



**Highgate BO 1448(43)
Bridge 25 on TH 4 (Machia Road)
Public Informational Meeting
over Missisquoi River**

January 21, 2016

Introductions

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Meeting Outline

- Purpose of the Meeting
- Existing bridge information
- Proposed project information
- Next Steps
- Questions

Purpose of Meeting

- Present the Preliminary plans and changes since the last presentation
- Provide you with the chance to ask questions and voice concerns.
- Build consensus for the new alignment

Background Information

- The structure is owned and maintained by the Town
- Machia road is a Class 2 local road intersecting VT 78
- Funding will be 80% Federal & 15% State funds
- Local share will **still** be 5%
- Functionally classified as a Rural local road
- Posted Speed = 35 mph (Design Speed)
- Existing bridge is a two span Thru Truss
- Existing Bridge length = 292 feet (2 equal spans @ 143 feet)
- Bridge Width = 16 feet +/-
- The bridge was built in 1928 (88 years old)

EXISTING BRIDGE DEFICIENCIES

Inspection Rating Information (Based on a scale of 9)

Bridge Deck Rating	5 Fair
Superstructure Rating	4 Poor
Substructure Rating	4 Poor

Rating Definitions

9 Excellent
8 Very Good
7 Good
6 Satisfactory
5 Fair
4 Poor
3 Serious
2 Critical
1 Imminent Failure

Deficiencies

- The bridge is structurally deficient and unable to carry design loads
- The bridge is functionally obsolete as it is too narrow for the roadway classification and design speed
- The bridge railing and approach railing are substandard
- The vertical and horizontal alignments are substandard

Looking east at Bridge approach



06.13.2013

Looking west at Bridge approach



East Abutment showing signs of movement



West Abutment showing undermining



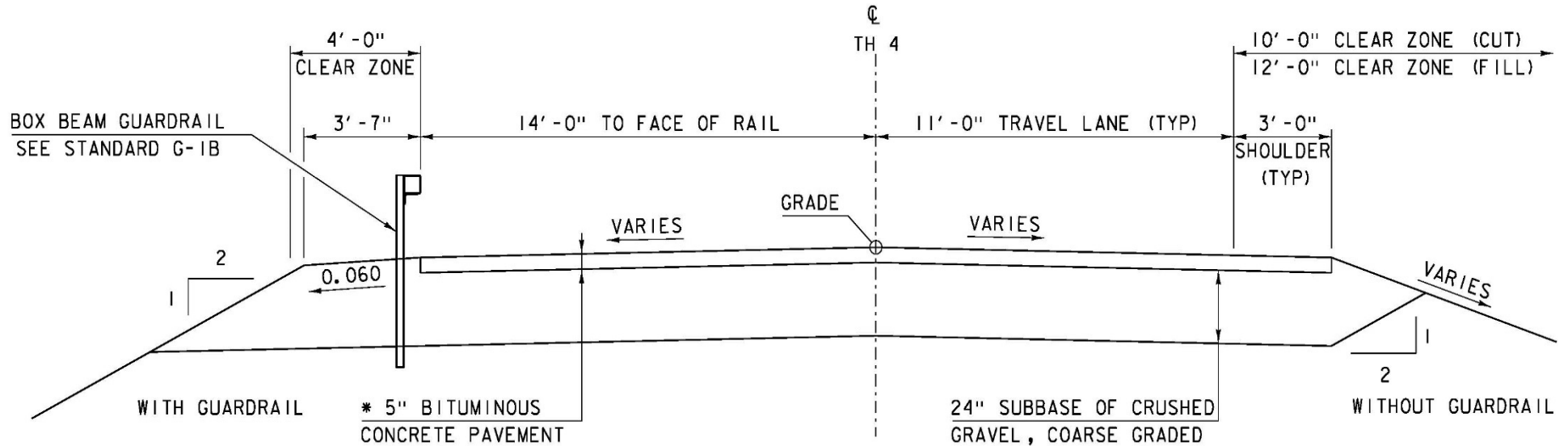
Proposed Project Details

- Complete bridge replacement
- 2 spans @ 140' – 140' (280' overall span length)
- 28' width between face of rail (per Town request)
- Horizontal alignment will be improved using a straight bridge alignment
- The new horizontal alignment also improves the intersection with VT 78
- Improves vertical alignment of roadway

