Stakeholder Meeting

Pioneer Valley Planning Commission

May 7, 2014

Northern New England Intercity Rail Initiative

BOSTON | SPRINGFIELD | NEW HAVEN | MONTREAL

massDOT Massachusetts Department of Transportation

VERMONT

CONNECTICUT DEPARTMENT OF TRANSPORTATION

Agenda

- Project Outreach
  - Public Meetings
  - Agency Meetings
  - Project Coordination

- Study Analysis Results
  - Train Performance Calculations
  - Initial Ridership Analysis
  - Station Assessment

- Current Activities
  - Alternative Development

Public Meetings

- White River Junction, Vermont
  January 22, 2014

- Springfield, Massachusetts
  January 23, 2014

Environmental Scoping Meetings

- Federal Interagency Scoping,

  Cambridge, Massachusetts

  March 22, 2014

- Individual State Meetings in

  Vermont and New Hampshire in

  April 2014

Freight & Passenger Rail Operations

- Information on CSX, NECR, CN, and Pan Am Southern Operations from Coordination and Past Agency Outreach

- Passenger Rail Operations from Agencies and Publicly Available Information

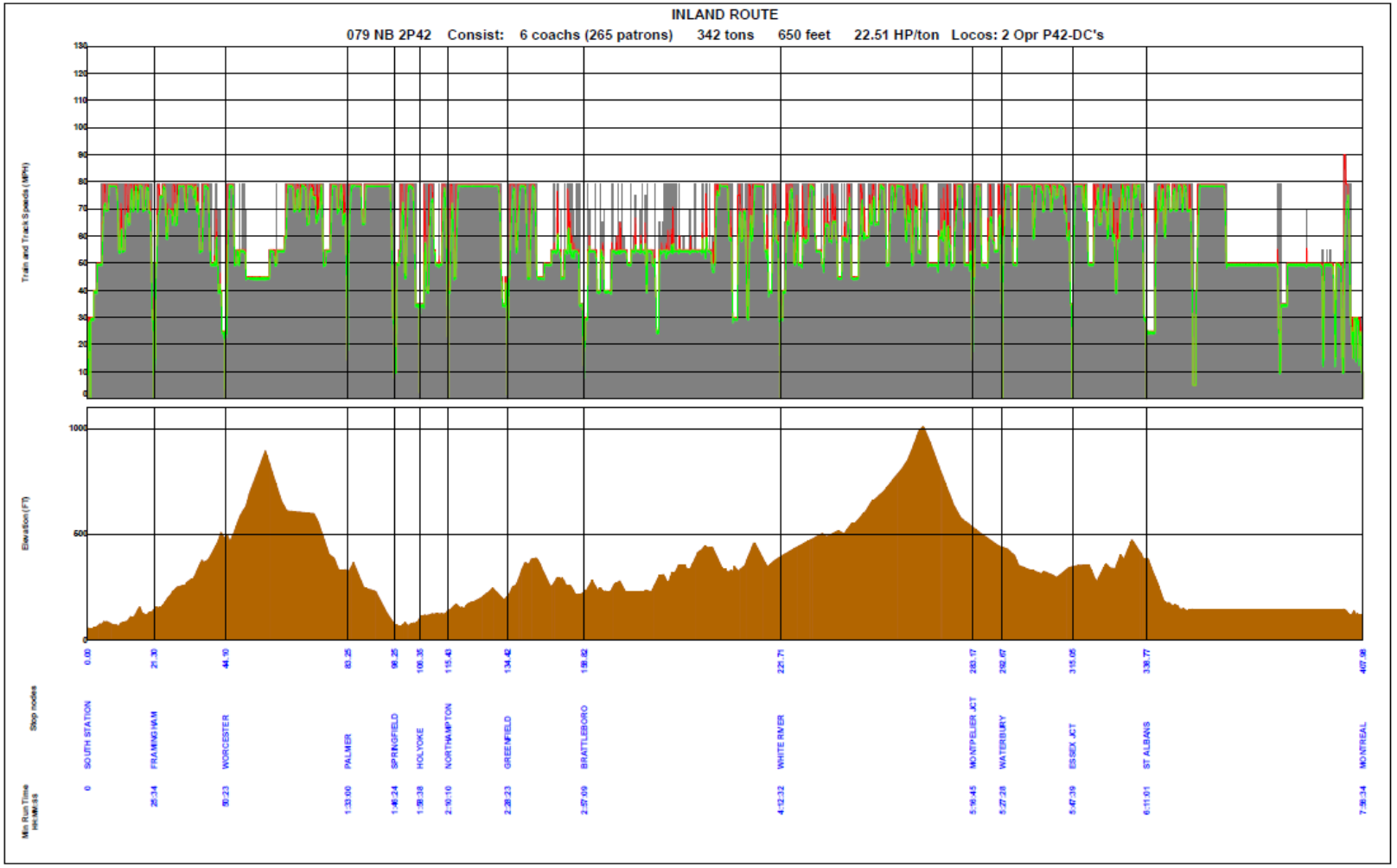
Coordination with other Projects

- NEC Future
  - One Current Alternative Includes a Boston - Springfield-Hartford Alignment
- Quebec High Speed Rail Study
  - Issued Report – Affirms Assumed Route and Travel Time
- South Station Expansion
  - Assumes 16 NNEIRI Trains Per Day

Train Performance Calculator

- Possible travel time with given route characteristics
- Assumes no conflict with other trains
- Train models
  - Current locomotives & standard coaches
  - Tilting train equipment
- Travel Times evaluated for 60, 79, 90 &110 MPH
- Travel time savings only 3 mins. 90 vs 110 MPH
