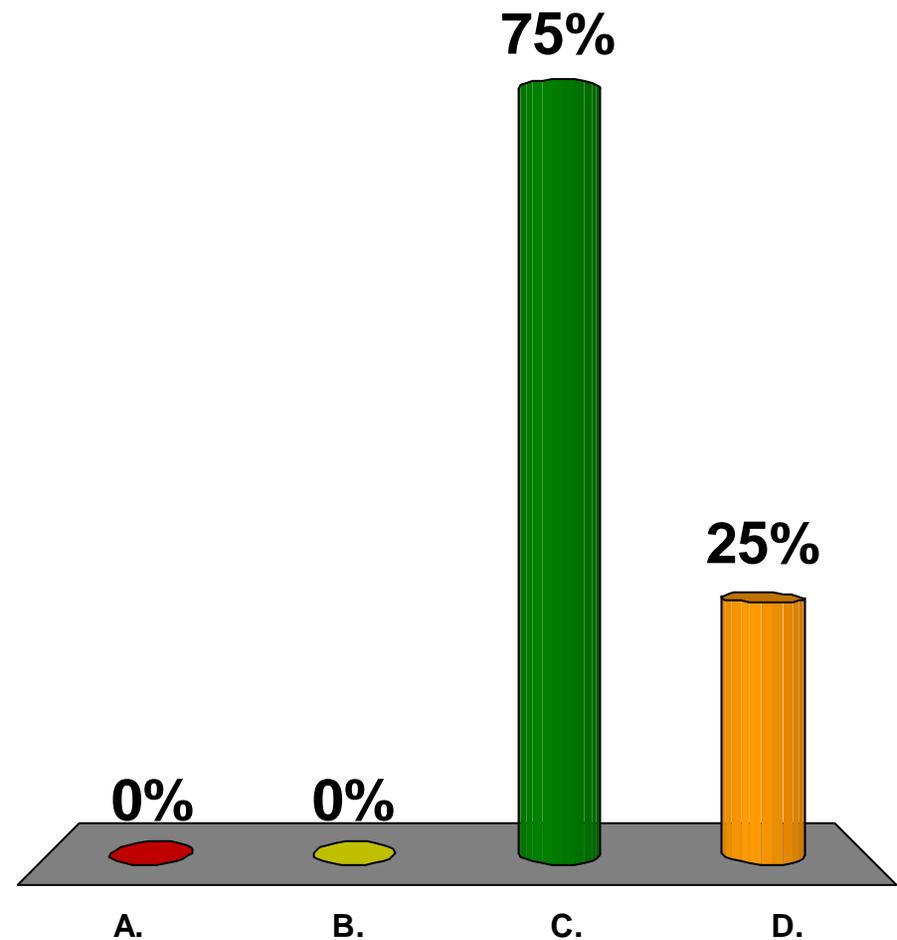
- Approx 8 week bridge closure
- Detour route signed by Town of Orwell

Possible Detour



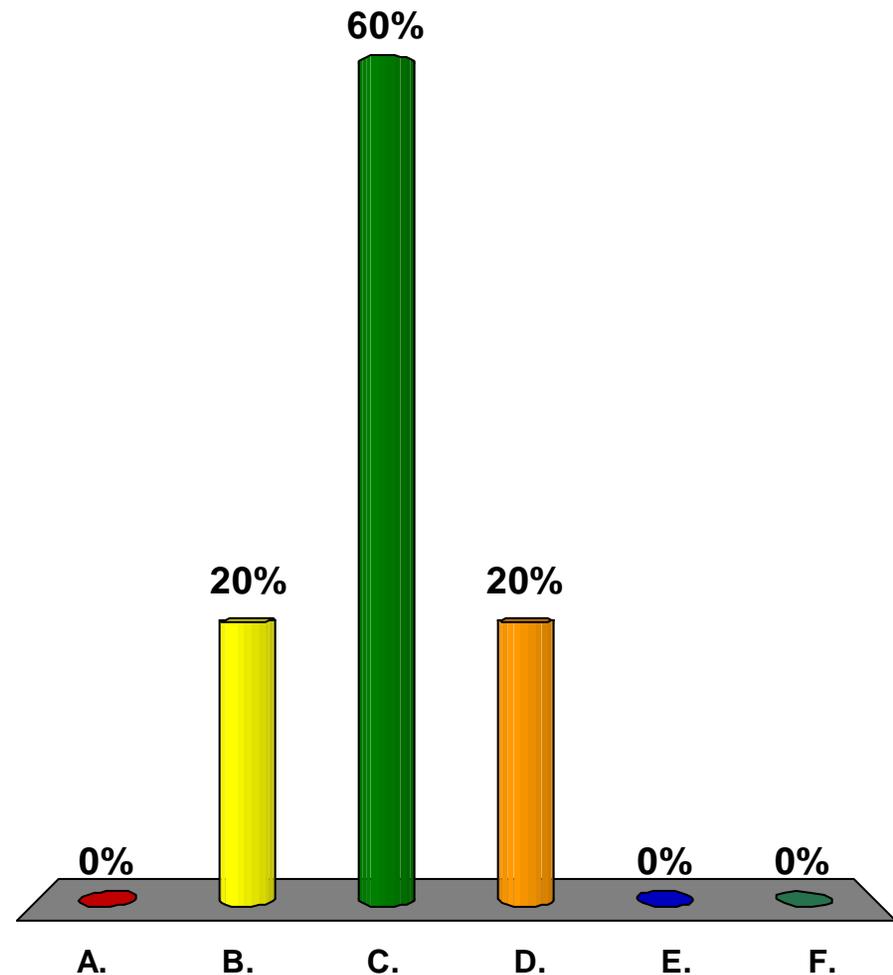
What would be the maximum acceptable length of closure for Bridge #4?

