



Montpelier to St. Albans

Commuter Rail Feasibility Study

Rail Council Meeting



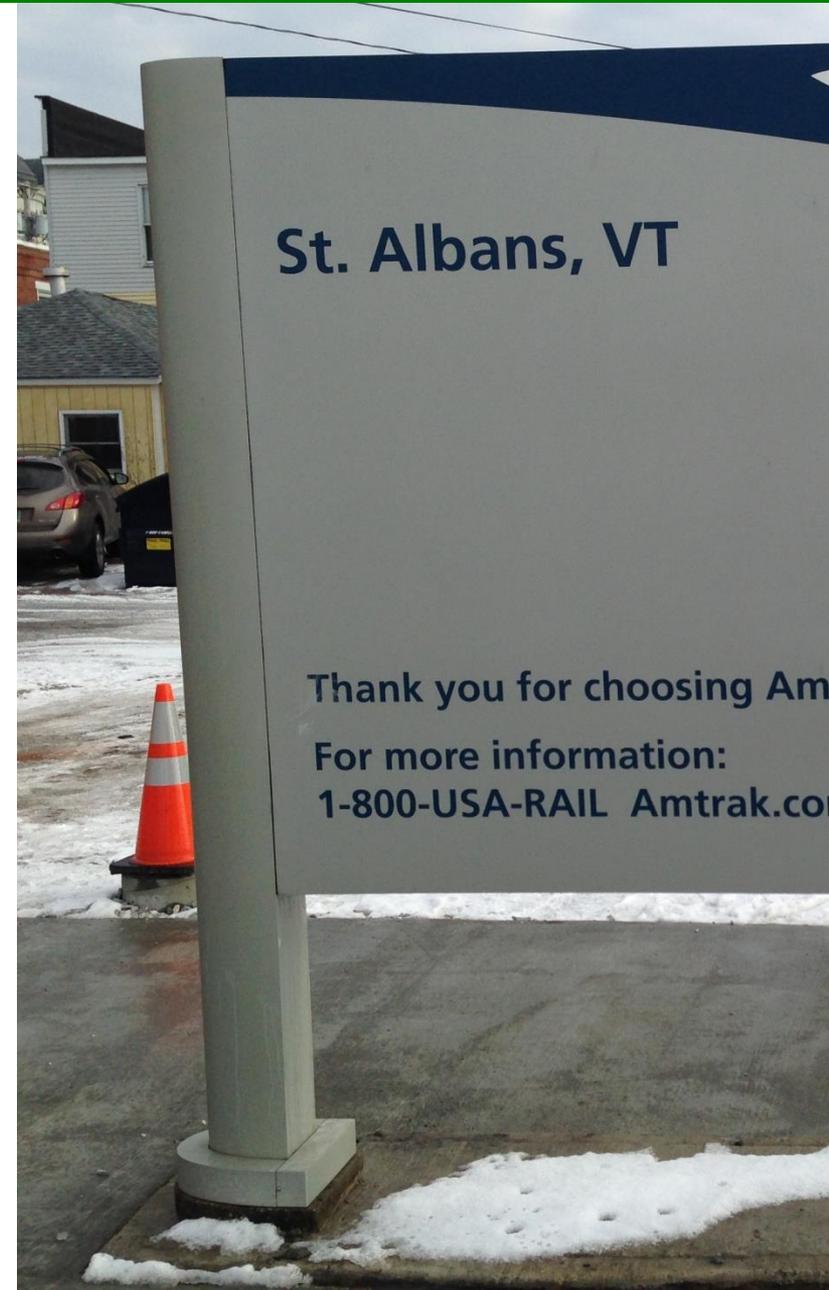
AGENDA

- Study Review & Existing Conditions
- Conceptual Operations & Transit Demand
- Cost Projections
- Implementation Considerations & Framework
- What's Next?

