



Woodford BF 010-1(52) Regional Concerns Meeting

Vermont Route 9 – Culvert #18 over Unnamed Brook
April 20, 2016



**Accelerated
Bridge
Program**
VTRANS

Introductions

Nick Wark, P.E.

Design Project Manager

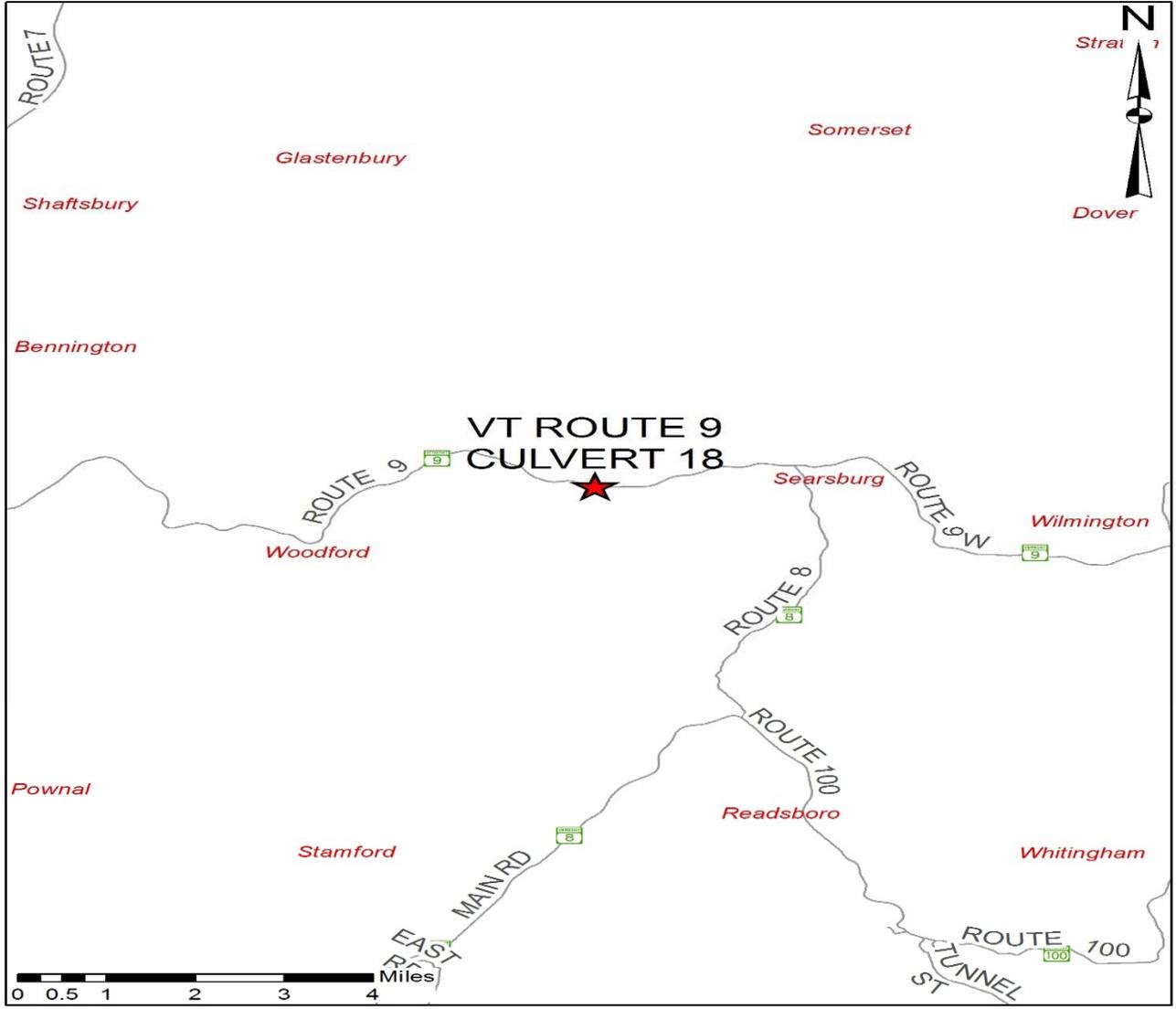
Gary Sweeny, P.E.

Scoping Engineer

Tom Levins, P.E.

