



April 28, 2021

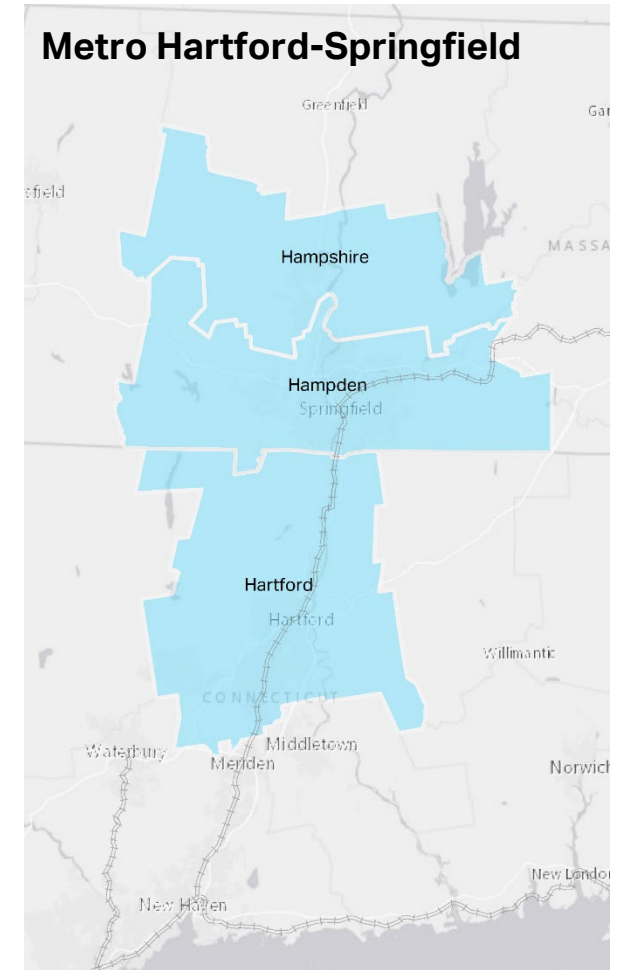
# Economic Benefit of Regional Rail Investment in the Metro Hartford Springfield Region

DRAFT

AECOM analyzed the potential economic benefits of proposed rail improvements which have clear potential to economically reconnect Hartford and Springfield to the Northeast Corridor (NEC):

- Completion of the Hartford Line between Hartford and Springfield
- East-West Rail Improvements in Massachusetts within the Worcester-Springfield Corridor

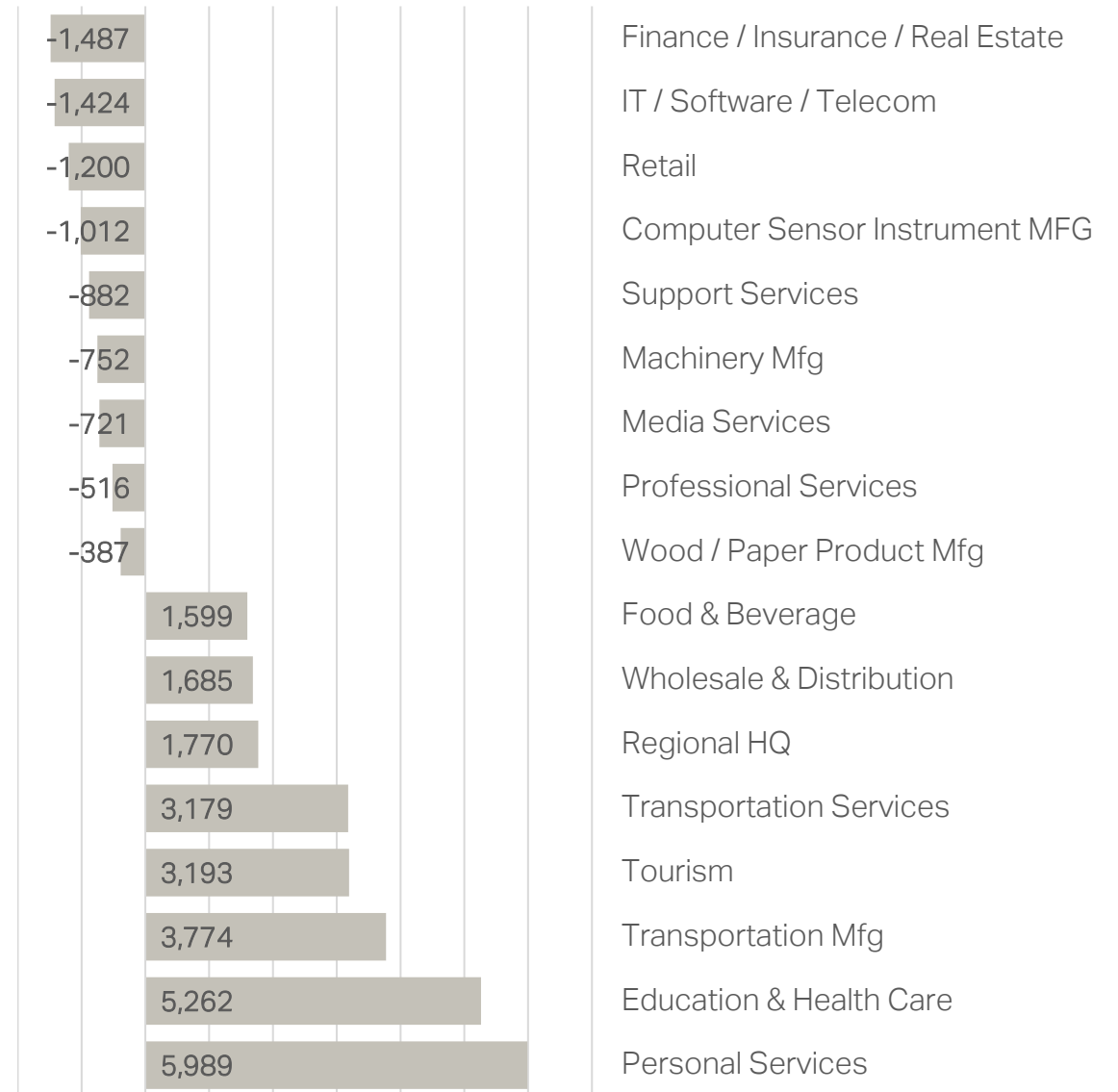
These projects would reconstitute the former **Inland Route**; regular service from Boston to New York via Worcester, Springfield, and Hartford