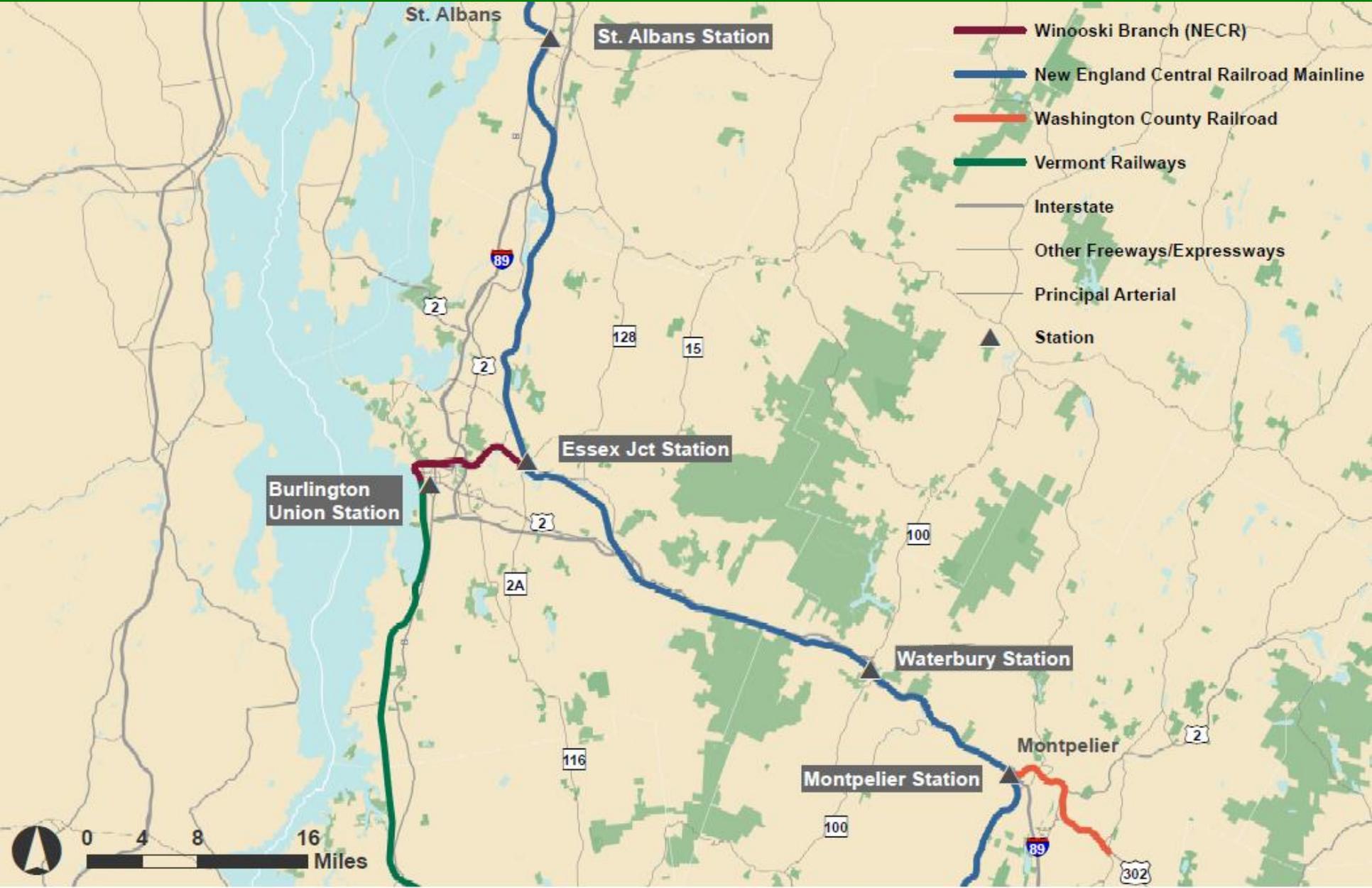


STUDY REVIEW

- Study begun in Spring 2016
- Public Meetings in Burlington & Montpelier in April
- Stakeholder Meetings in June & October
- Draft Chapters 1-7 Distributed to Stakeholders for Review in November
- Public Meetings in December
- Final Study Report January 2017