GM2 Consulting Engineers





Location Map



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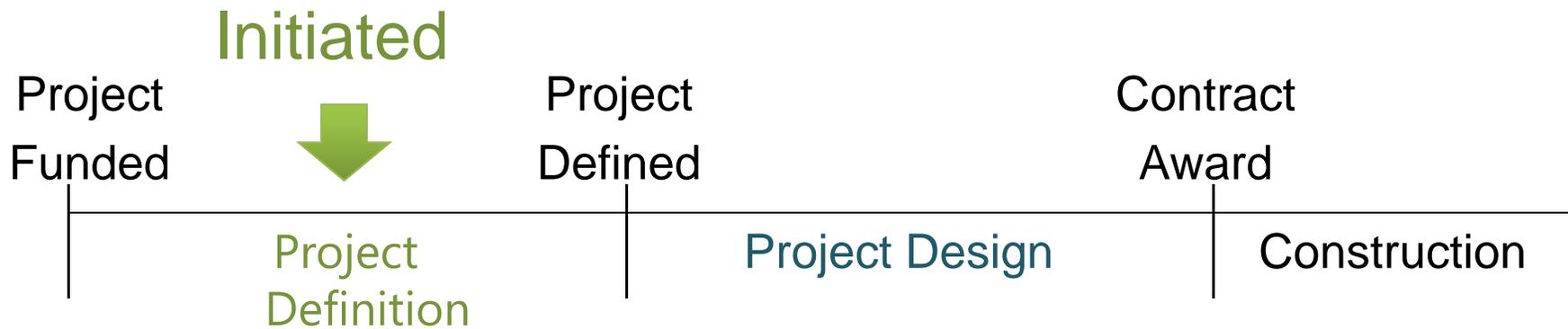


Meeting Overview

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



VTrans Project Development Process



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

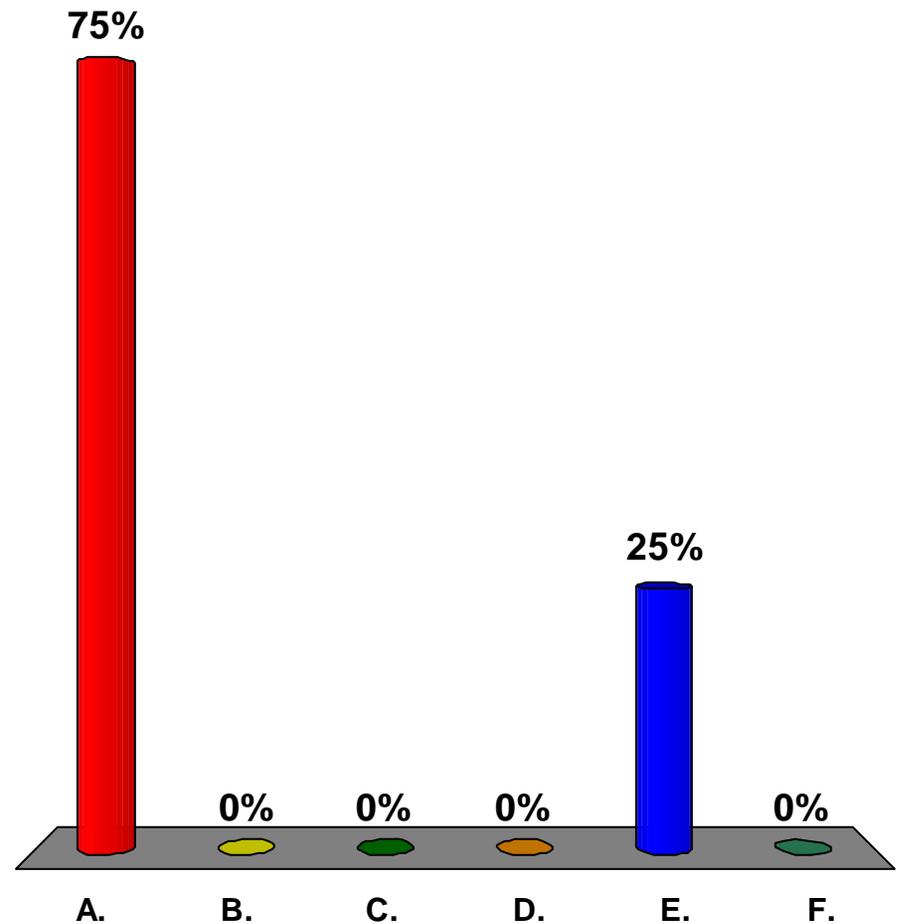
- Quantify areas of impact
- Environmental permits
- Develop plans, estimate and specifications
- Acquire Right-of-Way if necessary



