

Economic Impact of Transportation in Greater Boston



18 June 2015

High costs contribute to slower growth

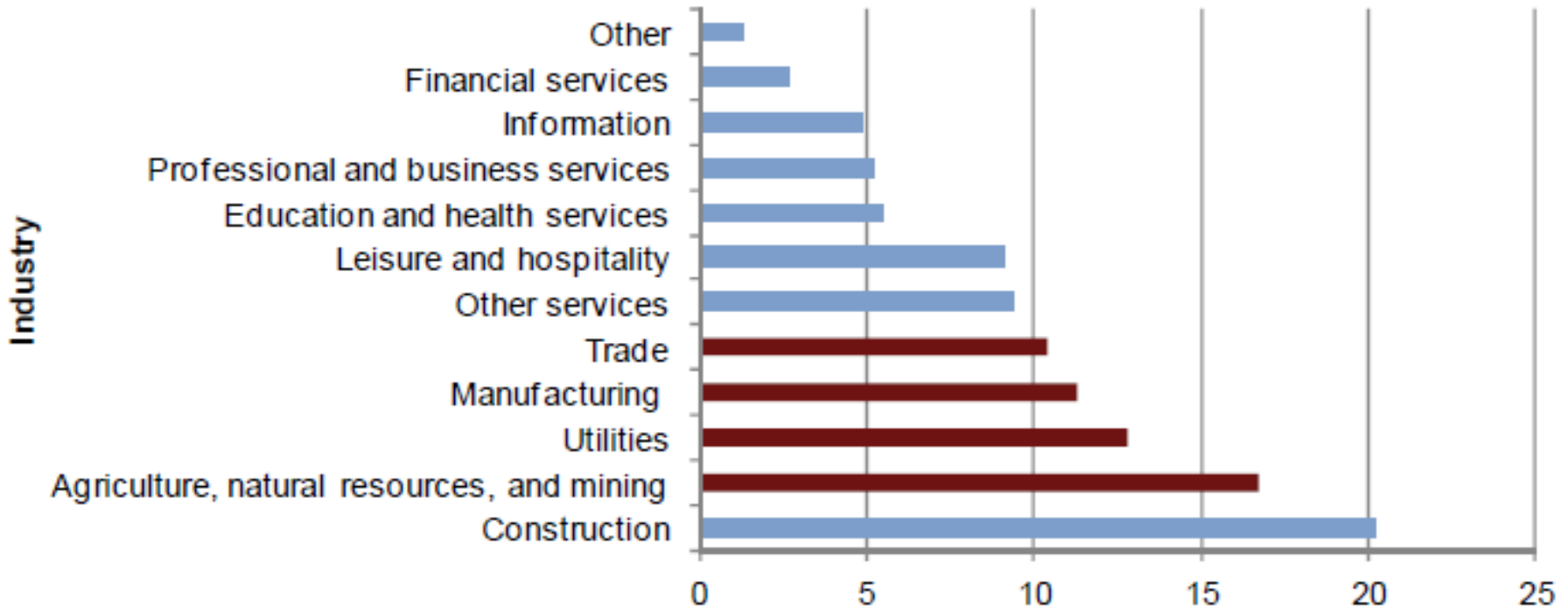
Massachusetts and Surrounding States	Cost of Doing Business		Unit Labor Cost		Energy Cost		State & Local Tax Burden	
	Index	Rank	Index	Rank	Index	Rank	Index	Rank
Massachusetts	124	1	117	1	169	3	99	19
Connecticut	113	4	99	24	183	2	111	8
New Hampshire	111	7	104	7	162	4	80	45
New York	110	9	97	29	146	8	142	1
Vermont	110	10	104	5	130	11	111	7
Rhode Island	102	14	92	39	150	6	109	9

SOURCE: Moody's Analytics

NOTE: An index value of 100 means a state's costs are equal to the U.S. average. States are ranked out of 51 (50 states plus the District of Columbia). A rank of 1 is the highest cost; a rank of 51 is the lowest.

Penalty of poorly maintained system felt throughout the economy but hard to see

Transportation services purchased to produce an additional \$1 in the industry shown, cents



SOURCE: US Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *Transportation Satellite Accounts: A Look at Transportation's Role in the Economy*, Washington, DC: 2011, page 35.

Estimating the impacts in Massachusetts

- **Economic penalty** of not maintaining the transportation system estimated by comparing two scenarios:
 - Economic outcomes anticipated with status quo level of funding – growing backlog
 - Economic outcomes anticipated with bringing system into a state of good repair
- Applies the **HERS-ST model** developed by FHWA:
 - Tailored to physical and operating characteristics of Massachusetts system
 - Relates funding decisions to system performance
- **Job impacts** assessed outside of HERS-ST using detailed data from US input-output accounts (BEA)



What did we find?

By 2030, losses in highway system performance cost the Massachusetts economy between **\$11.1 and \$14.9 billion** (in discounted 2008 dollars).