EXISTING CONDITIONS: RAIL CORRIDORS MAP



EXISTING CONDITIONS: TRANSPORTATION SYSTEMS

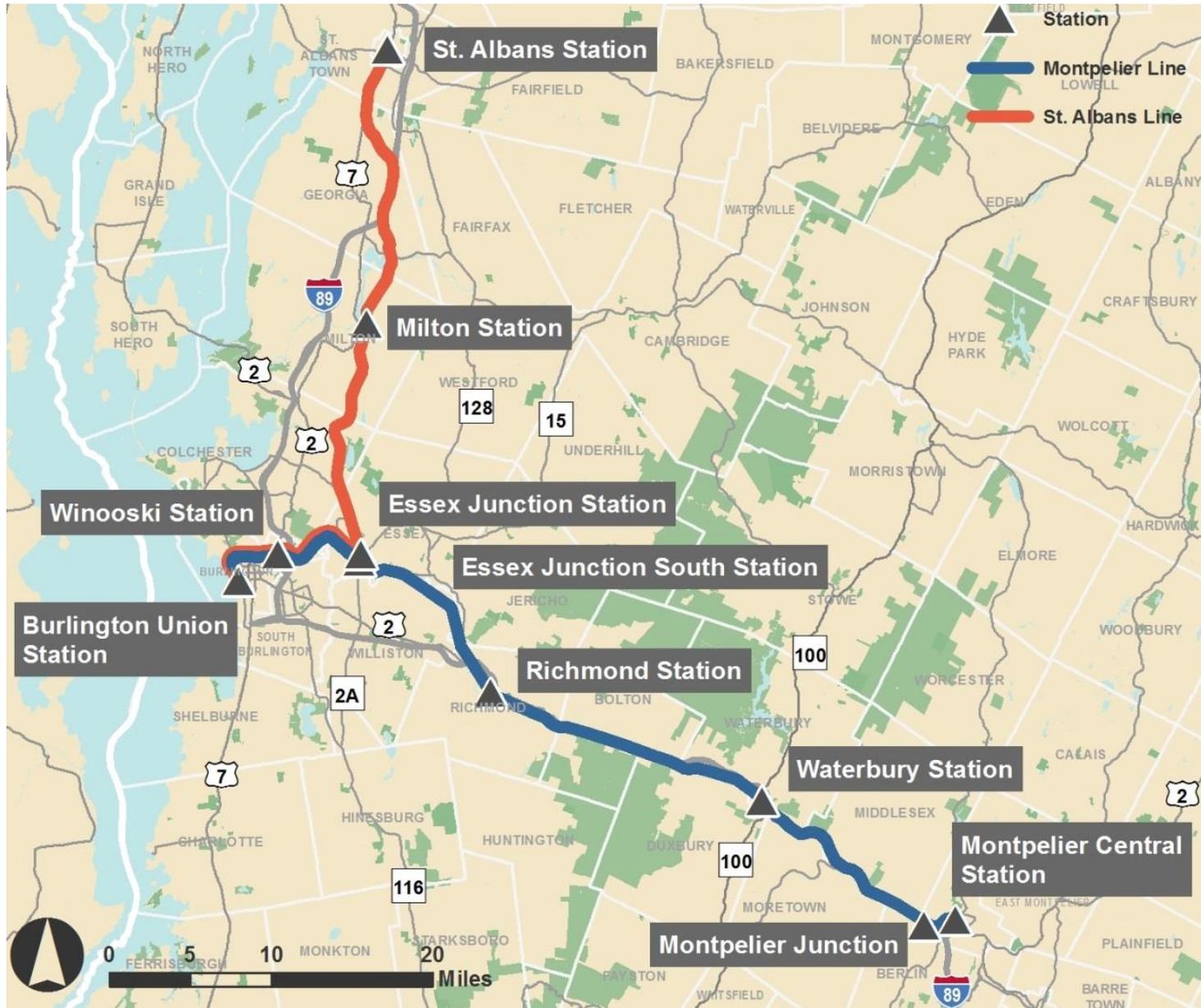
Route	Weekday Round-trips	Peak Travel Time (Minutes)	One-way Length (Miles)	Annual Operating Cost
Montpelier LINK	10.5	70 Minutes	42	\$615,000
St. Albans LINK	4	70 Minutes	33	\$190,000
Total Statewide Transit Budget	Approximately \$40 Million			