The project study area includes the counties of Hartford, CT; Hampden, MA; and Hampshire, MA.

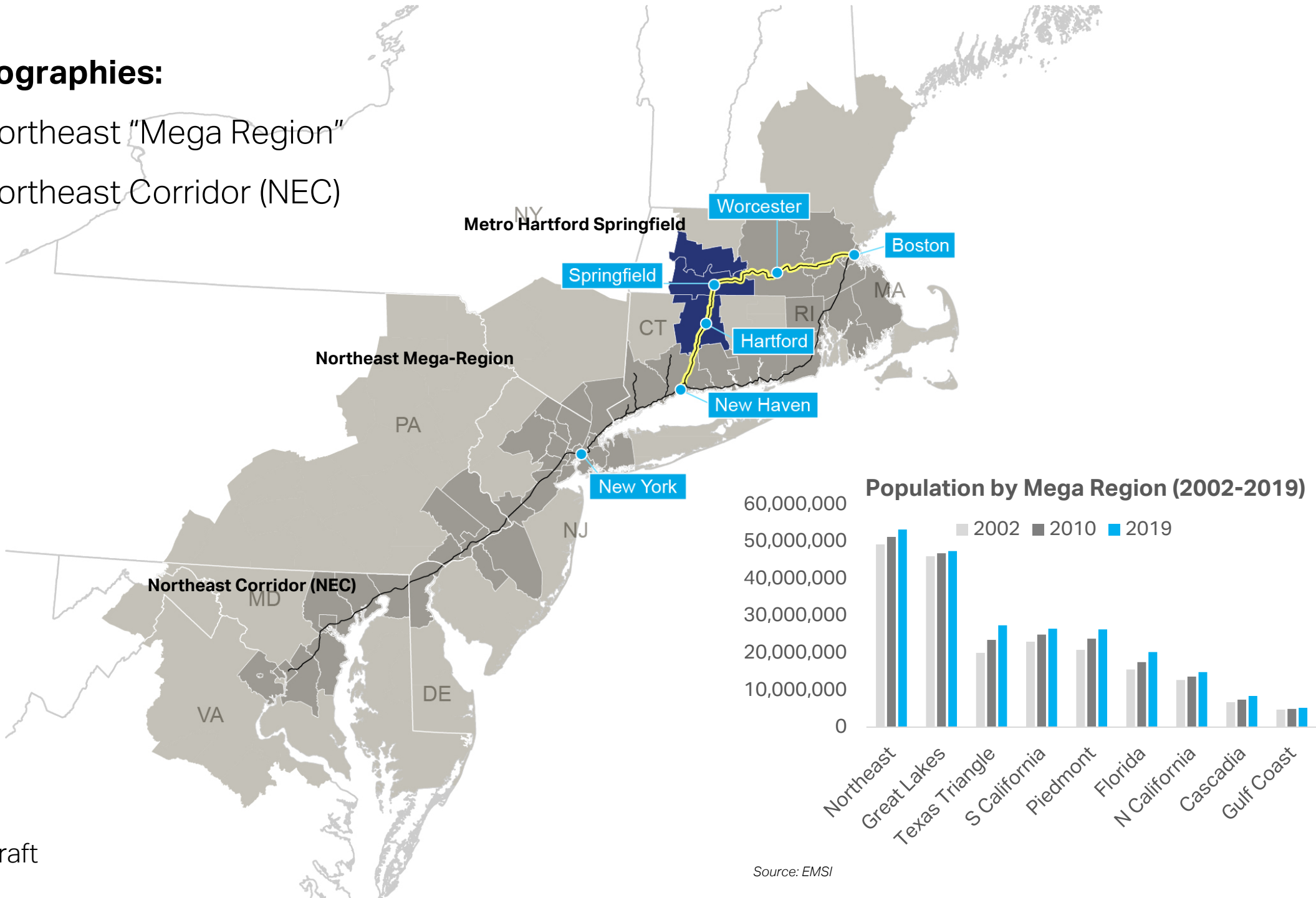
- Metro Hartford-Springfield is economically consequential:
  - 1.6 million residents / total output in excess of \$120 billion.
- The insurance sector has lost about 1,500 jobs since 2010.
- Professional services (LQ of 0.8) stands out as an under-represented sector.