An additional **\$6.6 to \$11.1 billion** in operating and safety costs add to the losses.

Between **12,300 and 15,600 jobs** are associated with those economic losses.

To the degree that the Commonwealth's transit systems become constrained and shift travelers to cars, these estimates are conservative.

Total losses range between **\$17.7 and \$26.0 billion** by 2030. This is about 5 to 7 percent of the Massachusetts economy OR about 2 to 3 times the loss associated with the 2009 recession. The difference is that the transportation penalty is a slow gradual pressure on growth.



Purpose of the Benefits of Transit Project

Tell the story of the critical role the system plays in Greater Washington.

How does the system influence the region's economy beyond traditional mobility benefits?

What does this mean for the region?



It really seems like Metro helped make something happen

Ballston 1980

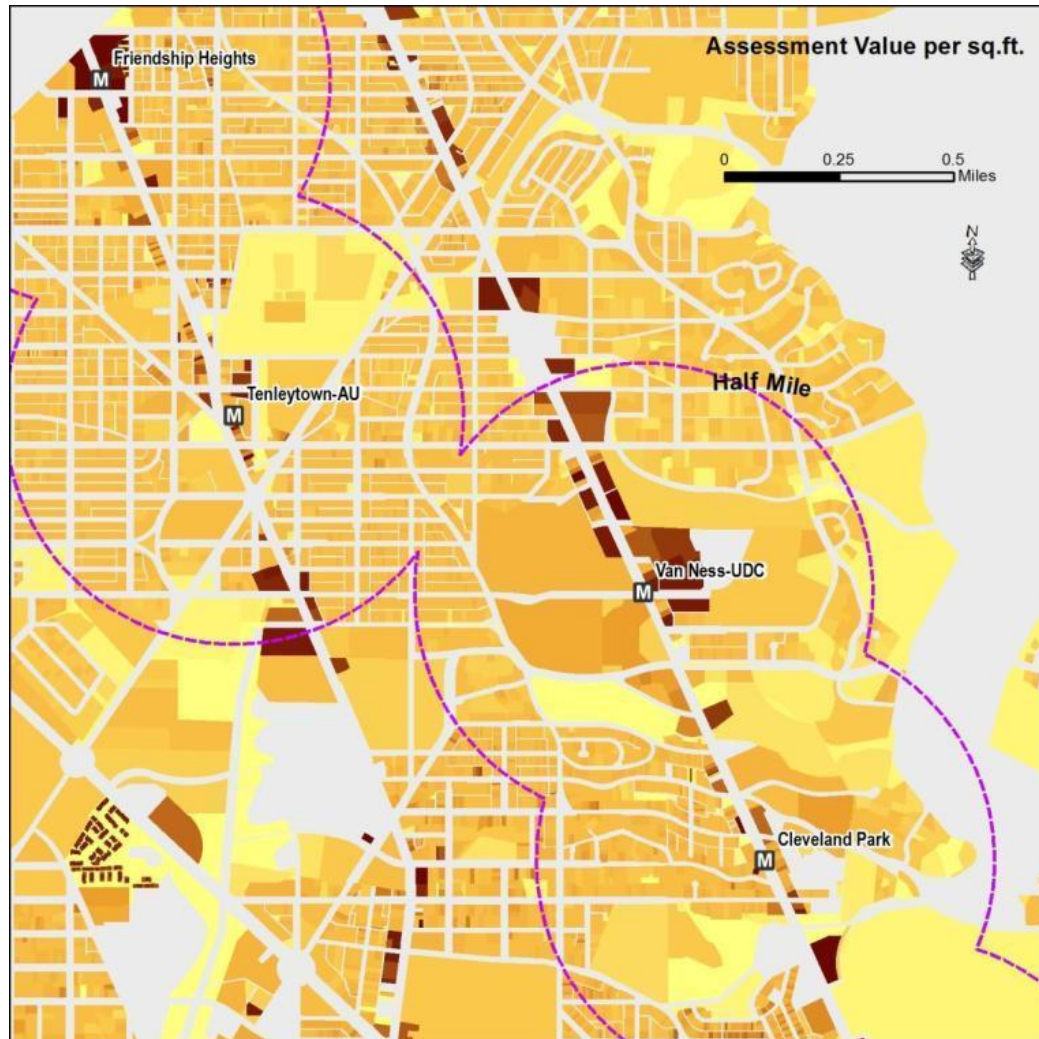


Ballston 2001



Source: J. Antos, WMATA Benefits of Transit Study and Arlington County

Proximity to Metro increases property values



\$212 billion of real estate value within half-mile of rail stations

Proximity to rail increases property values by 7– 9%, average over the buffer

Source: J. Antos and WMATA Benefits of Transit Study

Transit moves the regional economy

Without transit:

- Peak travel times up 25%
- Congestion fractures the regional economy
 - Employers lose access to workers
 - We lose competitiveness of single economy