  - Agreed not to consider 110 or 125 MPH

Train Performance Calculator Example



Train Performance Calculator

Travel Time in Hours:Minutes

City	Base (60 MPH) Local	Base (60 MPH) Express	79 MPH Local	79 MPH Express	90 MPH Local	90 MPH Express	90 MPH Express with Tilt
Boston (South Station)	0:00	0:00	0:00	0:00	0:00	0:00	0:00
Boston (Back Bay)	0:06	0:06	0:06	0:06	0:06	0:06	0:06
Suburban Boston (Framingham)	0:34	-	0:31	-	0:31	-	-
Worcester	1:06	1:02	0:59	0:57	0:59	0:57	0:53
Palmer	1:58	-	1:46	-	1:45	-	-
Springfield	2:18	2:09	2:03	1:59	2:01	1:56	1:46

Train Performance Calculator

Travel Time in Hours:Minutes

City	Base (60 MPH) Local	Base (60 MPH) Express	79 MPH Local	79 MPH Express	90 MPH Local	90 MPH Express	90 MPH Express with Tilt
Springfield	0:00	0:00	0:00	0:00	0:00	0:00	0:00
Holyoke	0:16	-	0:16	-	0:16	-	-
Northampton	0:32	-	0:31	-	0:30	-	-
Greenfield	0:56	-	0:52	-	0:51	-	-
Brattleboro	1:30	-	1:25	-	1:24	-	-
Claremont	2:38	-	2:28	-	2:25	-	-
White River Junction	2:58	2:41	2:48	2:35	2:45	2:33	2:29
Montpelier	4:06	-	4:00	-	3:56	-	-
Waterbury	4:19	-	4:13	-	4:11	-	-
Burlington (Essex Junction)	4:59	4:21	4:36	4:03	4:34	3:49	3:44
St. Albans	5:31	-	4:53	-	4:50	-	-
Montreal	7:50	7:13	6:55	6:29	6:53	6:27	6:02

Initial Ridership Development

- Rail schedules for the NNEIRI services
- Development of a geographic zone system covering the entire study area
- Highway network connecting all the zones, all the rail stations and all the airports in the study area
- Socio-economic data for the zone system
- Ridership information for the existing Massachusetts, Connecticut, and Vermont rail services
- Travel characteristics for auto, air, and rail within the model area

