
Economic Impact of Passenger Rail Expansion along the New Hampshire Capitol Corridor

Prepared for the NH Rail Transit Authority (NHRTA)

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Topics

1. Proposed Passenger Rail Service
2. Objectives of the Study
3. Analysis Methodology
4. Findings
5. Next Steps

Overview of TranSystems Contract

- Hired to package *existing information* on the Capitol Corridor project to seek funding for High Speed Rail “shovel ready” funds.
- FRA advised NH to seek planning funds.
- FRA funding is for *intercity rail*, not commuter rail—necessitating new work to develop an appropriate operating plan, schedule and ridership estimates.

Ridership

- *Past ridership estimates* available for Boston to Montreal intercity service and Lowell to Manchester commuter rail service.
- *Quick method* for this project based on Downeaster ridership and ridership growth.
- *Assume fares* slightly greater than bus service fares.
- *No new modeling* of highway traffic conditions or mode choice decisions

Proposed Passenger Rail Expansion

Upgraded Tracks - Lowell MA to Concord NH (73 miles)

Speed to 79 mph
(90 min. Concord to Boston)
(75 min. Manchester to Boston)

Frequency - 5-Trains/Day between Concord and Boston (*increasing to 10 by 2019 and 12 by 2024*)

Four New Stations in NH

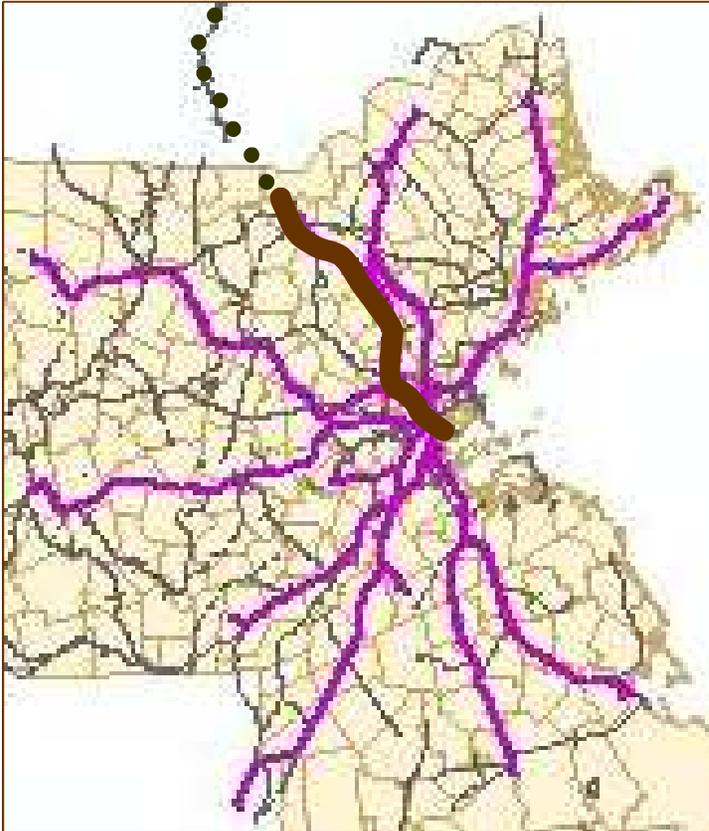
Schedule similar to current Downeaster and B&M service provided in 1964

Bi-state region: MA (Middlesex & Essex counties); NH (Hillsborough, Merrimack & Rockingham counties)