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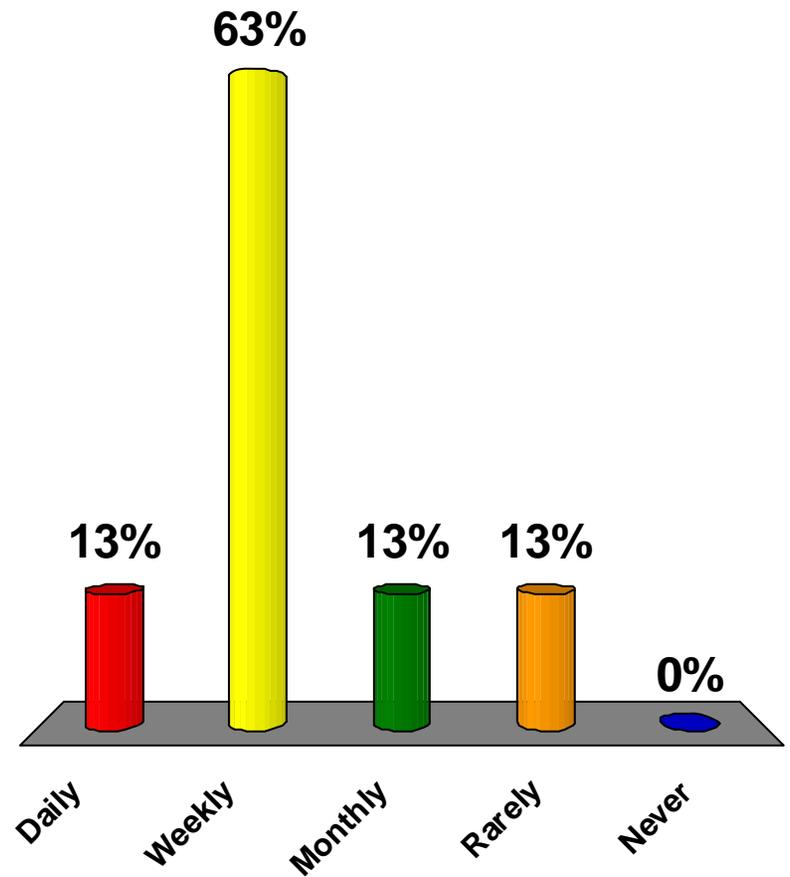
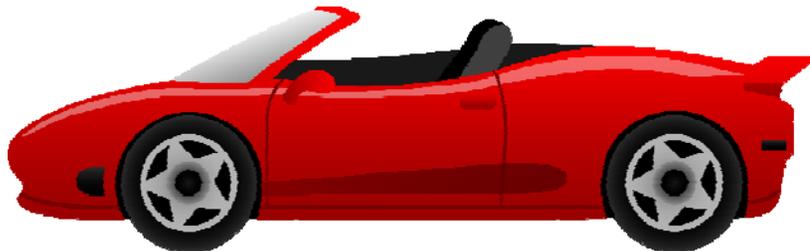
Who are you representing?

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



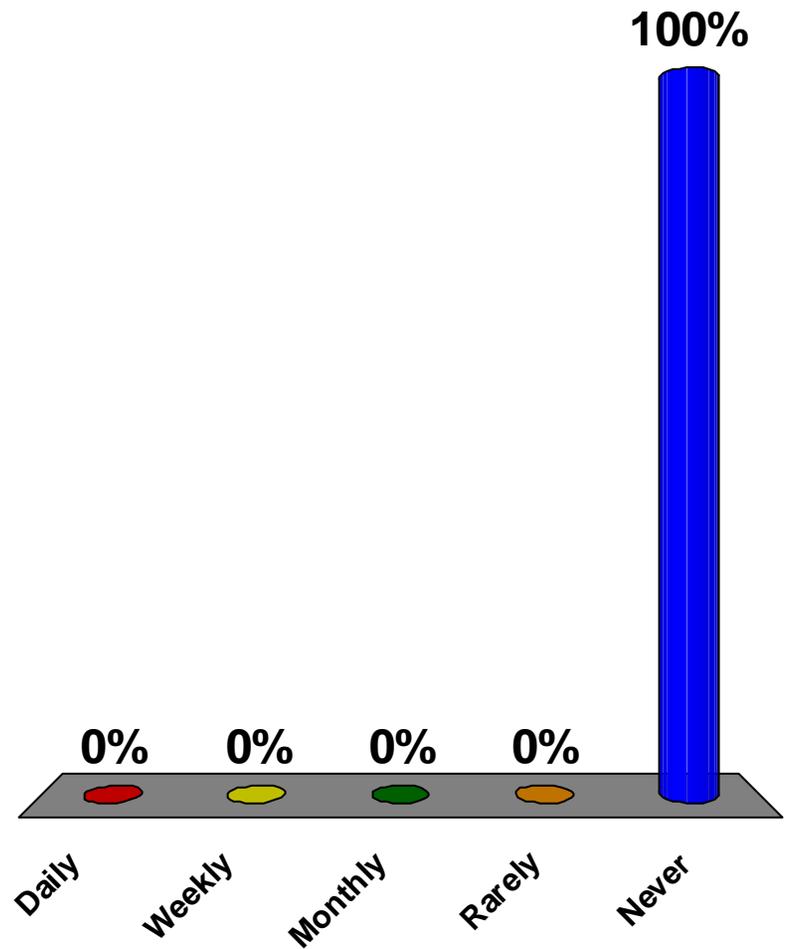
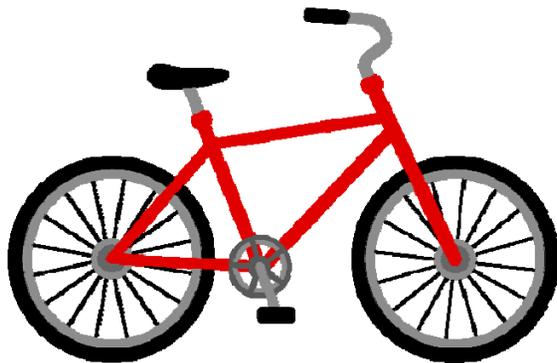
How often do you drive this segment of VT Route 9?