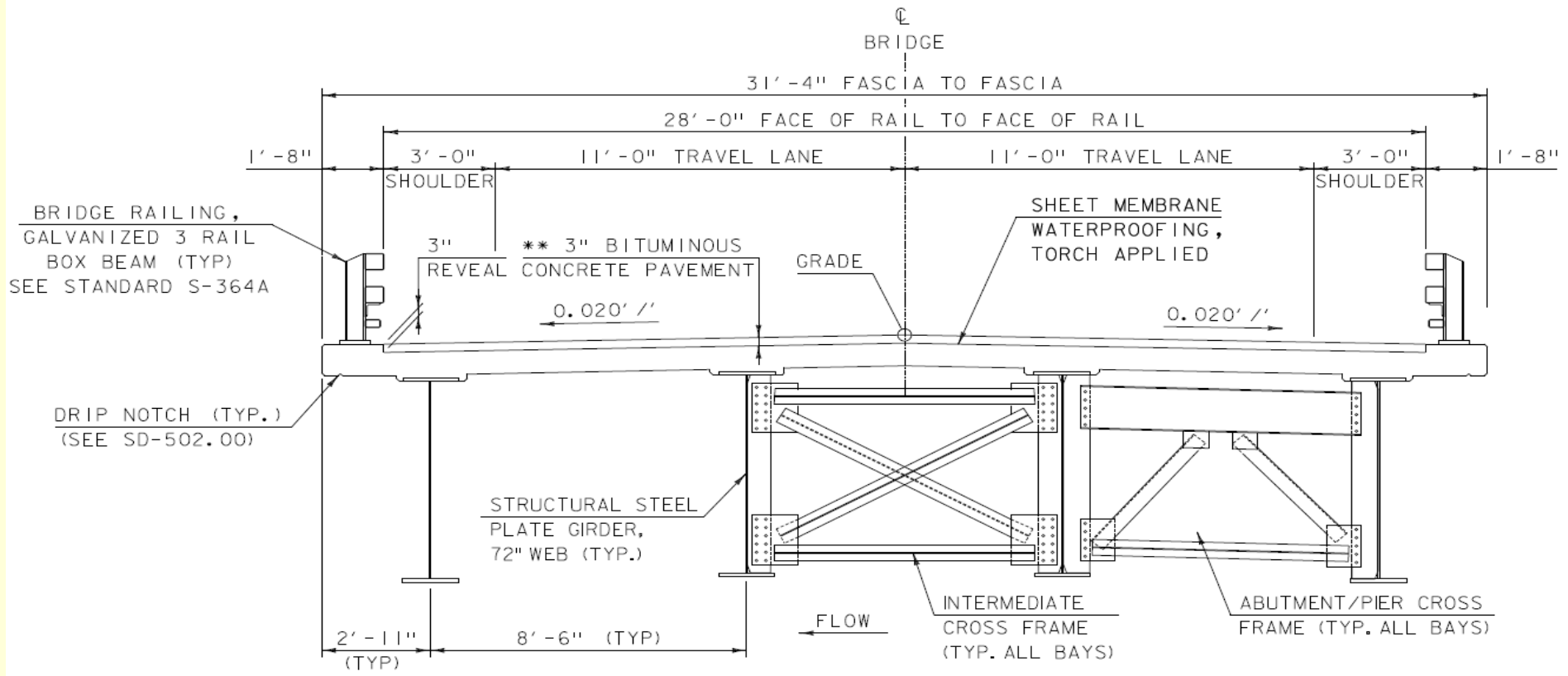
Known Issues to Discuss

- Length of closure periods based on new downstream alignment
- Acquisition of the property on the corner of Machia Road and VT 78 as part of the project
- Permanent Power line relocation
- Changes to property impacts on the west side of the bridge based on the new alignment
- Slight realignment to TH #48/Pine Plains Rd to accommodate VT 78 intersection changes