Initial Ridership Results

Annual Boardings Corridor-wide

Max Speed	60 MPH	79 MPH	90 MPH	90 T MPH
2020 Local	1,515,300	1,792,800	1,901,500	-
2020 Express	1,293,100	1,450,700	1,528,500	1,640,800
2035 Local	1,739,000	2,060,300	2,185,300	-
2035 Express	1,486,700	1,671,000	1,762,200	1,893,800

Initial Ridership Results – Origin and Destination Pairs

City Pair	Montreal	Essex Junction	Brattleboro	Northampton	Springfield	Boston	Hartford	New Haven	New York
Montreal	-	5,848	23,103	5,793	11,888	1,499	5,531	10,481	79,101
Essex Junction	5,848	-	5,963	1,960	2,032	324	1,468	2,103	7,878
Brattleboro	23,103	5,963	-	636	2,277	1,388	460	1,318	13,448
Northampton	5,793	1,960	636	-	9,987	10,161	1,797	4,770	44,306
Springfield	11,888	2,032	2,277	9,987	-	15,893	2,185	20,629	40,718
Boston	1,499	324	1,388	10,161	15,893	-	11,384	12,559	101,415
Hartford	5,531	1,468	460	1,797	2,185	11,384	-	35,468	60,716
New Haven	10,481	2,103	1,318	4,770	20,629	12,559	35,468	-	NA
New York	79,101	7,878	13,448	44,306	40,718	101,415	60,716	NA	-

Station Analysis

Station Types

- **Urban Hub**
- **Urban Intermediate**
- **Suburban Hub**
- **Suburban or Rural Intermediate**

Station Analysis

Station Access Modes

- Private Automobile and Taxi Pick-up Facilities
- Parking
- Private Car Rentals and Car Sharing
- Transit
- Pedestrian
- Bike and Bike Sharing
- Airport

Station Analysis

Station Rating Criteria

- Presence of existing station or feasible conditions for building a station
- Population density and economic activity
- Intermodal connections
- Distance between station stops
- Ridership