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



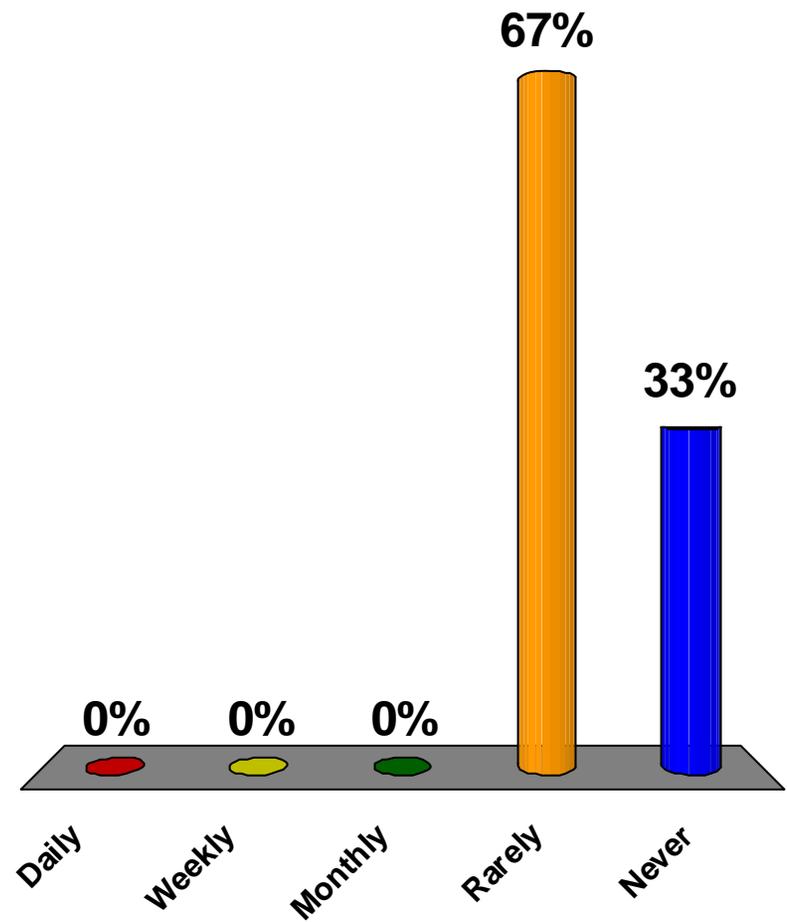
How often do you bike over this segment of VT Route 9?

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



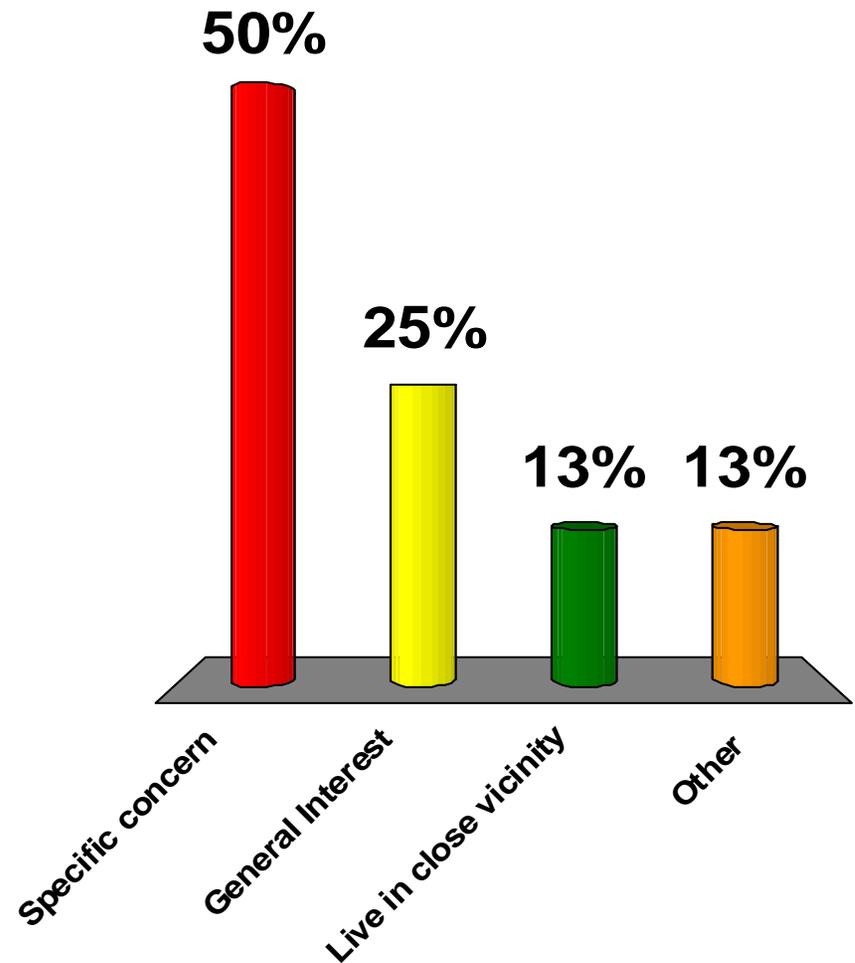
How often do you walk over this segment of VT Route 9?