**Metro Hartford-Springfield Job Creation, 2015-2019**



Two geographies:

- 1.The Northeast “Mega Region”
- 2.The Northeast Corridor (NEC)



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Source: EMSI



## **A Distinct and Consequential Region**

The Tri-County region today ranks among the top 40 US metropolitan areas, the region remains defined by sluggish growth since the 1990's, representing about 130,000 jobs not created, with specific weakness in professional services employment.

## **Missing Regional Transit**

Hartford-Springfield lost most of its regional rail access in the 1970's and has since experienced a prolonged period of low rail / transit use—both in general and among those in professional, financial, information, and insurance jobs.

## **Housing Gap**

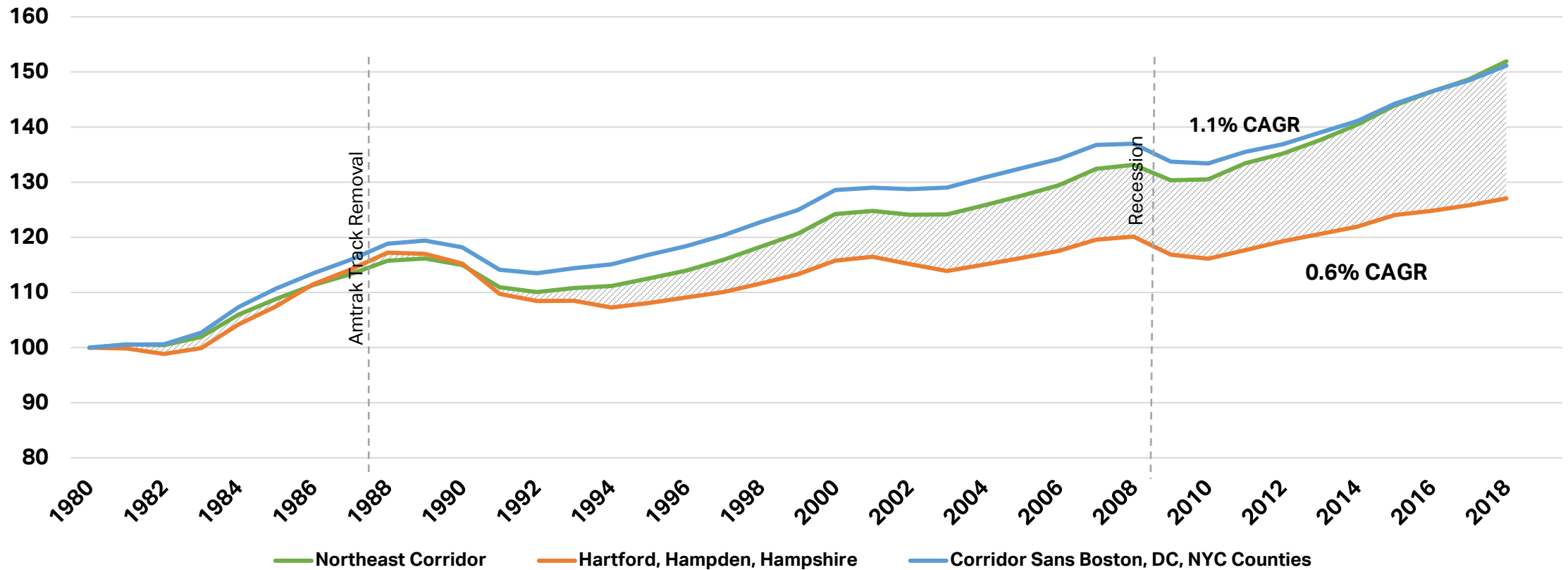
The Tri-County area has a relative abundance of older housing stock relative to NEC averages, with a significantly lower pace of new residential construction since 2010.

## **Equity Concerns**

Hartford and Springfield support a combined poverty rate of 27.5% (12.5% NEC / 9.5% excluding NYC. Median household income is less than half that of NEC averages.

- Since 1990, the Tri-County Region accelerated out of recession on a slower growth trajectory (0.6% annual job growth); 130,000 jobs not created since the early 1990's.
- Removal of Amtrak rail in the mid-1980' restricted Tri-County access to sectors which have experienced faster NEC growth, and tend to be more reliant on transit

**Total Jobs Index (1980 = 100), Percent Growth Over Baseline**



Source: Bureau of Economic Analysis, 2020

In context with NEC trends, Metro Hartford Springfield demonstrates:

- Greater reliance on specialty industries for job growth compared to the more economically diversified NEC
- A regional economy which has evolved differently, with consequential gaps in professional services and finance.