Station Analysis

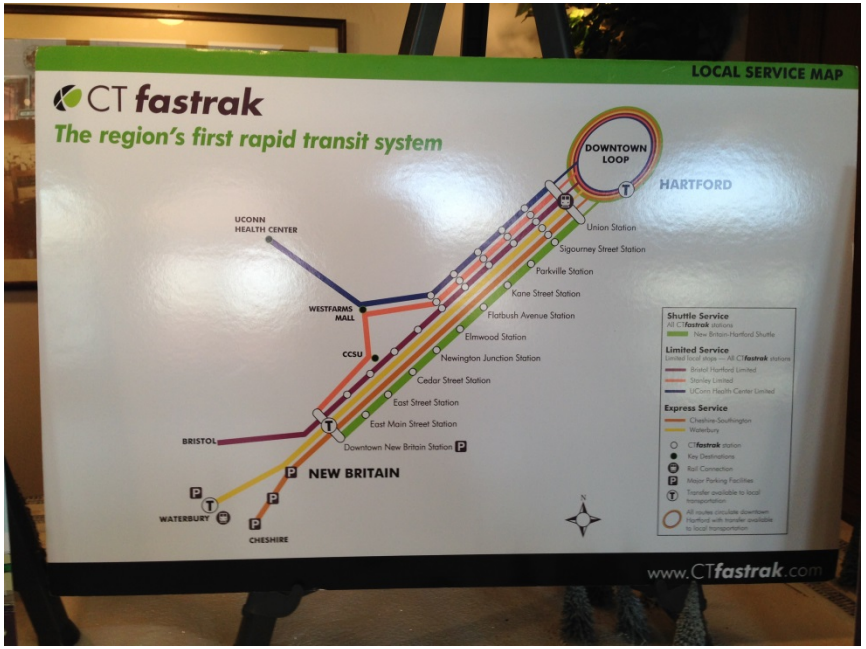
Potential Station Locations

Massachusetts	Vermont	Connecticut
Boston (Back Bay & South Station)	Brattleboro	Windsor Locks
Framingham	Bellows Falls	Windsor
Worcester	Windsor	Hartford
Palmer	White River Junction	Berlin
Springfield	Randolph	Meriden
Holyoke	Montpelier	Wallingford
Northampton	Waterbury	New Haven (Union Station)
Greenfield	Burlington (Essex Junction)	
	St. Albans	

New Hampshire	Claremont
Quebec	Montreal

Changes to Intermodal Connections Around Station Sites?

- Are there changes to stations in your area that we should know about?



Alternatives Development Process

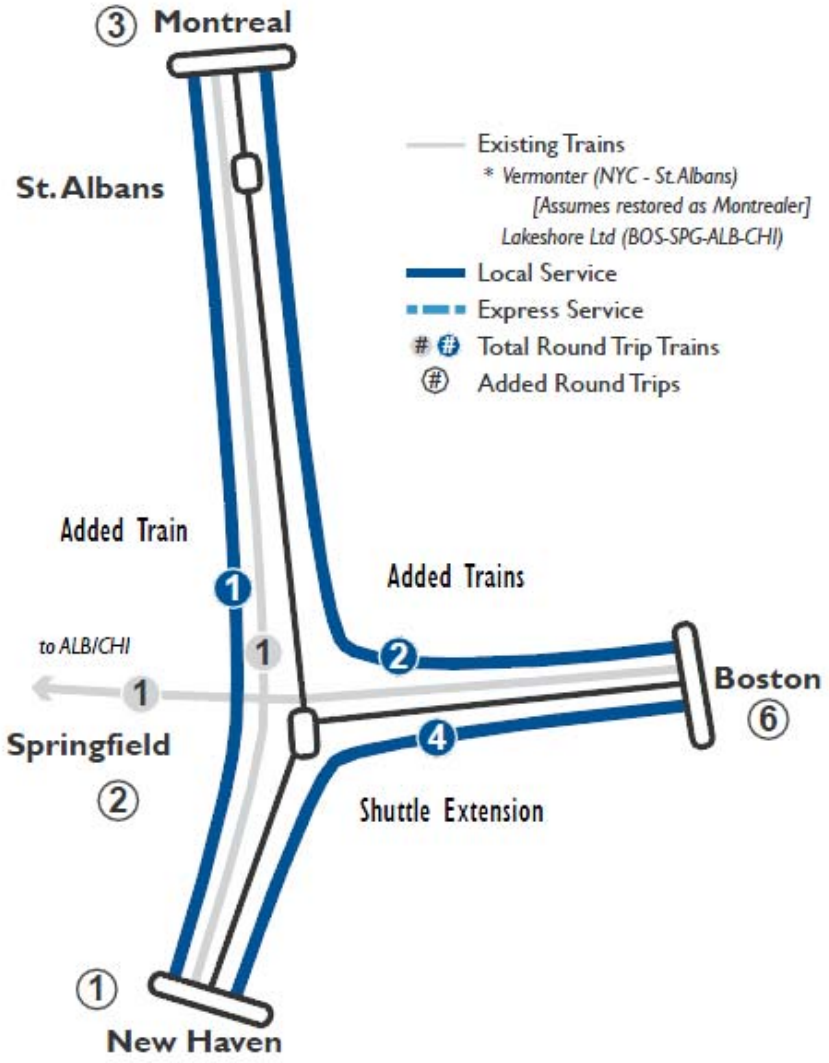
The Study developed a series of alternatives that meet the Purpose and Need.