- A. 4 weeks
- B. 6 weeks
- C. 8 weeks
- D. 10 weeks



Which time of year would be most acceptable for Bridge #4 to be closed?

- A. May
- B. June
- C. July
- D. August
- E. September
- F. Other



Recommended Scope

- Replace deck with new cast-in-place concrete deck with traffic maintained on offsite detour
 - 8 week proposed closure, detour signed by Town
 - Improve width (increased 2'-6")
 - New Bridge and Approach Rail
 - Determine if utility relocation is needed
 - No ROW needed
 - Construction – Summer 2017 (possibly 2016)



Alternatives Matrix

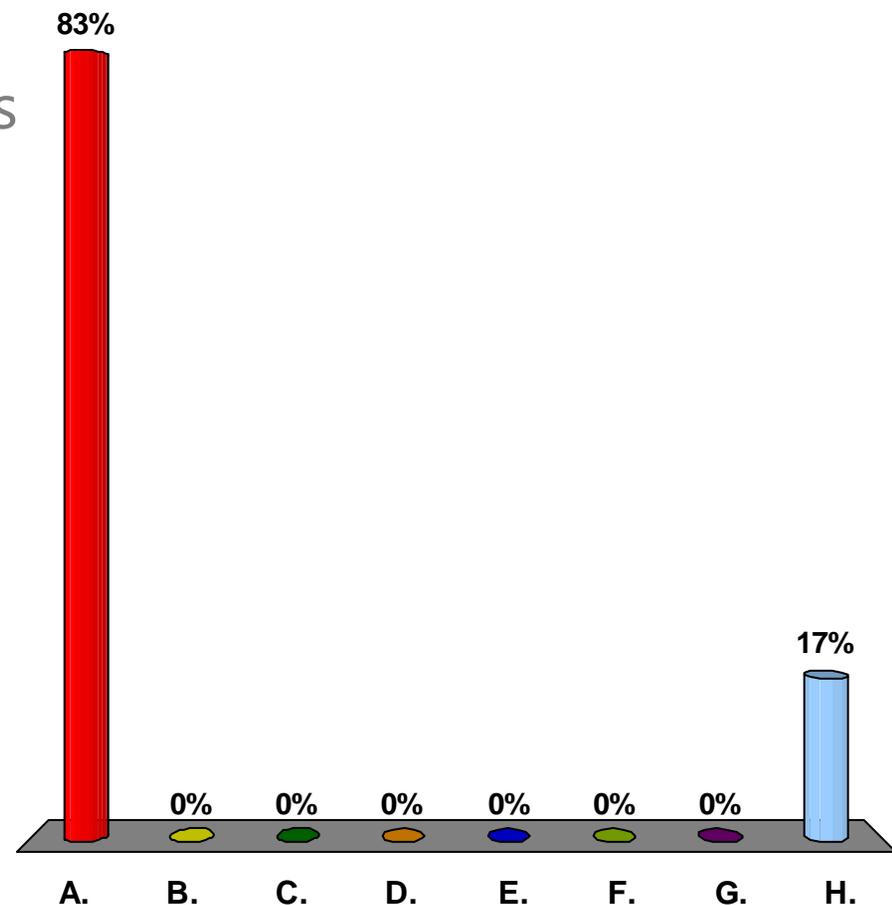
Recommended



	Alt 1	Alt 2	Alt 3
ORWELL STP DECK (41)	Do Nothing	Deck Patching	Deck Replacement
	N/A	Offsite Detour	Offsite Detour
Total Project Costs (Including Engineering and Contingencies)	\$0	N/A	\$623,500.00
Town Share	\$0	N/A	\$15,587.50 (2.5%)
Project Development Duration	0	N/A	1 year
Construction Duration	0	N/A	4 months
Closure Duration (If Applicable)	N/A	N/A	8 weeks
Geometric Design Criteria	Substandard width	Substandard width	Substandard width
Alignment Change	No	No	No
Utilities	No Change	No Change	Possible Relocation
ROW Acquisition	No	No	No
Design Life	Less than 10 Years	N/A	40 Years