**Top 10 Most Concentrated Industries, 2019**

Metro Hartford Springfield		Northeast Corridor (NEC)	
Industry	Location Quotient	Industry	Location Quotient
Cable and Other Subscription Programming	12.88	Securities /Commodity Brokerage	3.12
Hardware Manufacturing	7.14	Securities /Commodity Exchanges	2.75
Aerospace Parts Manufacturing	6.93	Other Financial Investment Activities	2.71
Cutlery and Hand tool Manufacturing	6.84	Apparel, Piece Goods Wholesaler	2.48
Insurance Carriers	5.61	Specialty Hospitals	2.45
School and Employee Bus Transportation	4.98	Colleges, Universities	2.38
Spring and Wire Product Manufacturing	3.83	Social Advocacy Organizations	2.08
Engine, Turbine, and Transmission MFG	3.55	Other Information Services	2.07

Source: EMSI

### Professional Services Industries, 2019 Data

Description	Metro LQ	NEC LQ
Legal Services	1.02	1.75
Accounting, Tax, and Payroll Services	0.81	1.42
Architectural, Engineering, and Related Services	0.89	1.03
Specialized Design Services	0.49	1.42
Computer Systems Design and Related Services	0.87	1.46
Management, Scientific, and Technical Services	0.62	1.47
Scientific Research and Development Services	0.37	1.98
Advertising, Public Relations, and Related Services	0.81	2.00

The Tri-County region has effectively **"missed out"** on consequential job growth in finance, management, and professional services) where workers are more likely to use public transportation

### Industry Sector Annualized Growth Rates, Tri-County Region / Northeast Corridor

Industry Sector	Metro Growth Since 2010	NEC Growth Since 2010	Transit Ridership Shares		
			Metro	US Average	NEC
Ag, Const, Mfg, Wholesale, Transport, Utilities	0.4%	0.3%	1.6%	2.7%	15.6%
Information, Finance, Professional Svcs	0.0%	1.1%	2.7%	7.7%	29.4%
Education and Healthcare	0.6%	0.9%	2.6%	4.7%	20.6%
Retail Trade	-0.3%	-0.1%	4.2%	4.5%	21.5%
Other Services	0.3%	0.3%	2.0%	4.9%	22.9%
Arts, Entertainment	0.3%	1.4%	6.9%	7.0%	29.3%
Local, State, Federal Government	-0.2%	-0.2%	1.3%	5.1%	22.0%

Source: ACS, 2019



Trends favoring work from home have been accelerating for more than 10 years, particularly in metro areas with limited transit infrastructure. Two trends are apparent regarding work from home:

- **3.9% Growth** - Metros with “legacy” transit have seen slower growth in work from home
- **10% Growth** - Dallas, Atlanta or Charlotte have more limited transit infrastructure, growth in trips by car, congestion, and higher rates of telecommute.

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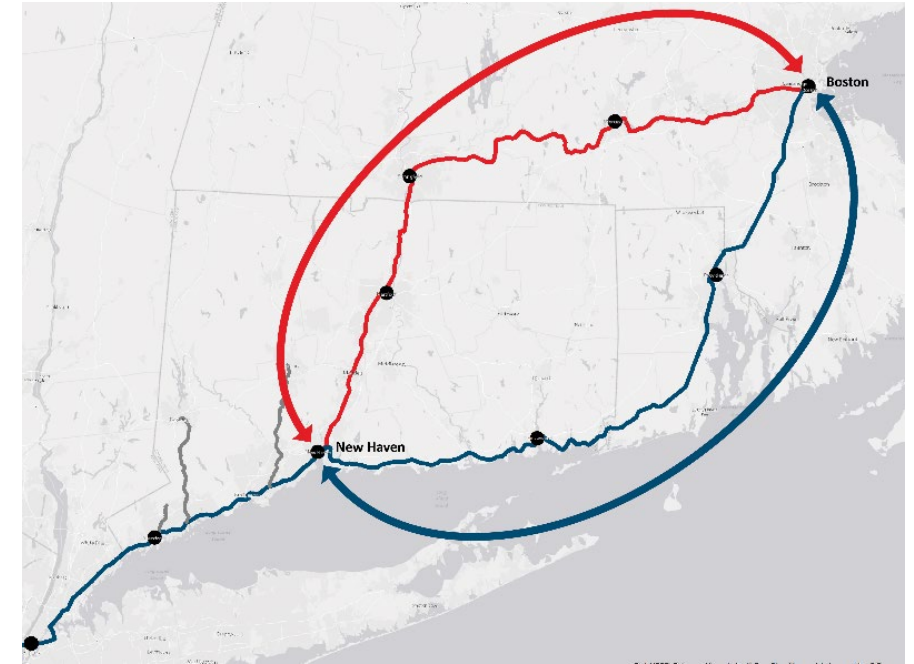
Journey to Work Trends, Respective Downtowns, 2000-2016

Central Area	Transit Share 2016	% Change in Telecommute Share 2000-2016	2016 Drive Share
NYC	79.7%	-1.0%	9.1%
Chicago	55.9%	6.0%	33.4%
Boston	53.5%	3.9%	35.6%
San Francisco	52.2%	2.6%	32.2%
D.C.	46.3%	6.6%	43.7%
Philadelphia	45.5%	3.8%	40.2%
Seattle	35.1%	5.4%	48.7%
Denver	22.4%	11.8%	66.3%
Los Angeles	20.2%	6.4%	74.6%
Houston	16.3%	10.2%	80.8%
Atlanta	13.5%	11.3%	80.1%
Miami	13.0%	12.4%	79.6%
San Diego	9.6%	9.7%	80.1%
St. Louis	8.1%	10.6%	87.8%
Dallas	8.0%	11.4%	88.3%
Charlotte	7.8%	14.7%	85.5%
Detroit	4.9%	2.2%	90.7%