Conceptual Operations Analysis

- Lines & Stations
- Two Conceptual Schedules
- Travel Demand

CONCEPTUAL OPERATIONS: LINES



Schedule 1: Limited Peak Service

- 12 daily trips on the Corridor, the maximum allowed without a PTC system.
- Six roundtrips to Burlington:
 - Two from St. Albans
 - Four from Montpelier
 - Reverse commuting options to Montpelier
- Service levels are comparable to the Champlain Flyer
- LINK Bus: No St. Albans Service but Limited Shoulder Peak and Off-Peak Service to Montpelier

CONCEPTUAL OPERATIONS: SCHEDULE

Schedule 2: Comprehensive Peak Service

- 11 roundtrips to Burlington
- Comparable service levels to the existing LINK Bus
- Potentially accommodate off-peak services.
- Schedule 2 would require PTC
- LINK Bus: No St. Albans Service but Limited Off-Peak Service to Montpelier

CONCEPTUAL OPERATIONS: TRAVEL DEMAND

- **Home-to-Work** data captures travel demand in a corridor based employment data.
- Home-to-Work data is the basis for Transit Demand estimates.
- Ridership analysis calculates the total one-way trips on a transit service based on a comprehensive statistical analysis of public and propriety data.
- American Community Survey (ACS) Data



TRAVEL DEMAND: HOME-TO-WORK BY SEGMENT

Segment	Direction of Commute	Total Daily Commuters
Montpelier to Burlington	Northbound	1,737
Burlington to Montpelier	Southbound	1,096
	Segment Total	2,833
St. Albans to Burlington	Southbound	4,433
Burlington to St. Albans	Northbound	548
	Segment Total	4,981
	Regional Total	7,814

Home-to-Work Travel Demand in the Corridor Region

- Realistic 2030 Home-to-Work Transit Demand Mode Splits:
 - **Champlain Flyer – 12% (Similar to Schedule 1)**
 - **Montpelier LINK Bus – 25% (Similar to Schedule 2)**

TRAVEL DEMAND: ANALYSIS & FINDINGS

Segment	Total Demand	Champlain Flyer (12%)	LINK Bus (25%)
Existing	7,814	940	1,835
2030 Low Growth	8,664	1,040	2,090
2030 High Growth	9,175	1,100	2,210