Proposed Roadway Typical Section



Proposed Bridge Typical Section

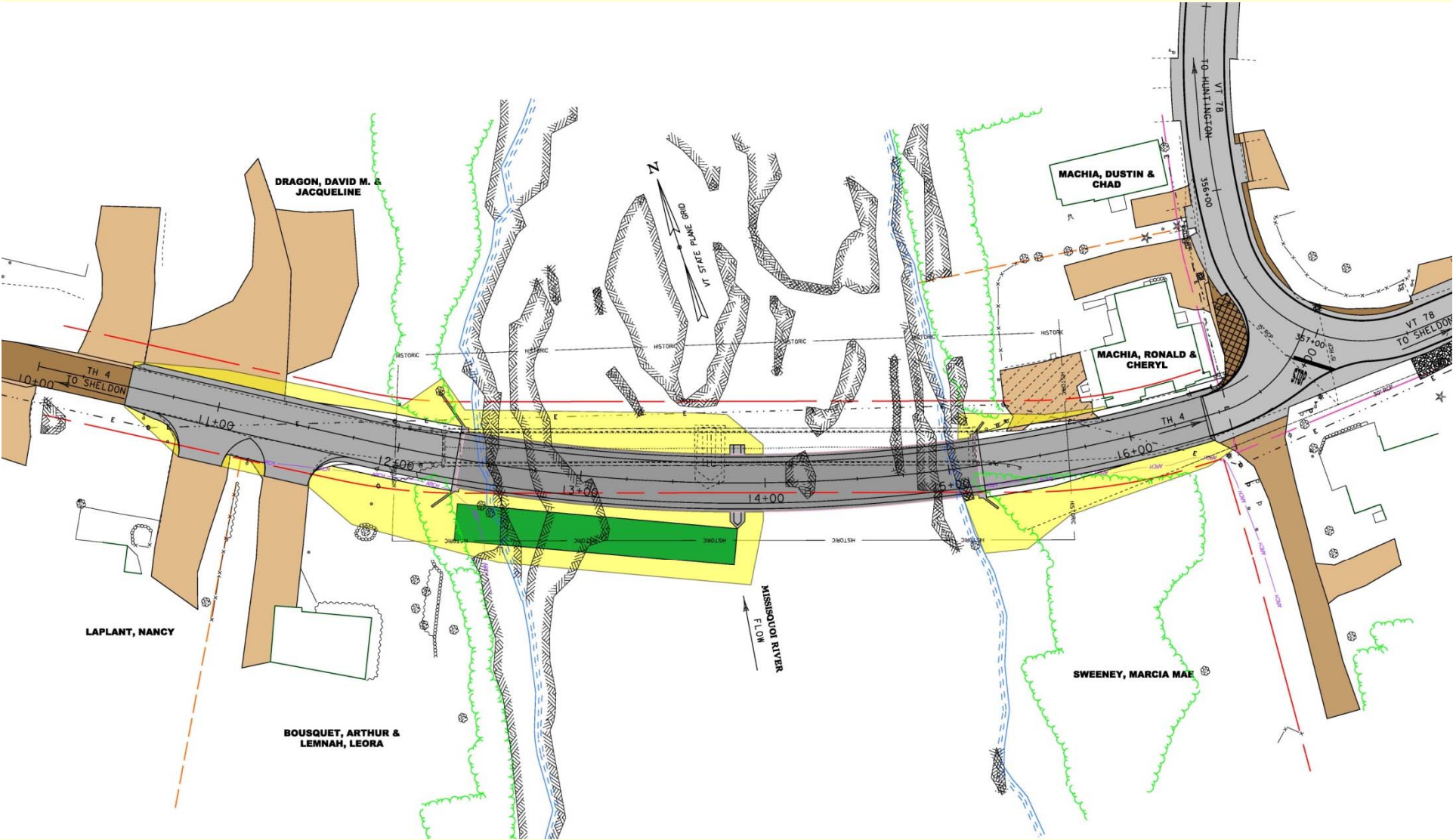


PROPOSED BRIDGE TYPICAL SECTION

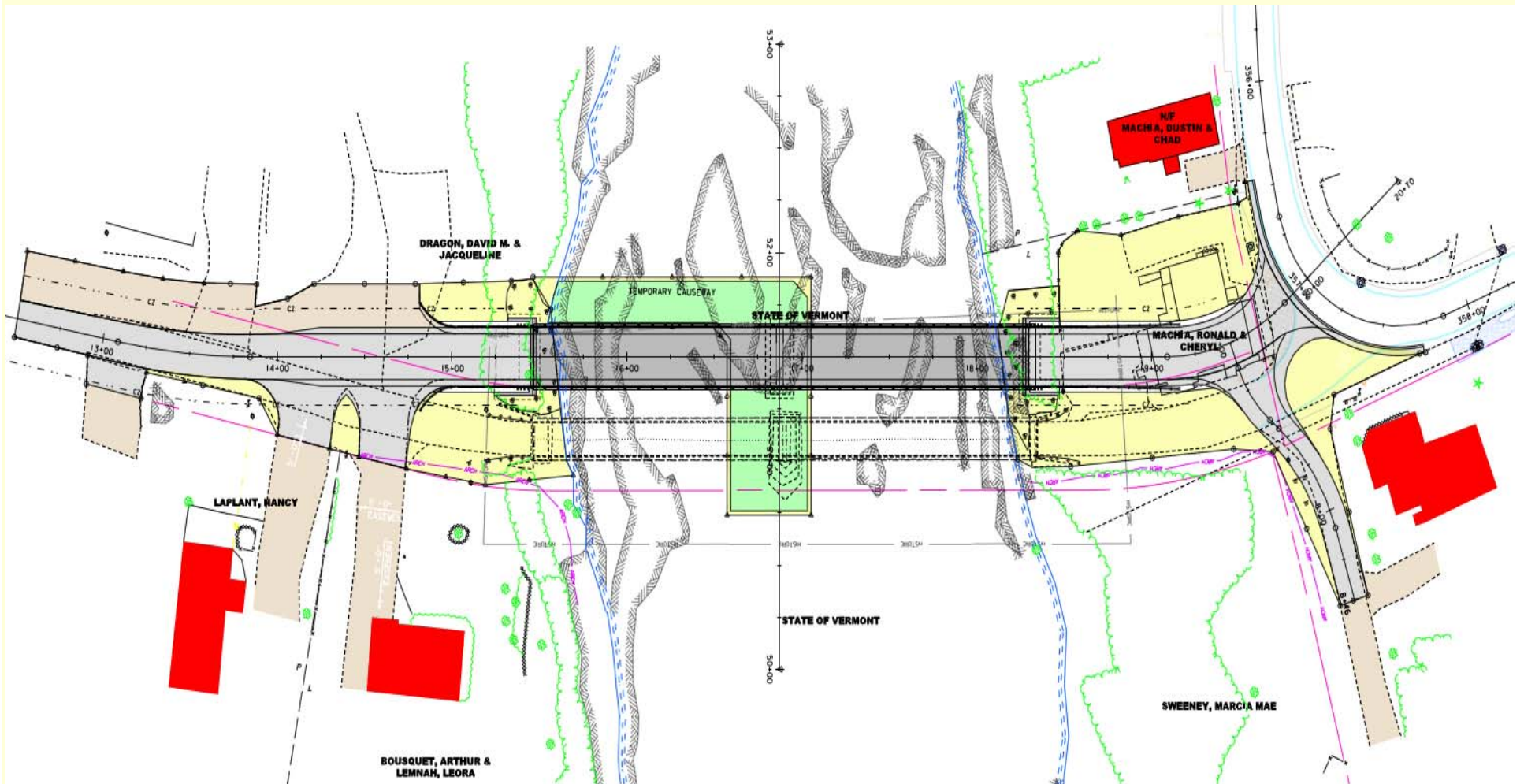
SCALE $\frac{3}{8}'' = 1'-0''$

** 1 1/2" TYPE IVS OVER
1 1/2" TYPE IVS

Original Layout of Proposed Bridge



New Layout of Proposed Bridge



Advantages to new alignment

- Minimize road closure - Keep traffic on existing bridge during construction. No full time detour required.
- Straight bridge is easier to design and construct and thus saves money.
- Improve intersection with VT 78 and improve drainage in this area.
- Improved guardrail throughout project.
- Moves road further from two residences on west side of bridge.
- Will move construction impacts further from delineated Archeologically sensitive areas.

Disadvantages to new alignment

- Increased ROW cost to purchase building and relocate residents.
- New road encroaches further onto farm property.
- Keeping the existing bridge open to traffic may lengthen the construction duration of the project.
- Minor realignment of TH #48/Pine Plains Rd.
- Could push construction out to 2019 based on time to acquire ROW. Creates a greater risk of existing structure needing repairs or bridge closure.