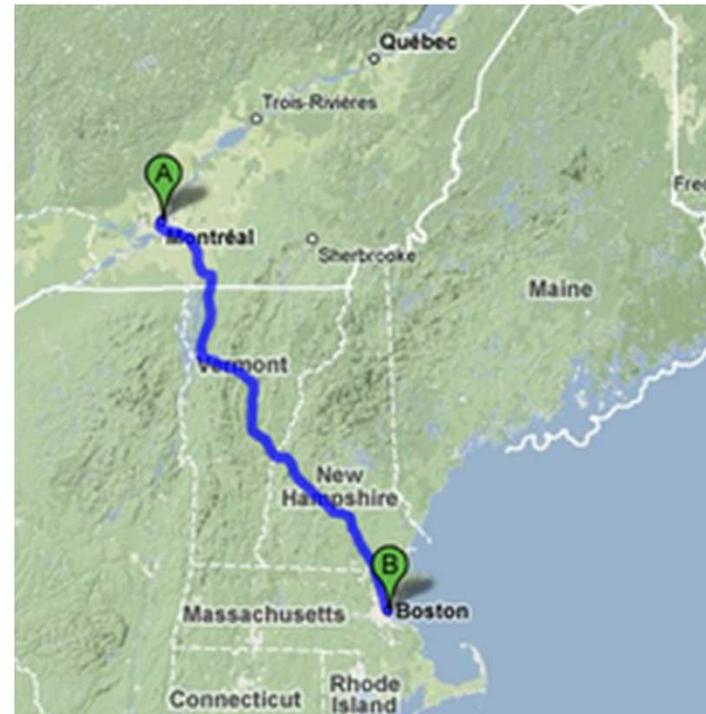


Context

Extending inter-city from Lowell MA to Concord NH (73 miles)