- 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





Existing Conditions – Culvert #18

- Roadway Classification – Rural Principal Arterial
- Corrugated Galvanized Metal Plate Pipe (CGMPP)
- Culvert: Span - 7 feet, Length – 92 feet
- Approx. 6 feet of fill over top of the pipe
- Constructed in 1919, Reconstructed 1965, Owned by the State of Vermont

10/18/2012

Existing Conditions – Culvert #18

- The culvert has a rating of 3 “Serious”.
- Corrosion is ongoing and has caused holes to develop in the pipe.
- Aquatic Organism Passage is considered adequate for this culvert.
- Culvert is hydraulically adequate, although Bank Full Width has not been identified for this culvert.
- Roadway is slightly substandard for banking and width.

Existing Conditions - Culvert #18



Interior of culvert

Existing Conditions - Culvert #18



Design Criteria and Considerations

- AADT of 3,400 vpd
- DHV of 520 vph
- % Trucks: 19.9
- Design Speed of 50 mph
- Principal Arterial

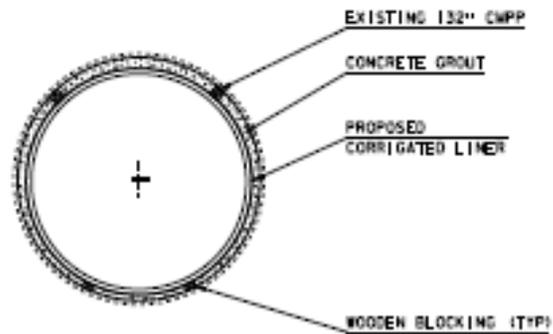
Alternatives Considered – Culvert #18

- No Action
 - Additional maintenance required within 10 years
 - Culvert Rating of 3
- Rehabilitation
 - Competitive up-front cost
 - Additional 30-40 years of service life
 - No improvements to roadway proposed
- Culvert Replacement with Trenchless Methods
 - New 60 year service life expectancy
 - No improvements to roadway proposed
- Culvert Replacement with Open Cut
 - Longest service life – 80 years
 - More favorable conditions for aquatic and wildlife
 - Most expensive
 - Roadway improvements possible

Recommended Alternative - Culvert #18

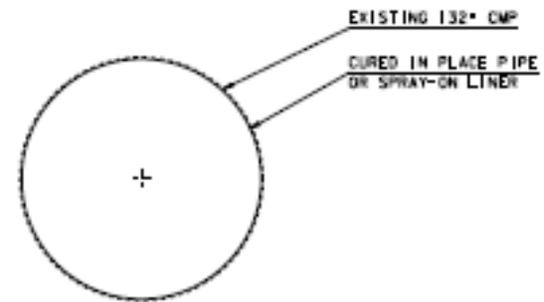
- Culvert Rehabilitation
 - Line culvert with new slip liner or spray-on liner
 - Road improvements not proposed

Proposed Bridge Typical Schematic



ALTERNATIVE IA TYPICAL SECTION

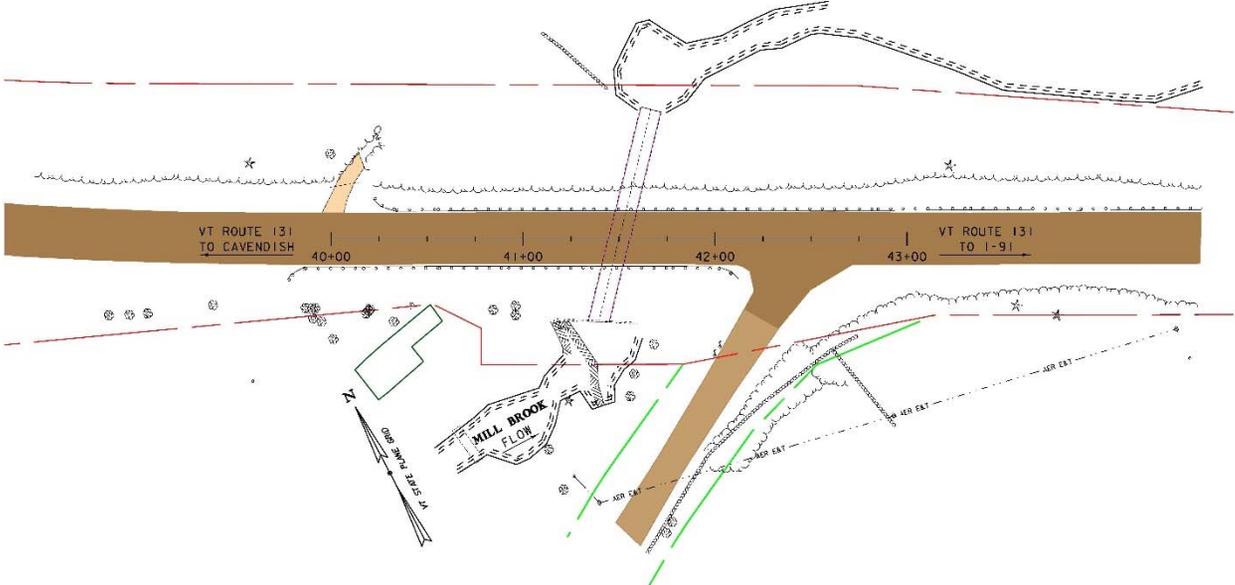
N. T. S.