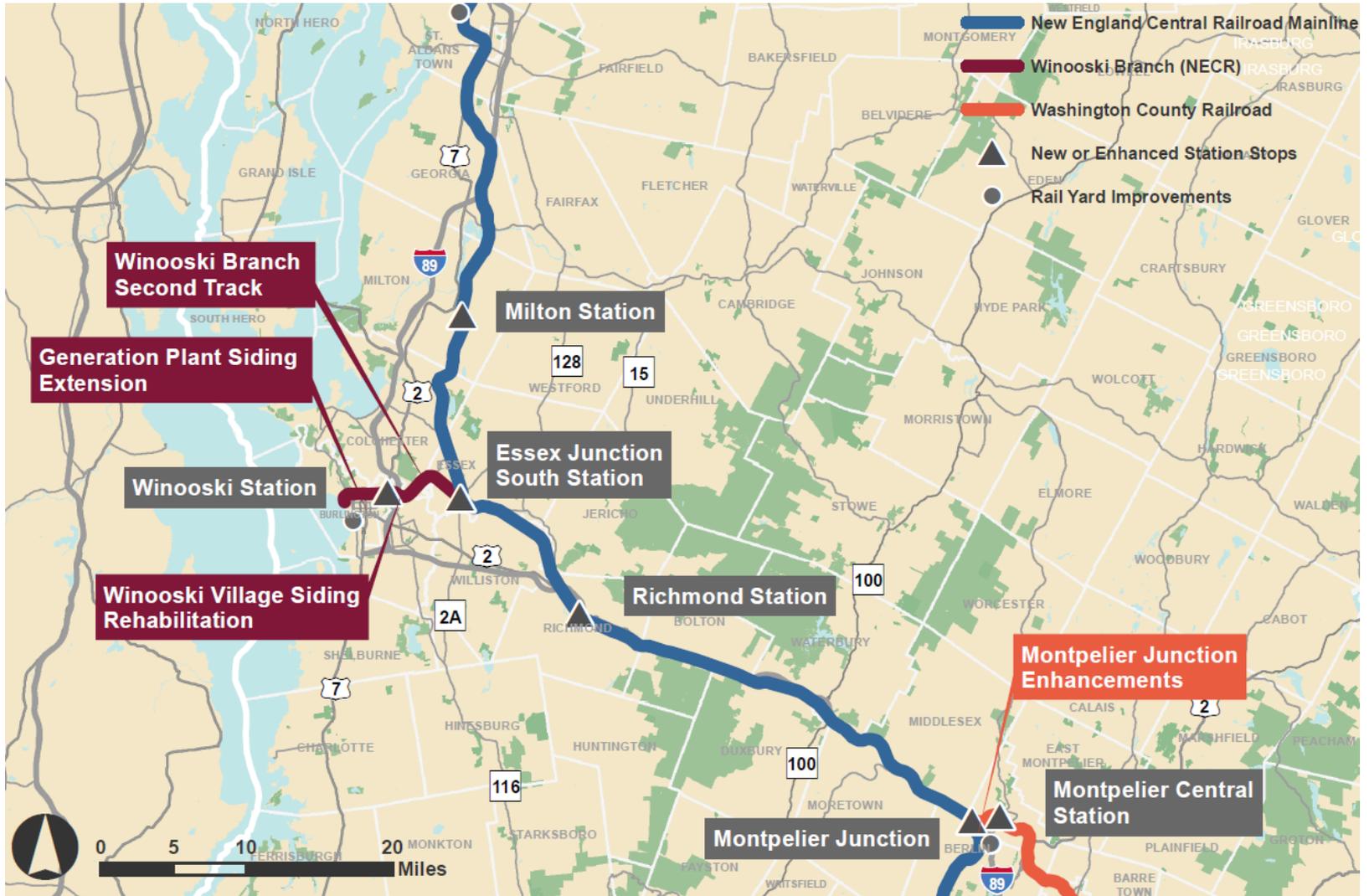


Conceptual Costs

- Infrastructure Upgrades
- Operations Costs
- Ticket Revenue
- Operating Subsidy

CONCEPTUAL COSTS: CAPITAL IMPROVEMENTS

Corridor-Wide Capital Improvements



CONCEPTUAL COSTS: EQUIPMENT

- Assume new rolling stock equipment
- Potentially second hand from another service provider if available.
- New equipment must meet U.S. Department of Transportation (USDOT) Standards
- Equipment Technology Considerations



COST ESTIMATES & FUNDING: CAPITAL TABLE

Unit	Total Cost (2016 Dollars)
Standard Cost Per Mile for Rehabilitation (Track, Signal, Bridge improvements)	\$23.5 Million
Cost for New Track Infrastructure	\$11.5 Million
Signal and Communications Equipment for NECR Mainline	\$56 Million
New Station Development	\$48 Million
Infrastructure Subtotal	\$139 Million
New Trainsets (6-7)	\$162-189 Million
PTC Implementation (Schedule 2 Only)	\$35 Million
Corridor Total	\$301-363 Million

CONCEPTUAL COSTS: REVENUE

Commuter Rail-Type Distance Based Zones: \$0.114 cost per mile, similar to Montpelier LINK bus service cost per mile.

Example Fares

Origin	Destination	One-Way Fare	Monthly Fare
Montpelier Junction	Burlington Union Station	\$4.62	\$186.73
Richmond	Essex Junction	\$1.03	\$155.21
St. Albans	Burlington Union Station	\$3.65	\$43.26
Milton	Winooski	\$1.82	\$76.61

CONCEPTUAL COSTS: OPERATING

The Corridor would not be self-supporting on ticket revenue alone. Fringe revenue from parking, advertising, etc. would not cover annual costs. Additional funds will be necessary to offset the operating cost not covered by revenue.

- **Operating support:** additional funding necessary to offset operating costs
- **Operating Support Per Passenger:** The expected annual operating support split up by the number of riders
- **Farebox Recovery Ratio:** The percentage of operating cost expected to be recovered by annual revenue.

CONCEPTUAL COSTS: OPERATIONS & MAINTENANCE

- Operations and maintenance (OM) costs are the annual costs associated with weekday commuter rail operation.
- OM costs for the Corridor are based on comparable costs for commuter rail operations for MBTA and CTDOT services.