Part of a Larger Boston-Montreal High Speed Rail Corridor

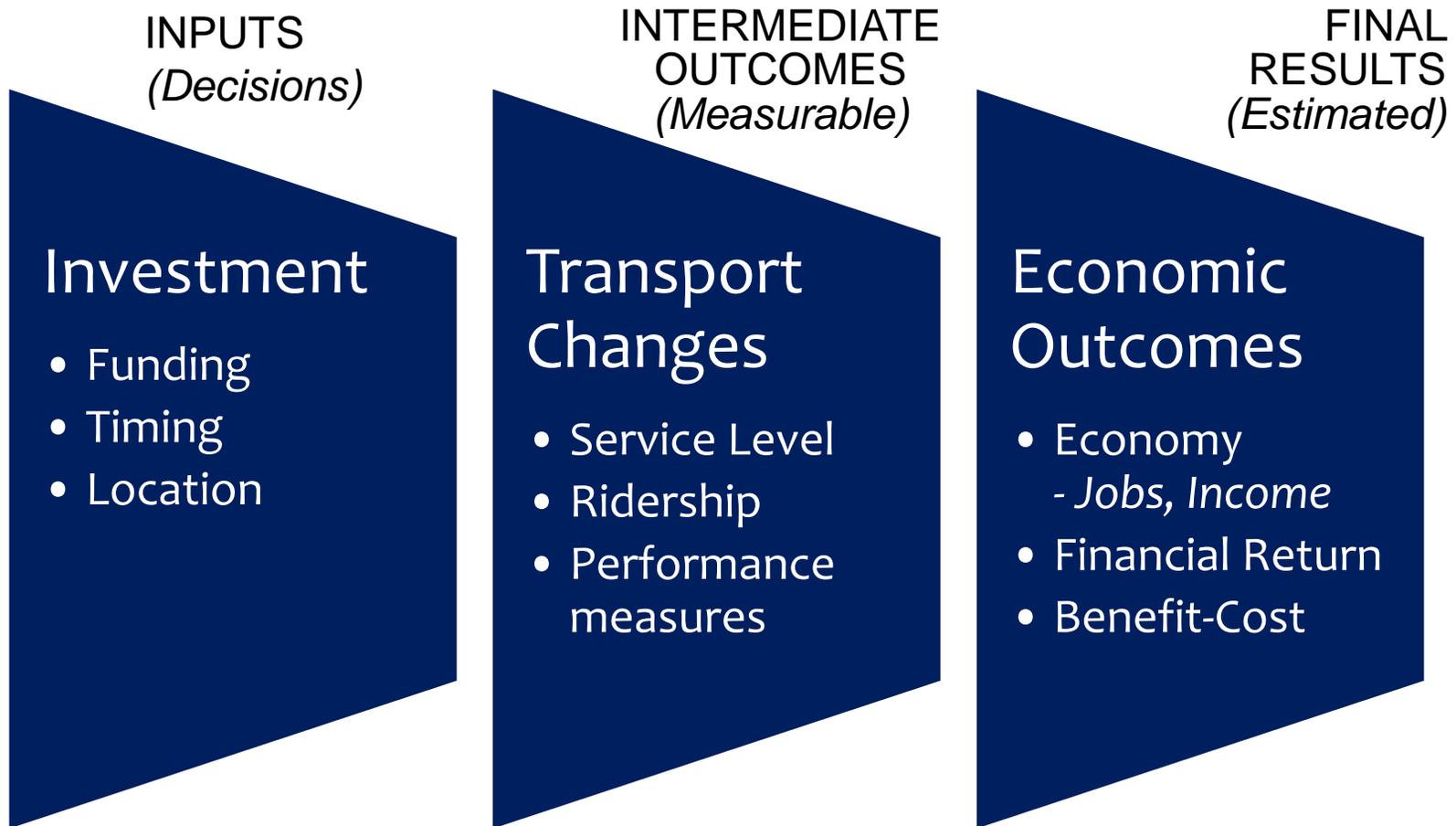


**489-mile corridor, up to 110mph,
travel time 4 ½ hours**

Ridership Estimates

Station	2014 (5 RT/day)	2019 (12 RT/day)	2024 (12 RT/Day)
Lowell	34,628	78,796	85,168
Nashua	132,558	301,637	326,028
Bedford/Airport	43,502	98,989	106,993
Manchester	166,198	378,185	408,766
Concord	64,712	147,253	159,160
Total	441,597	1,004,859	1,086,116

Impact Measurement Categories



Types of Travel-Related Benefits

New Rail Passengers

- Switch from driving a car
 - Switch from riding a bus
 - Switch from driving to/from commuter rail
- *Faster travel, less operating cost*

Remaining Cars & Trucks on Highways

- Commuters, Business Travelers and Truck Deliveries with origin, destination, schedule needs not conducive to rail
- *Less congestion >> faster, greater reliability, less cost*

Other Effects

→ *Less Air Pollution, Fewer Accidents*

Valuation of Benefits

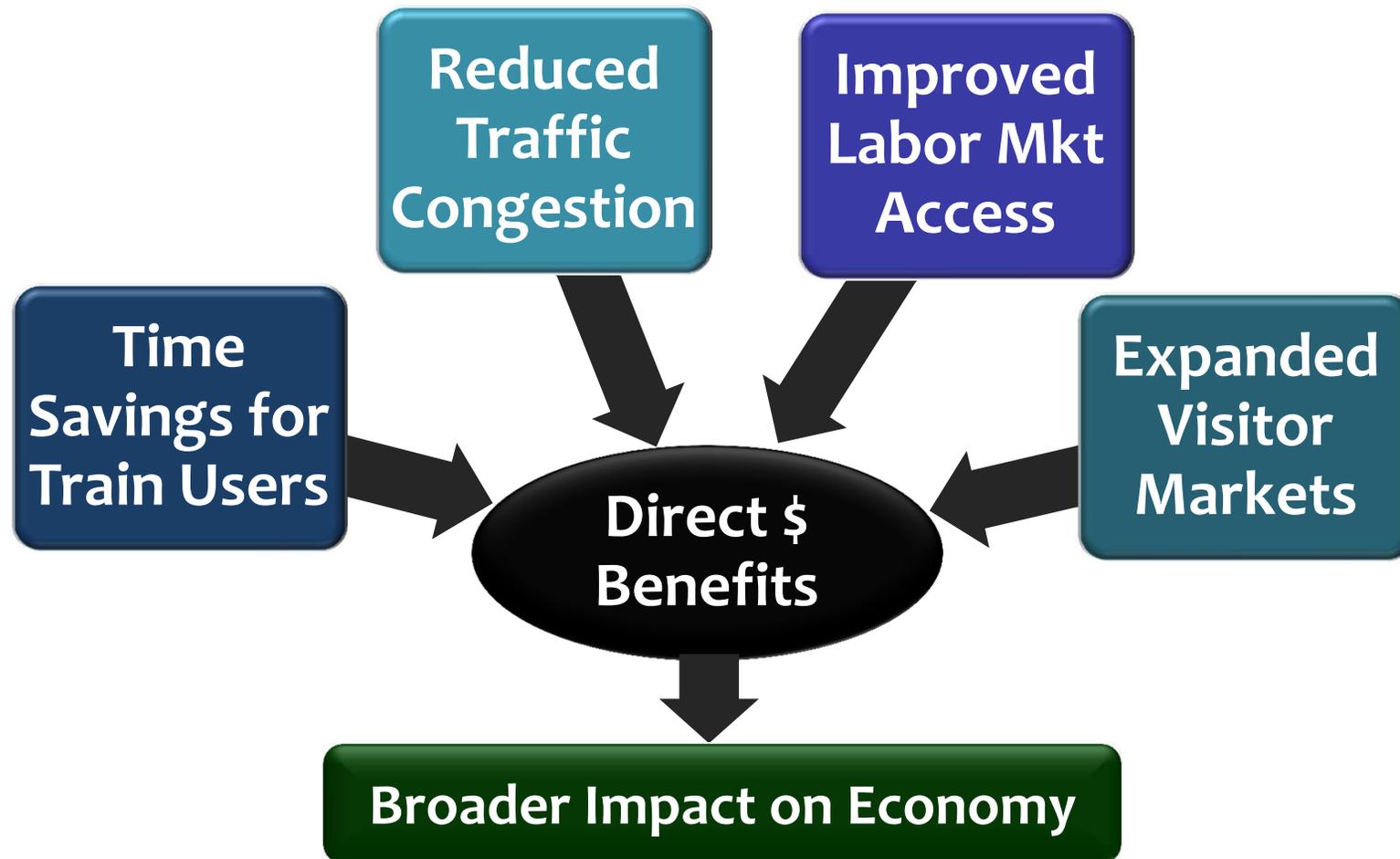
TRAVEL RELATED BENEFITS in 2030	\$ millions (constant 2009)
Net Time savings (auto, bus, and rail)	\$ 30.3 m
Reliability savings (auto)	\$ 1.5 m
Vehicle operating cost (auto)	\$ 15.5 m
Net safety benefit (auto, bus, and rail)	\$ 4.6 m
Net emissions benefit (auto, bus, and rail)	\$ 1.1 m
Total 2030 Traveler Benefits	\$ 53.0 m