ALTERNATIVE IB TYPICAL SECTION

N. T. S.

Proposed Culvert Replacement Layout



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Maintenance of Traffic Options Considered

- Road Closure with Offsite Detour
- Phased Construction
 - One lane, alternating, with traffic signals
- Temporary Bridge
 - One lane Temporary Bridge, either side
 - Expensive
 - ROW needed if north side used
 - Overhead utility relocation needed if south side used
 - Wetland impacts

Recommended Maintenance of Traffic

- Maintain traffic through the work zone with periodic short term lane closures. No detours and no road closures.

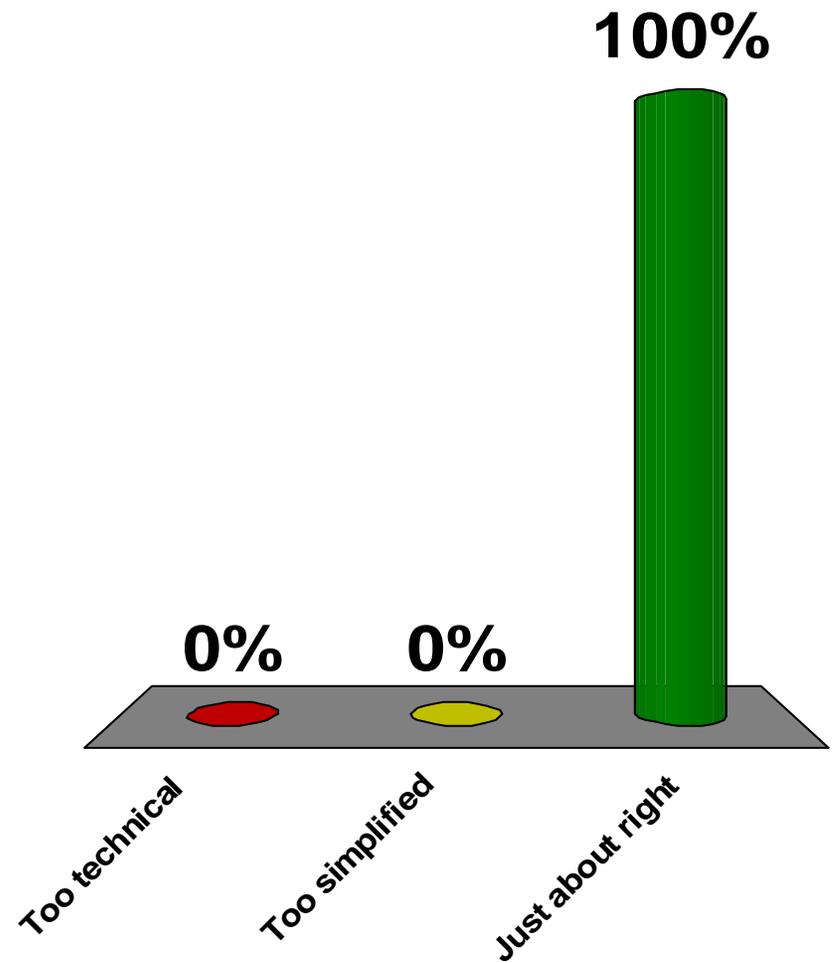


Alternatives and Cost Matrix

Woodford BF 010-1(52)	Alt 1	Alt 3a	Alt 3b
	Culvert Rehabilitation Trenchless Technology	Replacement Using Open Cut	Replacement Using Open Cut
	Minor Traffic Impact	Offsite Detour	Temporary Bridge
Total Project Cost (Including Engineering and Contingencies)	\$474,000	\$773,000	\$992,000
Project Development Duration	2 Years	2 Years	2 Years
Construction Duration	2 Months	3 Months	5 Months
Closure Duration (If applicable)	N/A	5 Days	N/A
Geometric Design Criteria	No Change	No Change	No Change
Alignment Change	No	No	No
Utilities	No Change	No Change	No Change
ROW	Yes	Yes	Yes
Design Life	40 Years	80 Years	80 Years