Traffic Maintenance

- Existing bridge to remain open during new bridge construction.
- Short duration closures could be possible during certain major construction activities. (e.g.- Truss bridge demolition)

Scope - Cost - Schedule

The project cost and schedule can not be determined until the scope of the project is clearly defined.

Preliminary Engineering	\$ 500,000
Right-of-Way	\$ 400,000
Construction w/ CE and Contingencies	\$4,050,000
Total	\$4,950,000

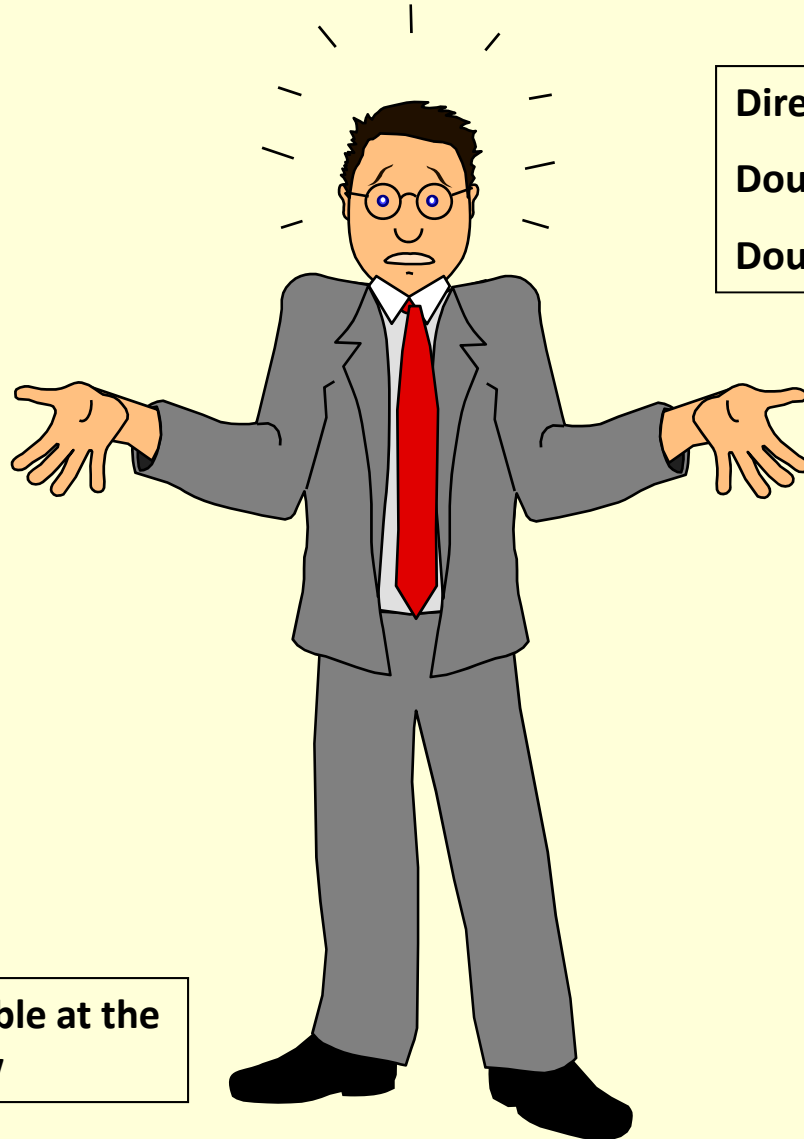
- Construction is currently scheduled for 2018
- Many factors can affect construction year
- Project is funded 80% Fed – 15% State – 5% Local
- Construction year is assuming Federal & State funding is available

Next Steps

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

- Get official town backing of New Conceptual plans
- Proceed with Preliminary Plans and Design
- Utility relocation process – ROW required for
- Environmental impact permitting – NEPA
- Confirm Town's responsibilities in Right-of-Way process
- Right-of-Way process – including purchase of affected properties and relocation of residents in building on the corner of Machia Rd and VT 78

Questions



Direct any questions to:

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**This presentation is available at the
web address shown below**

<https://outside.vermont.gov/agency/vtrans/external/Projects/Structures/98J378>