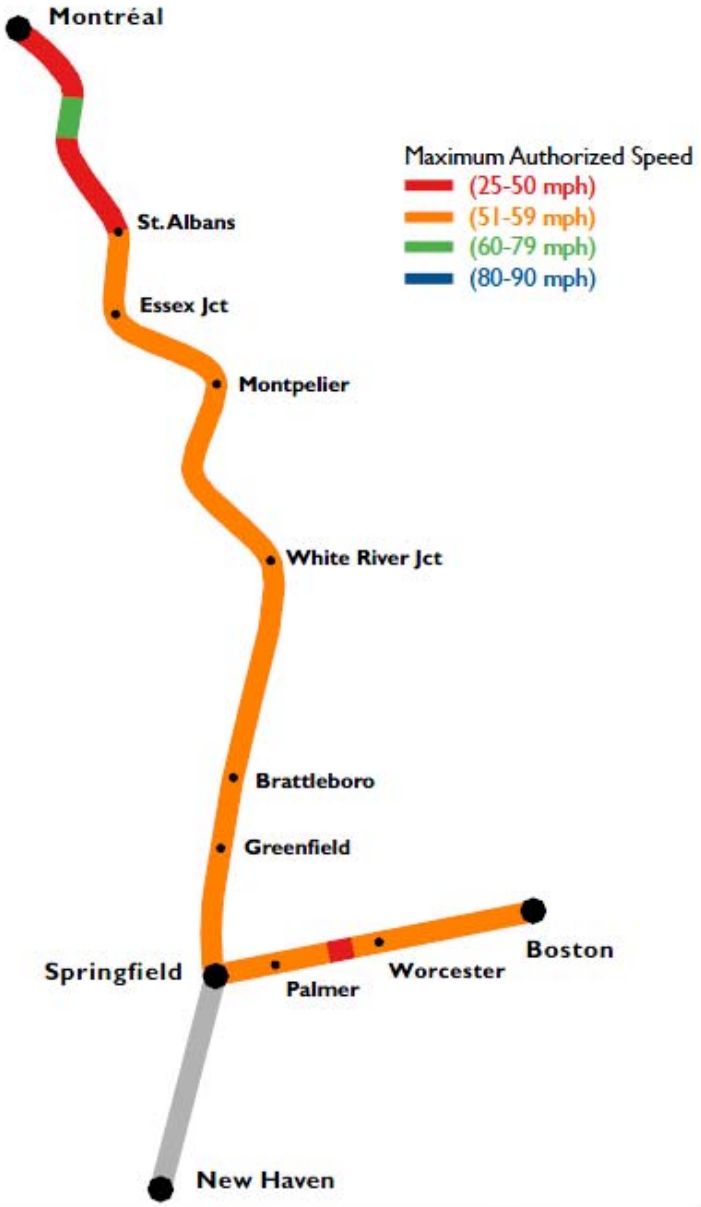
Alternatives include:

- Existing use of rail corridor for freight and passenger operations up to 90 mph
- Variations of speed, frequency and fares
- Accommodation for operation and growth of freight
- Consistency with current and planned projects, and
- Incorporation of public input