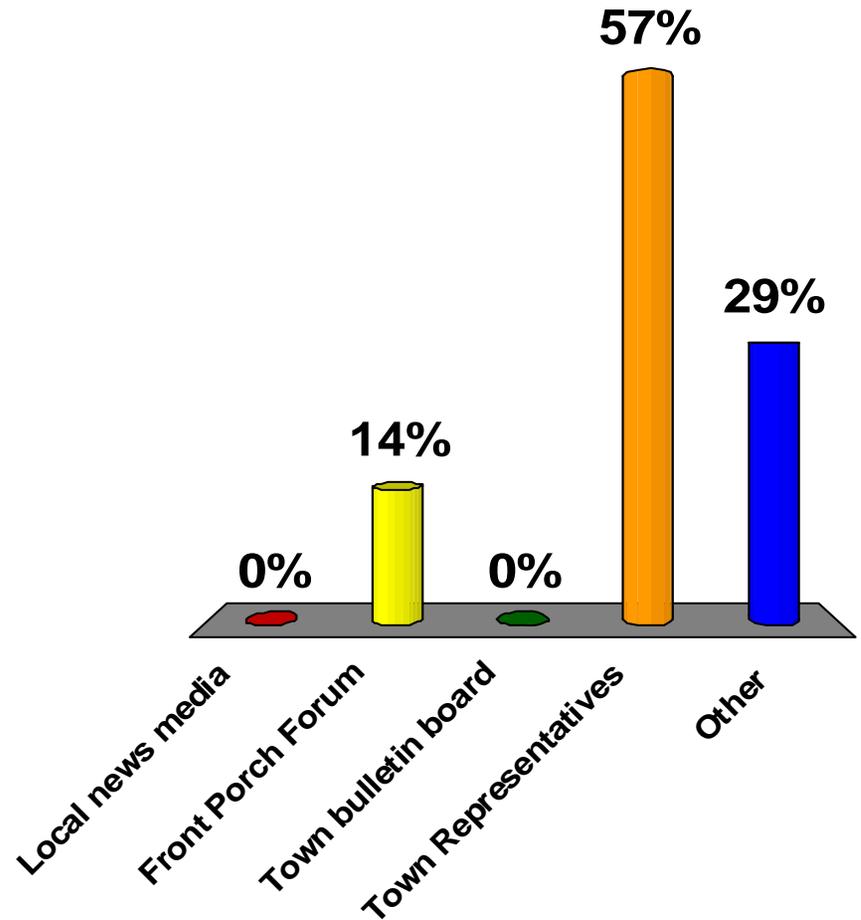
Did you find this presentation to be?

- A. Too technical
- B. Too simplified
- C. Just about right



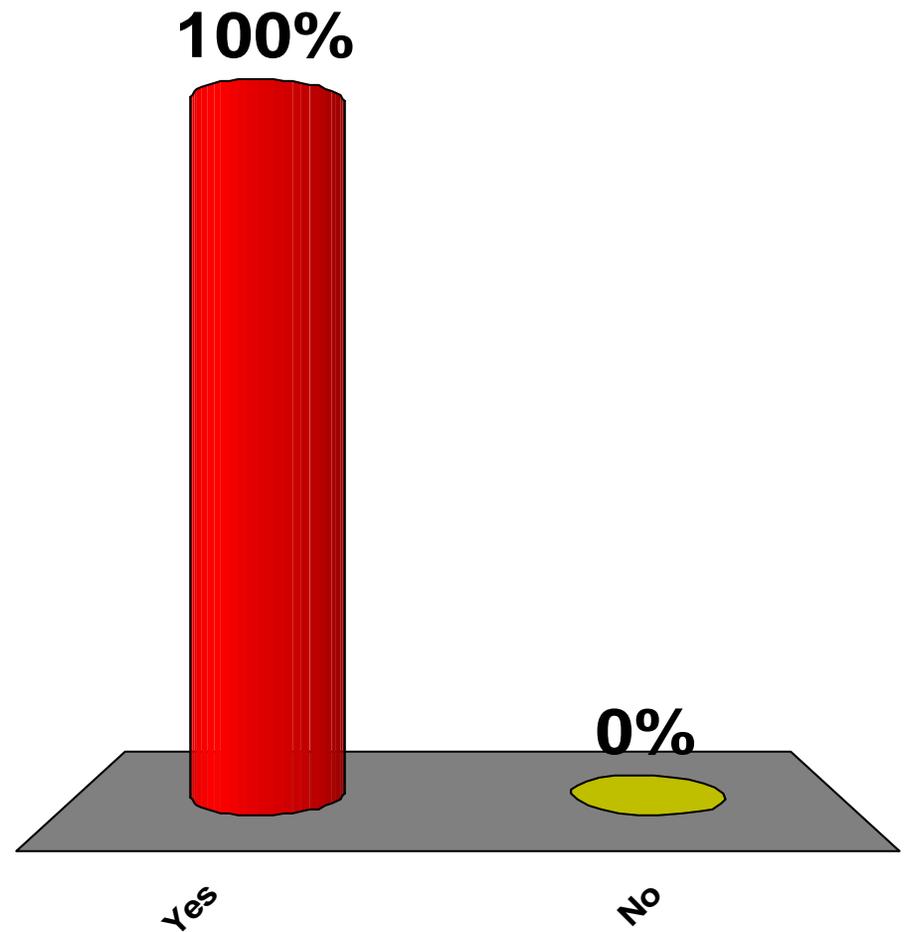
How did you hear about this meeting?