Source: US Census Transportation Products, Bureau of Labor Statistics

This study evaluates the benefits of proposed rail improvements in the Connecticut Valley region:

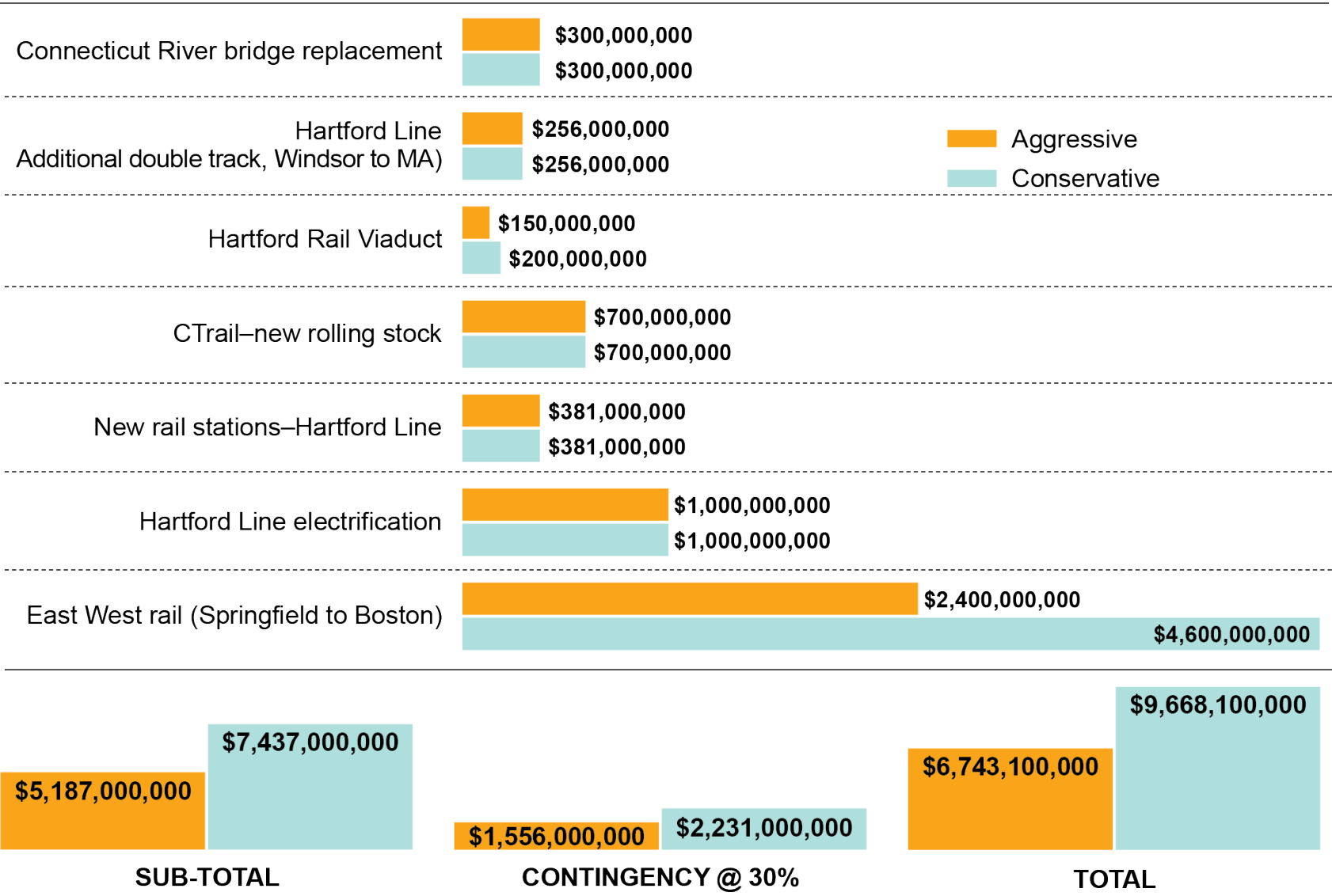
- **Completion of the Hartford Line** from New Haven through Hartford and Springfield, covering infrastructure, electrification, **double tracking**, a new **Connecticut River Bridge**, sidings and new / enhanced stations.
- **East-West Rail Improvements** in Massachusetts within the Worcester-Springfield Corridor to resolve freight conflicts and other alignment challenges to expand passenger service from Springfield to Boston