Alternative 1

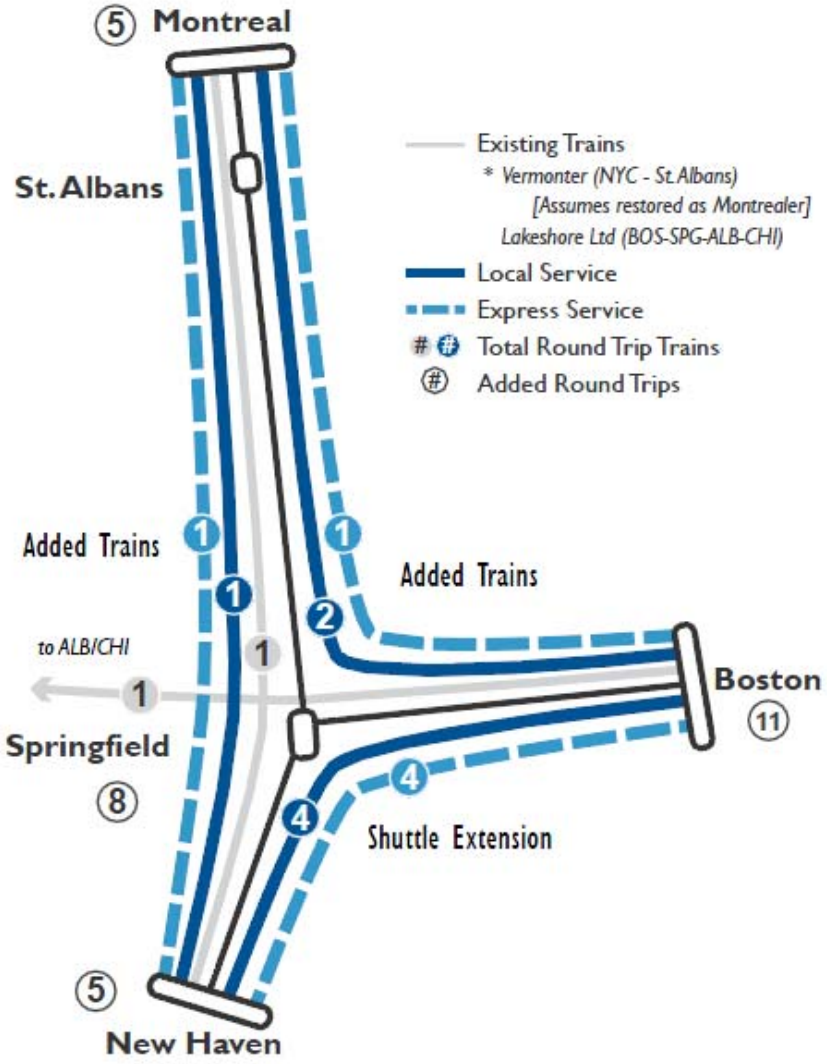
Proposed Service & Maximum Speed

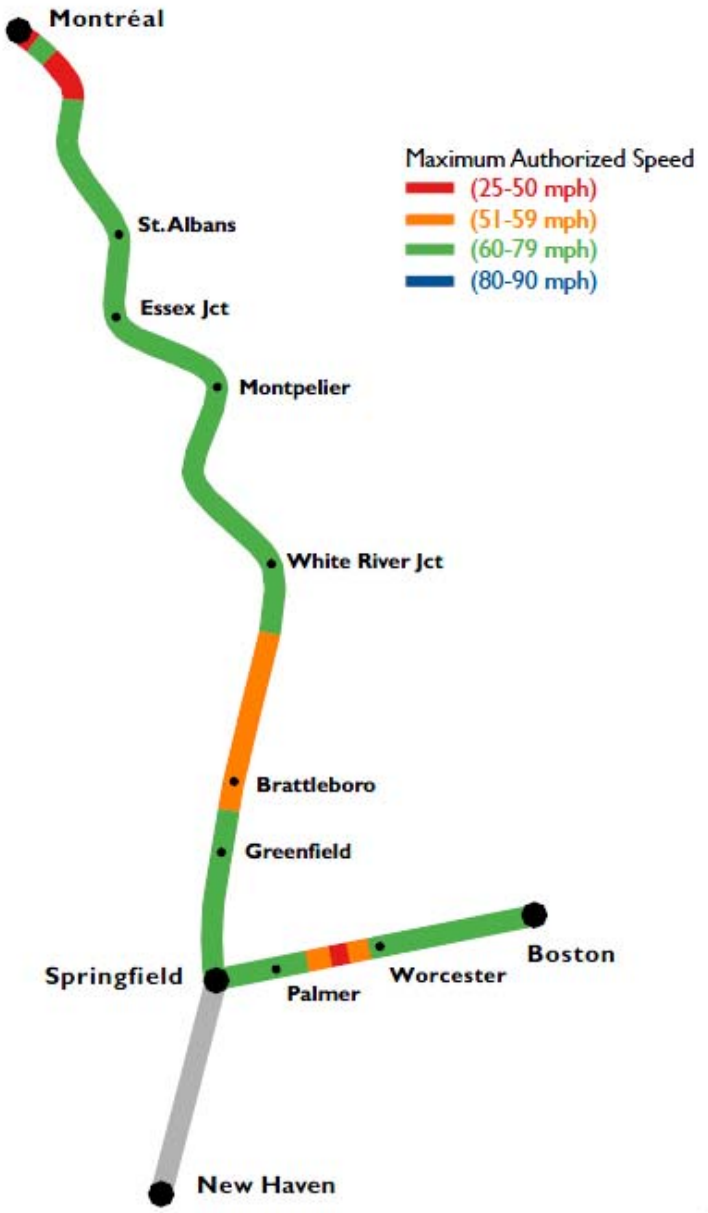




Alternative 2

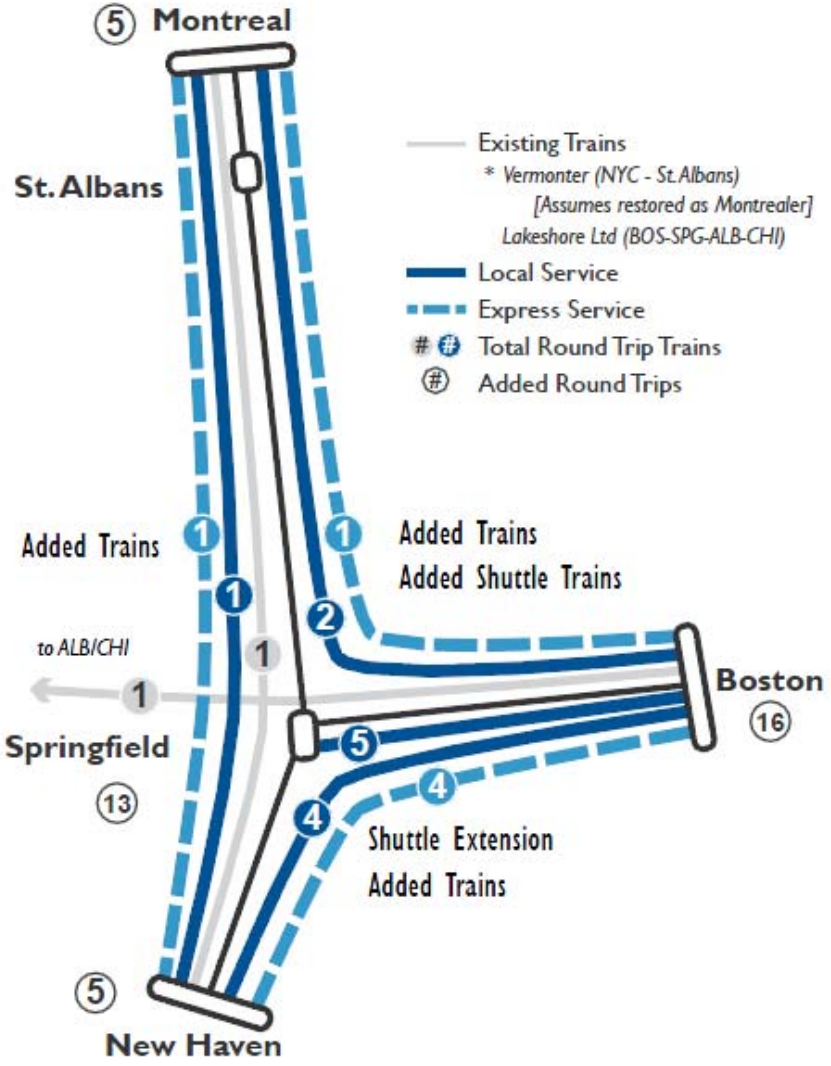
Proposed Service & Maximum Speed

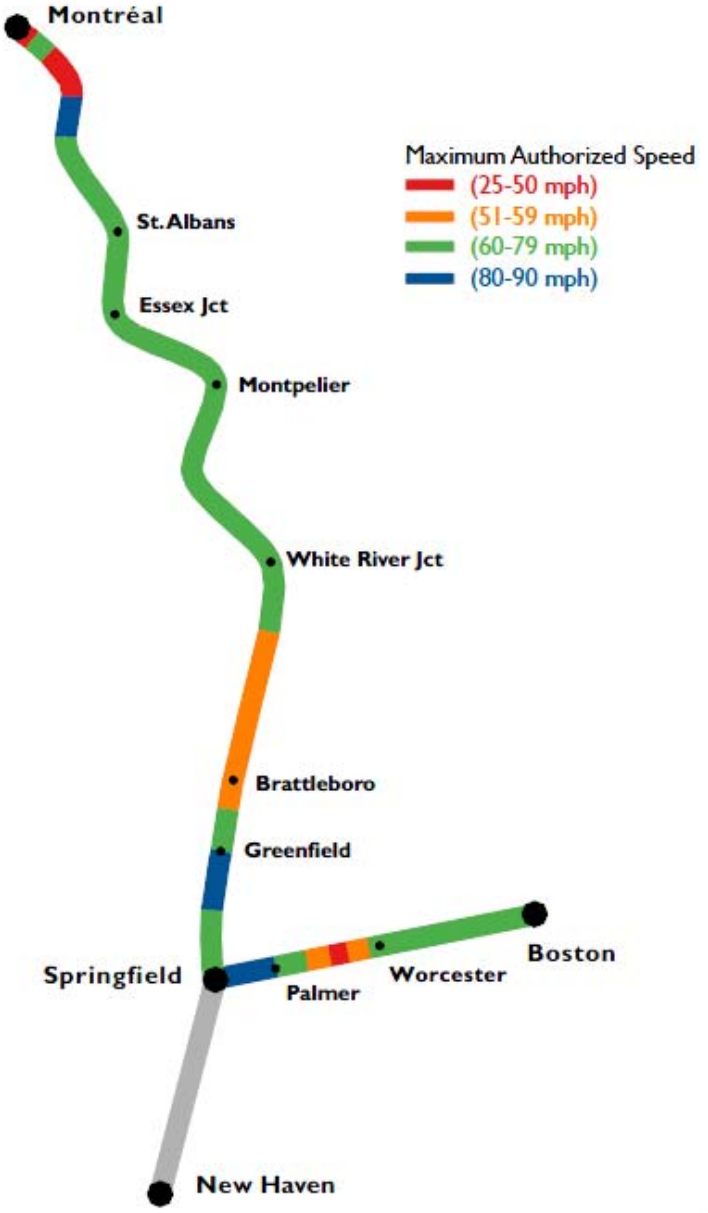




Alternative 3

Proposed Service & Maximum Speed





Additional Ridership Analysis

- Based on Selected Alternatives, new ridership analysis will be conducted
- Ridership sensitivity testing of origin/destination pairs for:
  - speed
  - frequency
  - station stops

Alternative Analysis

- Evaluate infrastructure needs for speed
  - Track, structures and signals
- Initial assessment of added capacity
  - Locations for improvements
  - Consider potential environmental impacts
  - Develop initial infrastructure costs
  - Develop initial revenue and operations cost
- Apply initial screening of alternatives

Other Project Development Activities

- Public Engagement and Comments
- Further refinement of freight, passenger rail, and track data
- Alternative Analysis Methodology and Criteria

Project Schedule & Next Steps

- Preliminary alternatives 09/12/14
- Finalize alternatives 10/31/14
- Service Development Plans 09/03/15
- Complete NEPA process 09/25/15

Thank You

Questions and Discussion

Follow-up Meeting Comments to:

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www.mass.gov/massdot/northernnewenglandrail