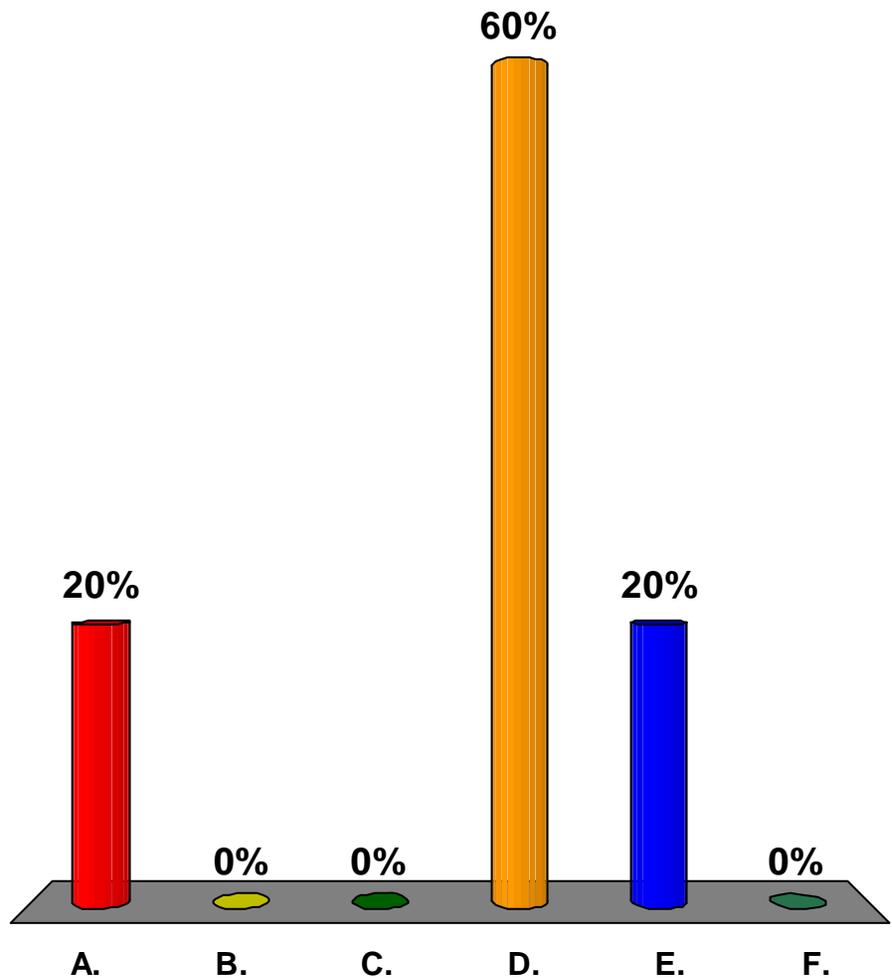
Which would you be most concerned about?

- A. Closure Duration
- B. Bridge Aesthetics
- C. Environmental Impacts
- D. Recreational Impacts
- E. Emergency Services
- F. Business Impacts
- G. Other
- H. Not really concerned



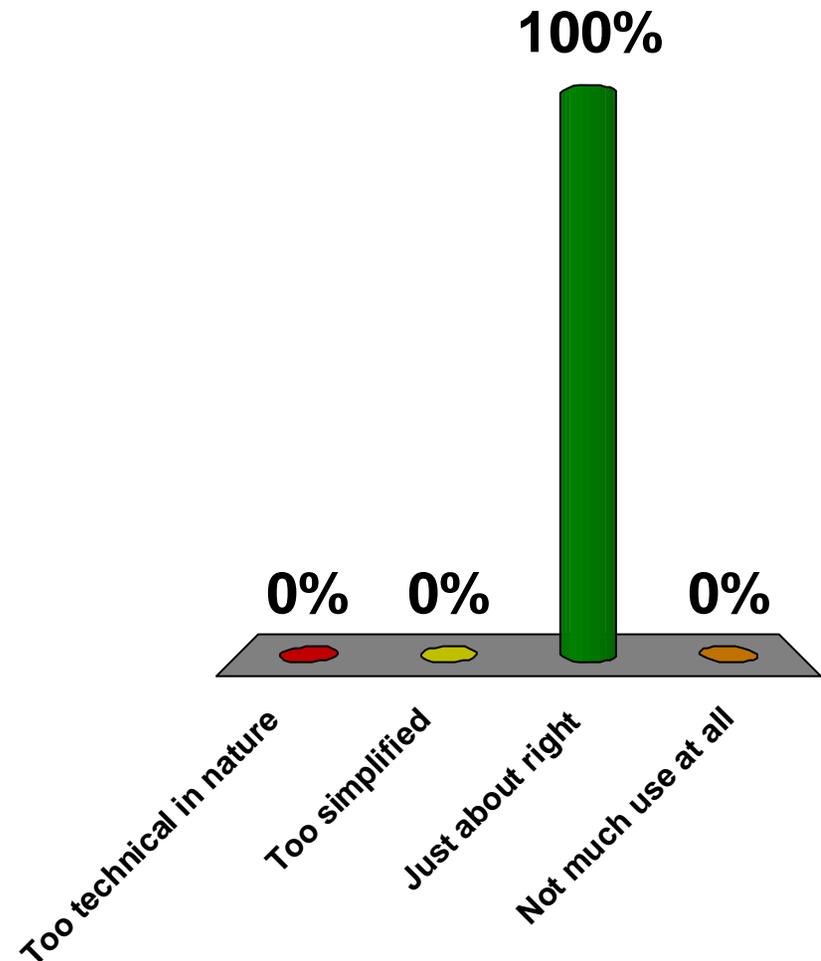
Which design aspect is the most important to you?