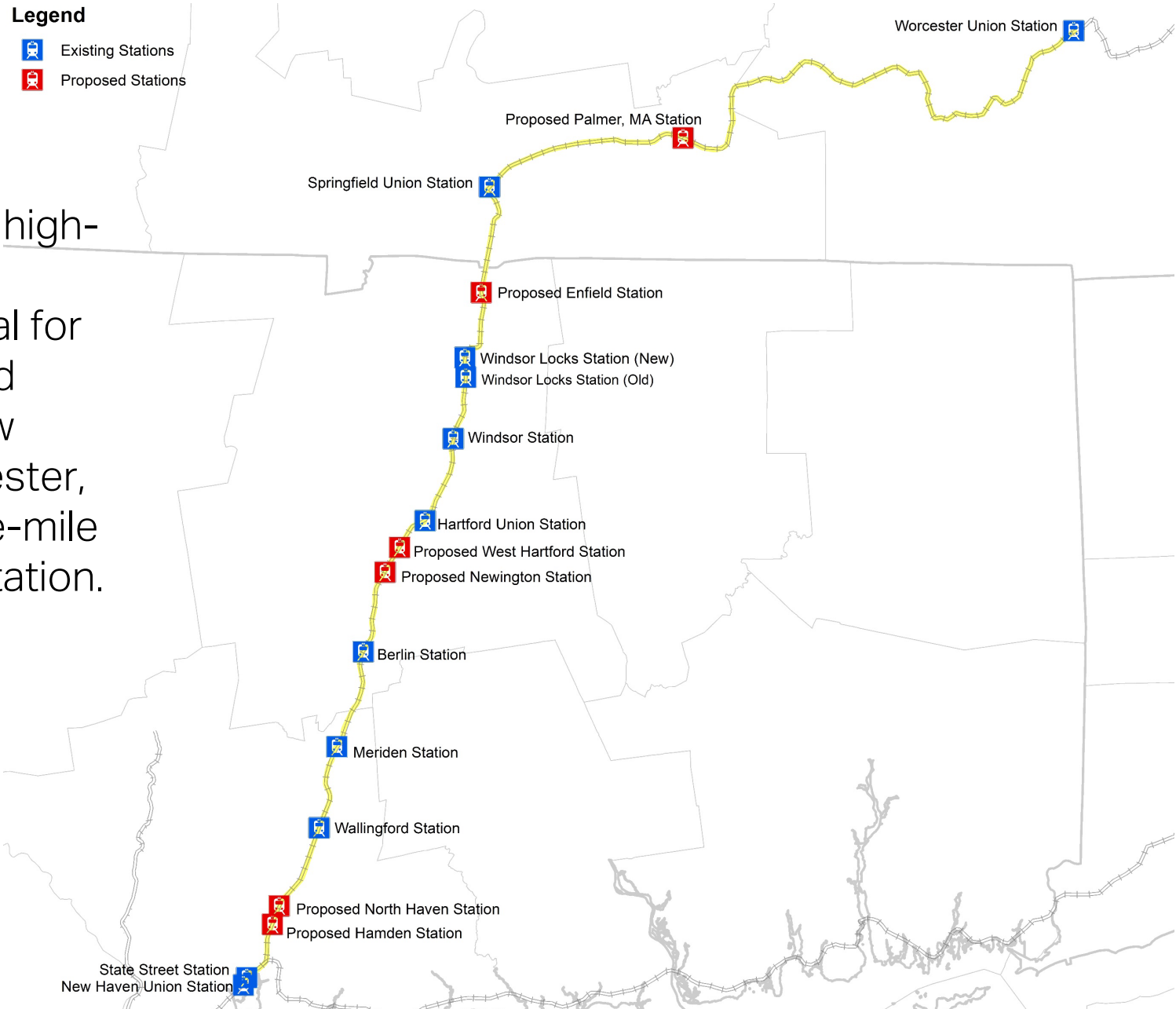
**While the distance between New Haven and Boston is nearly identical between the NEC or NHHS/East-West (150 miles), NEC travel time is shorter on Acela (2 hrs 19 min) versus the Hartford Line and the Lakeshore limited (3 hours 51 minutes).**