Benefit Cost Analysis

Annual Twenty Year Stream in Real 2009 Dollars, Time Value using a 5% Discount Rate	\$ millions
Present Value of Benefits	\$ 557 m
Present Value of Costs	\$ 435 m
Net Present Value	+ \$ 122 m
Benefit/Cost Ratio	+ 1.28

Issues affecting ultimate results: track, train, station & equipment costs, fare and service characteristics, ridership results, highway traffic growth

Types of Impact on the Economy



Types of Economic Impact

- **Commuter Travel Cost** – speed, reliability, expense
→ *Commuters save money, Employers save money*
- **Business Travel Cost** – speed, reliability, expense
→ *Businesses save money, increase productivity*
- **Labor Market** – employer access to broader labor mkt., worker access to broader job mkt., better skill/need match
→ *Greater productivity and job growth*
- **Visitor Market** – larger tourism & business travel market
→ *Growth of visitor-serving business activity*
- **Indirect + Induced Economic Growth** – suppliers to the directly affected businesses, also worker re-spending
→ *Additional business growth*

Economic Impact Findings

Total Economic Impact of Construction (2 years) 2030

	Constr. per yr	Sum (2 yrs)	O&M per yr
<i>Jobs (Number)</i>	1,740	3,480 job-yrs	200
<i>Business Sales (\$Millions)</i>	\$258m	\$516 m	\$24m
<i>Labor Income (\$Millions)</i>	\$97m	\$194m	\$12m

Total Economic Impact of Rail Expansion in 2030

	NH	MA	Total
<i>Jobs (Number)</i>	998	102	1,100
<i>Business Sales (\$Millions)</i>	\$120m	\$15m	\$134m
<i>Labor Income (\$Millions)</i>	\$50m	\$6m	\$56m

Sum of Long-Term Economic Impact over 20 Years

	Total
<i>Job-Years (Number)</i>	19,500
<i>Business Sales (\$ Billions)</i>	\$2.4 billion
<i>Labor Income (\$ Billions)</i>	\$1.0 billion

Additional Forms of Impact

- **Airport connectivity** and activity growth
- **Land development** near train stations
(higher property values and tax revenues)
- Supporting **transit-oriented development** initiatives
- Supporting **regional economic development** strategies
(via inter-city business connections)
- Impact on alternatives **sources of revenue** for operations

Remaining to be Examined

- **Travel Modeling**

*Traffic Conditions - volumes, speed, reliability / variability;
by time of day and hwy segment, now and future*

*Mode Choice - Car/Train mode split: commuter & other travelers;
also airport ground transport*

- **Land Use and Economic Development**

Station area development

Broader regional tourism and business development

- **Surveys**

Travel mode and destination patterns: for tourism and regional travel