	Schedule 1 (6 Roundtrips)	Schedule 2 (11 Roundtrips)
Total Annual Operating Costs	\$4,900,000	\$8,900,000

COST ESTIMATES & FUNDING: ANNUAL OPERATING SUPPORT

CONCEPTUAL ANNUAL OPERATING SUPPORT*

Schedule	Line	Annual Revenue	Annual Operating Support	Operating Support Per Passenger (Daily)	Farebox Recovery Ratio (Overall)
Schedule 1	Montpelier Line	\$515,000	\$2,995,000	\$17.00	15%
	St. Albans Line	\$650,000	\$725,000	\$2.50	47%
	Corridor Total	\$1,165,000	\$3,720,000	\$19.50	24%
Schedule 2	Montpelier Line	\$1,055,000	\$5,090,000	\$14.10	17%
	St. Albans Line	\$1,330,000	\$1,425,000	\$2.40	48%
	Corridor Total	\$2,385,000	\$6,515,000	\$16.20	27%



Implementation Considerations

IMPLEMENTATION CONSIDERATIONS: GOVERNANCE

- A **State Chartered Rail Authority** to oversee governance and management of the system. This could be the dormant Vermont Transportation Authority (VTA).
- Selection of a **Commuter Rail operator** to run daily services. This could include the VTA, Amtrak, Freight Railroad, or other another Private Company.
- Identification of **Funding Source** for Capital and Operations other than the current FTA apportionment that is used for bus transit throughout the state.
- **Federal labor requirements** could increase the cost for the first three years of operations. The State will be responsible for three years of employee salaries for jobs lost due to new Commuter Rail services.

IMPLEMENTATION CONSIDERATIONS: FUNDING

Sources for local funding could include **municipal, state, and private sources.**

The Federal Government provides some formula and discretionary funding for capital and operating, including **Federal Transit Administration** and **Federal Railway Administration.**

Bus Connections

- Existing bus transit services would need modifications to link with future commuter rail service, such as schedule or route changes.
- Most stations in suburban areas would primarily be park-and-ride locations.
- Some LINK bus service assumed to remain to complement commuter rail services.



Implementation Framework

IMPLEMENTATION FRAMEWORK: PHASING

Option	Capital Cost	Operating Cost	Annual Operating Support	Daily Transit Demand
Option 1 – Corridor-wide Service with Schedule 1	\$301 Million	\$4.9 Million	\$3.7 Million	930
Option 2 – Corridor-wide Service with Schedule 2	\$363 Million	\$8.9 Million	\$6.5 Million	1,835
Option 3 – St. Albans Line - only Service with Schedule 2	\$164 Million	\$2.8 Million	\$1.4 Million	1,140
Option 4 – Montpelier Line Service-only with Schedule 2	\$249 Million	\$6.1 Million	\$5.1 Million	695

IMPLEMENTATION FRAMEWORK: COMPARISON

■ Existing Operations

- Annual operating costs are > \$1 Million
 - Montpelier LINK: \$615,000
 - St. Albans LINK: \$190,000
 - Annual Statewide Transit Funding in Vermont about \$40 Million
- Capital Cost will consist of bus replacement and potential maintenance facility rehabilitations.

■ Conceptual Commuter Rail Operations

- Annual operating costs are \$5-9 Million
 - Montpelier Line: \$6.1
 - St. Albans Line: \$2.8 Million
- Capital Cost: **\$301-363 Million**
 - Montpelier Line: \$249 Million
 - St. Albans Line: \$164 Million

IMPLEMENTATION FRAMEWORK: NEXT STEPS

- **Service Option Choice**
- **Legislative approval**
- **Governance and Funding Determination**
- **Host Railroad and Service Operator Agreements**
- **Final Schedules**
- **Engineering and Rolling Stock Procurement**

STUDY NEXT STEPS

- November Rail Advisory Council
- December Public Meetings – Project Findings
- December Final Stakeholder Meeting – Project Findings and Public Comments
- Late December - Final Report Completed
- Submittal to Legislature by 1/15/17 and offer them presentations



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