# Estimated Construction Costs, Regional Rail Improvements

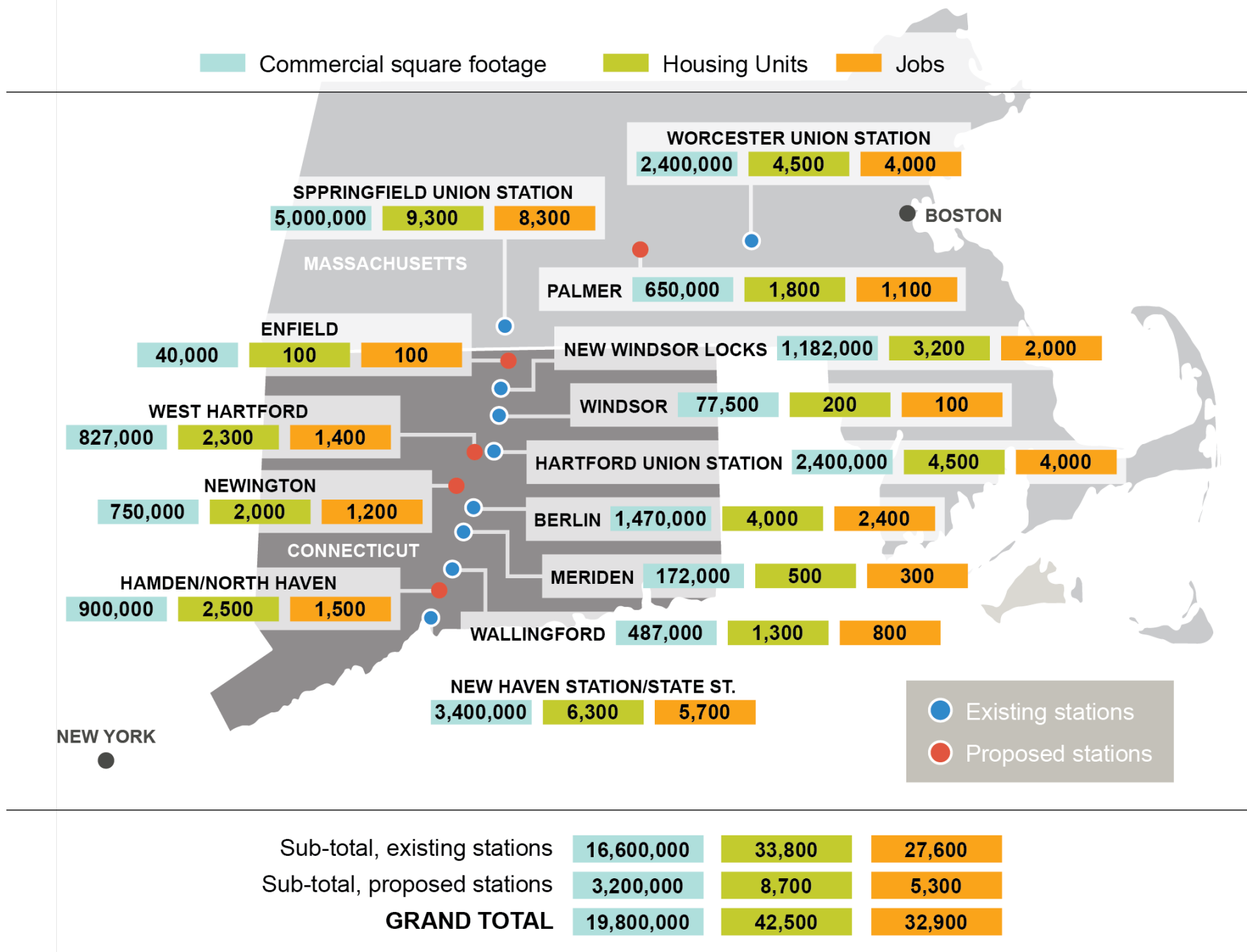
(Current USD)



AECOM completed a high-level analysis of TOD development potential for existing and proposed stations between New Haven, CT and Worcester, MA, focused on a one-mile radius around each station.



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## Conservative Approach

- Statistical analysis of correlation between commuter rail ridership and professional services, finance, insurance, job percentage, across top urban counties, versus counties with legacy commuter rail service
- A generally positive relationship between professional services transit shares and concentration of professional services jobs, with significant improvement in R Correlations

## Aggressive Approach

- The share of jobs in professional services relative to total private sector employment (BLS QCEW definition).
- Metro Hartford Springfield ranks 37th in the number of professional services jobs (25.4% of private sector employment).

Analysis outcomes point to an average job gap of roughly 20,000 to 40,000 jobs across the Metro Hartford Springfield Region

**Direct Costs**

Direct construction spending, covering construction labor, wages, materials and equipment for the East-West and Hartford Line. Costs are estimated at between \$6.4 - \$9.4 billion (2021 \$USD) over an assumed 10-year construction period.

**Indirect Benefits**

The ripple effect of growth in 20,000 to 40,000 Tri-County Jobs and construction of future TOD residential and commercial real estate. Input - output multipliers from EMSI are used.

**Direct Benefit: Jobs**

Growth of 20,000 to 40,000 Tri-County future new jobs in professional services and other sectors incrementally over 30 years. Jobs are shown for Year 30, wage & output benefits are shown as 30-year totals.

**Direct Benefits: TOD**

Construction of future transit-oriented residential & commercial development is based on assumptions for construction costs, FAR, and capacity for development.

**Fiscal Benefits**

Estimated value capture generated by new TOD-linked property taxes and income taxes paid to future employees in construction, services, and other sectors. Cumulative benefits are framed over 30 years, in current 2020 \$USD

## Direct Economic Benefits

	Direct Benefits, Present Value	Conservative	Aggressive
Direct Economic Benefits, New Regional Jobs, Linked to Transit Improvements	New Regional Jobs, 30 Years	20,000	40,000
	Cumulative New Wages, 30 Years	\$20,094,000,000	\$40,187,000,000
	Cumulative New Regional GDP, 30 Years	\$35,428,000,000	\$70,856,000,000
Transit Oriented Development New Construction Investment, Present Value	TOD Construction Jobs (Full-Time Equivalent)	97,000	115,000
	Cumulative Construction Wages	\$6,799,000,000	\$7,463,000,000
	Cumulative Construction Investment	\$11,332,000,000	\$13,422,000,000
Fiscal Implications	Cumulative Property Taxes, 30 Years	\$2,770,000,000	\$3,290,000,000
	Cumulative Income Taxes, 30 Years	\$1,055,000,000	\$2,110,000,000
	Total Fiscal Benefits	\$3,825,000,000	\$5,400,000,000
Total Benefits, Cumulative, 30 Years	New Professional Services Jobs	20,000	40,000
	New Construction Jobs	97,000	115,000
	New Regional GDP	\$46,760,000,000	\$84,278,000,000
	New Fiscal Benefits	\$3,825,000,000	\$5,400,000,000