- A. Bridge Width
- B. Aesthetics - Bridge Railing
- C. Construction year
- D. Construction Duration
- E. Cost
- F. Other



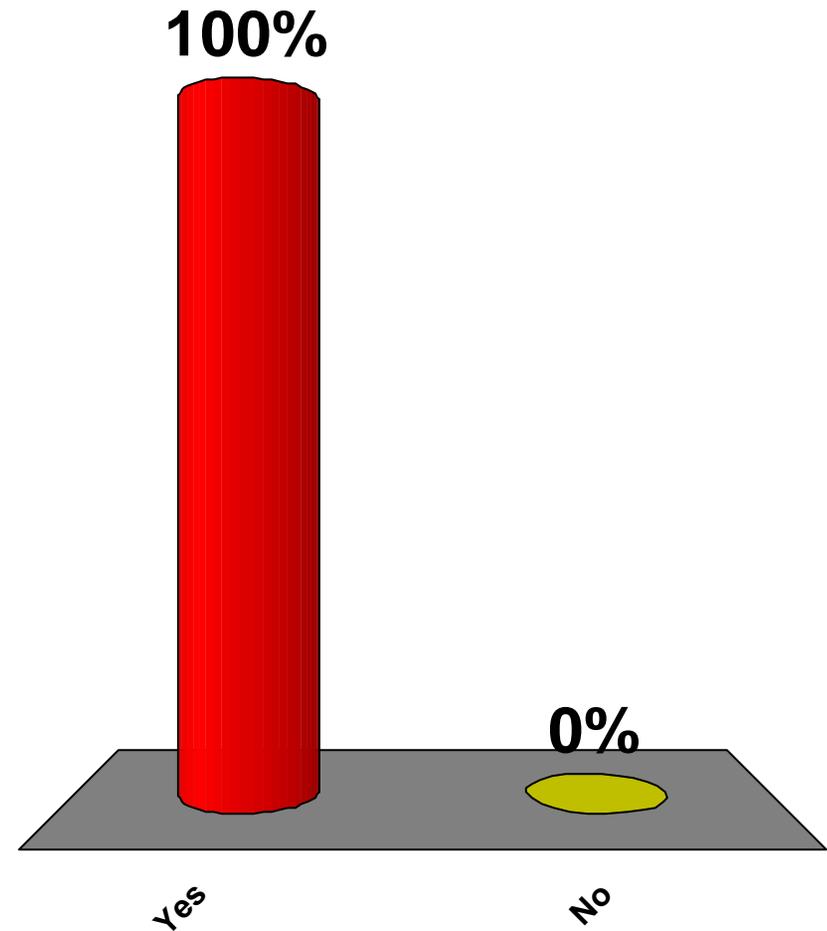
Did you find this presentation to be?

- A. Too technical in nature
- B. Too simplified
- C. Just about right
- D. Not much use at all



Do you find the recommended scope of work satisfactory?

- A. Yes
- B. No



Next Steps – Bridge #4

This is a list of a few important activities expected in the near future and is not a complete list of activities.

- ➔ Wait for Town response to recommendation on proposed project
 - Distribute Conceptual plan for comment
 - Process local agreements – ROW F&A Agreement



For more information:

- <https://outside.vermont.gov/agency/vtrans/external/Projects/Structures/15J108>



Orwell STP Deck (41) Questions & Comments

Route 73 – Bridge #4 over North Fork Creek

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Additional Considerations

- Are there any other considerations we should be made aware of?