- A. Local news media
- B. Front Porch Forum
- C. Town bulletin board
- D. Town Representatives
- E. Other



Did you find the scope of work satisfactory?

- A. Yes
- B. No





Woodford BF 010-1(52) Questions and Comments

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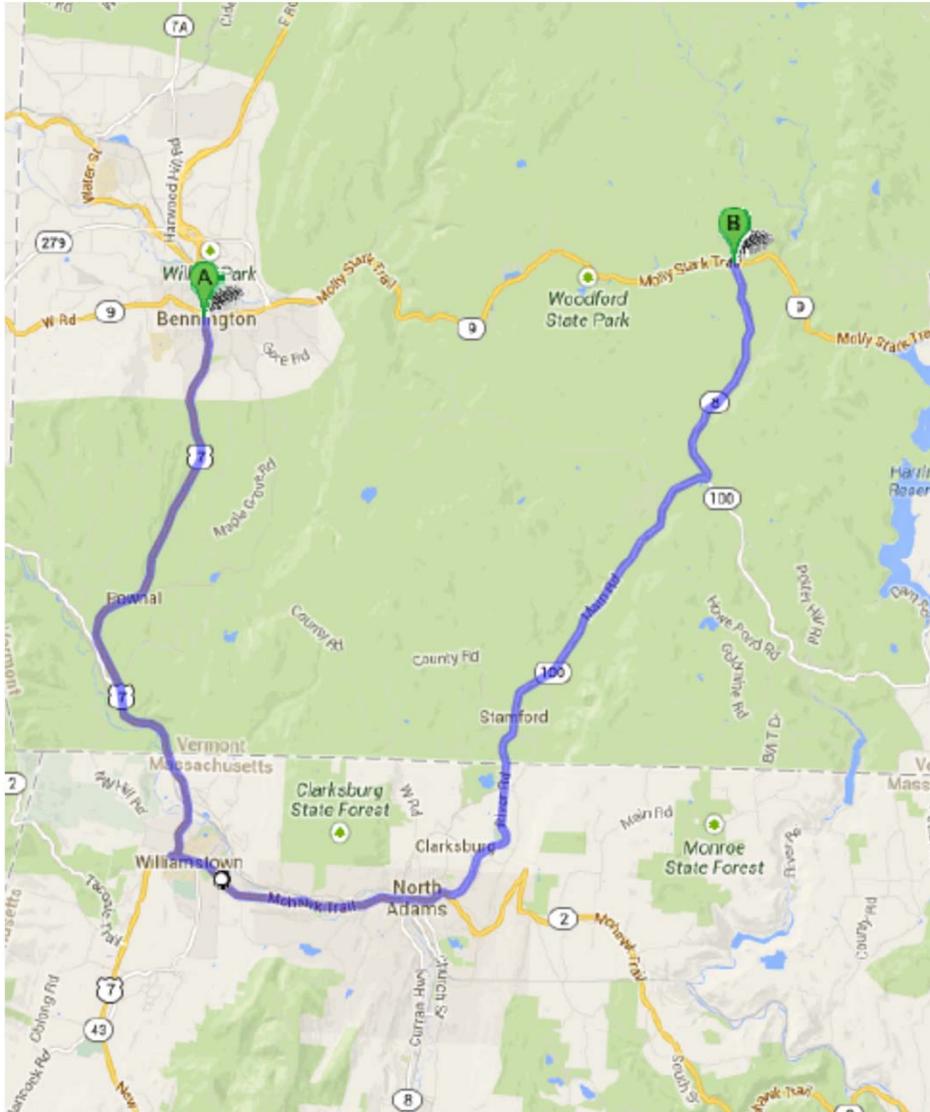
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Road Closure

- Closure for Complete Replacement
- Through distance: 13.8 miles 19 min.
- Detour distance: 36.5 miles 56 min.
- Added distance: 22.7 miles 37 min.
- End to end distance: 50.3 miles 75 min.
- No local bypasses are available

Maintenance of Traffic - Offsite Detour



- Road Closure w/ Offsite Detour
 - Signed by State
 - Approx. 75 min end to end
 - Periodic lane closures before and after full closure
- South on VT 8, then south on VT 100 into Mass. Continue on MA 8, then MA 2 to Williamstown. Then north on US 7 and east on VT 9.



05.14.2014