Source: AECOM Analysis

**Indirect Economic Benefits**

	Indirect and Induced Benefits	Conservative	Aggressive
Indirect / Induced Economic Benefits, New Regional Jobs, Linked to Transit Improvements	Jobs, Year 30	32,000	63,000
	Total Wages, Year 30, Present Value	\$1,621,000,000	\$3,242,000,000
	Regional GDP, Year 3, Present Value	\$3,521,000,000	\$7,041,000,000
Transit Oriented Development New Construction Investment, Present Value	Jobs, Year 30	133,000	158,000
	Total Wages, Year 30, Present Value	\$5,268,000,000	\$6,240,000,000
	Regional GDP, Year 3, Present Value	\$11,628,000,000	\$13,772,000,000
Total Benefits, Year 30	Jobs, Year 30	165,000	221,000
	Total Wages, Year 30, Present Value	\$6,889,000,000	\$9,482,000,000
	Regional GDP, Year 3, Present Value	\$15,149,000,000	\$20,813,000,000

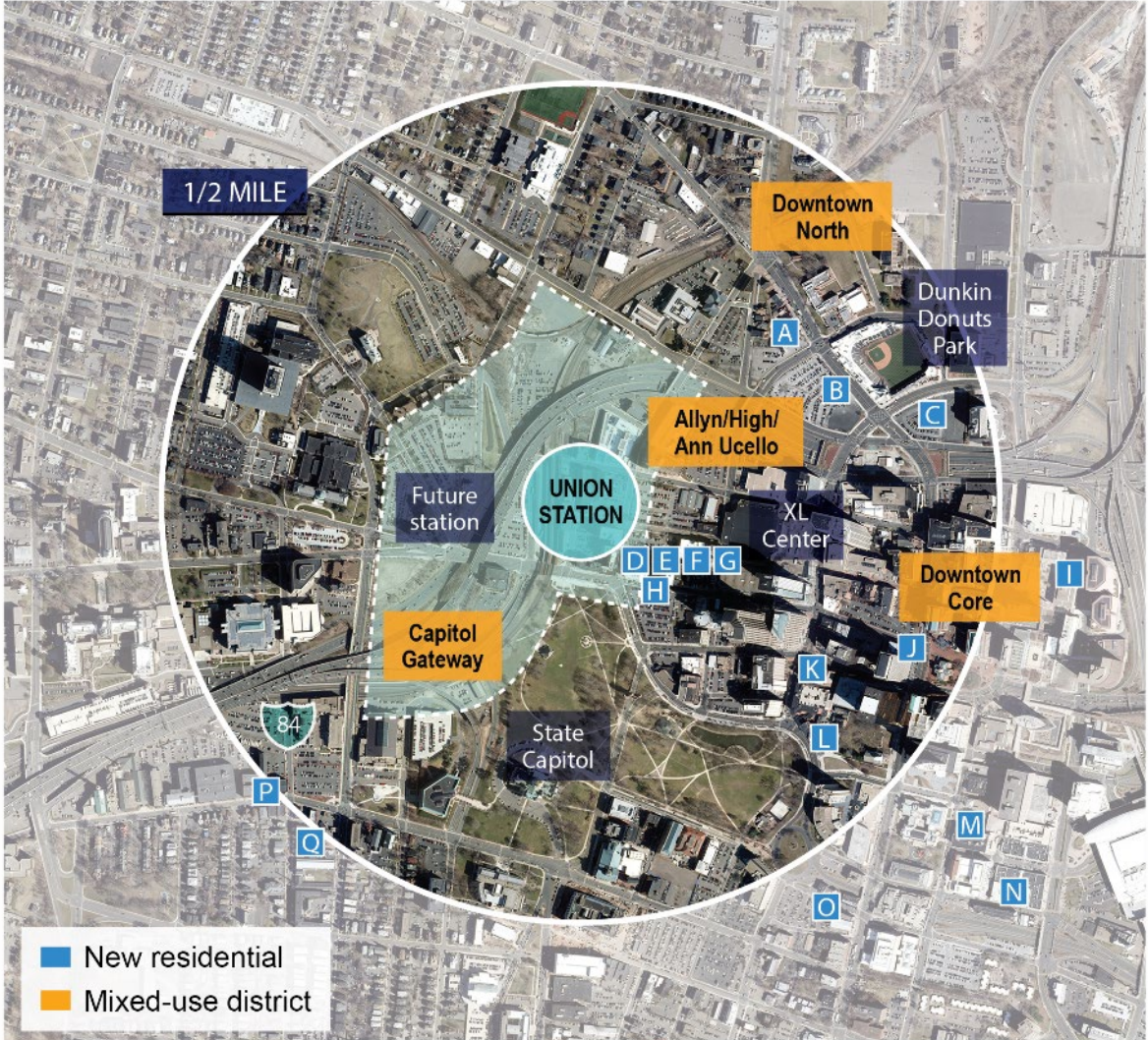
Source: AECOM Analysis, EMSI



New Haven Union Station + State Street



Hartford





Springfield



Worcester