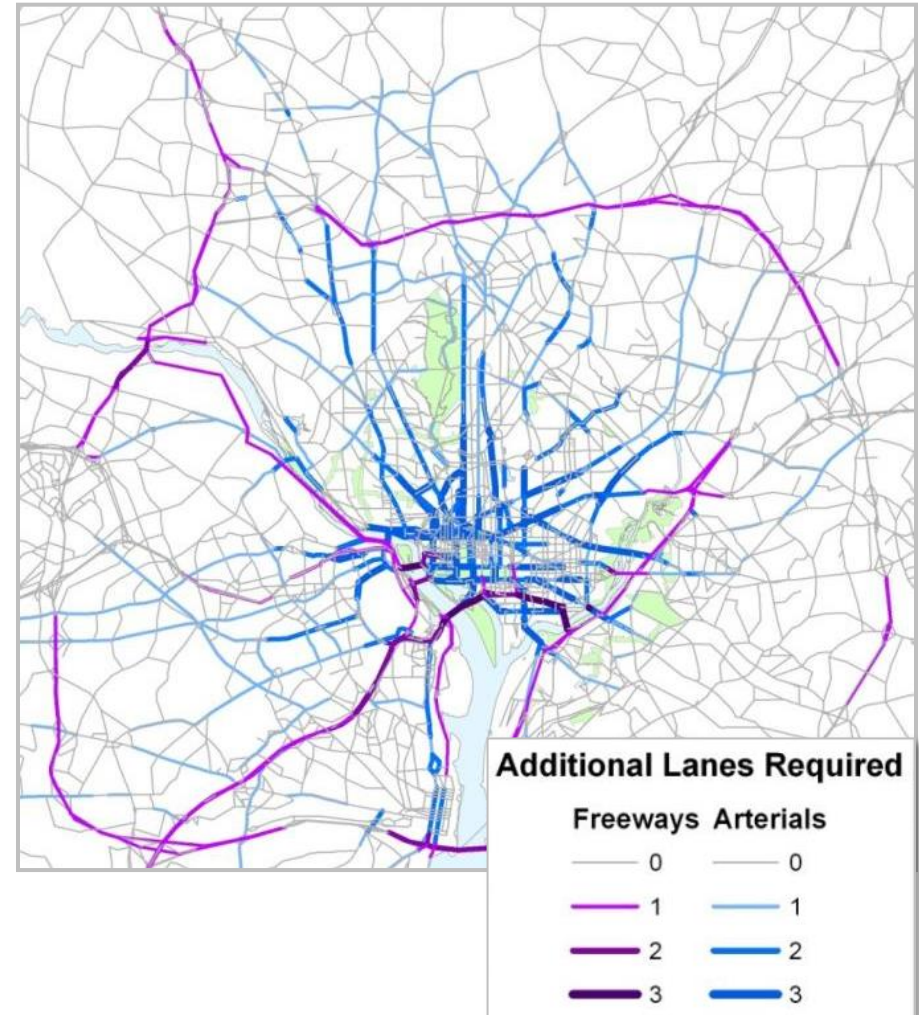
Without transit:

+1 million auto trips per day

+1,000 lane-miles needed to keep existing levels of congestion

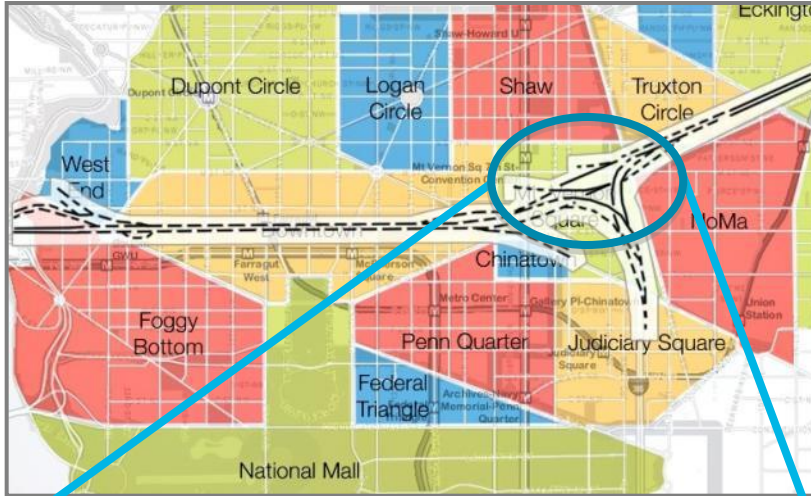
EQUALS ...

- Equivalent of nearly 2 new Capital Beltways
- 4 – 6 new lanes on Potomac crossings
- ~ \$6.7 billion



Source: WMATA Benefits of Transit Study

Metro makes development possible



Without Metro:
Planned highway interchange covers Mount Vernon Square



With Metro:
Vibrant, valuable development

Photo source: DCRealEstate.com

Source: WMATA Benefits of Transit Study

Using the results

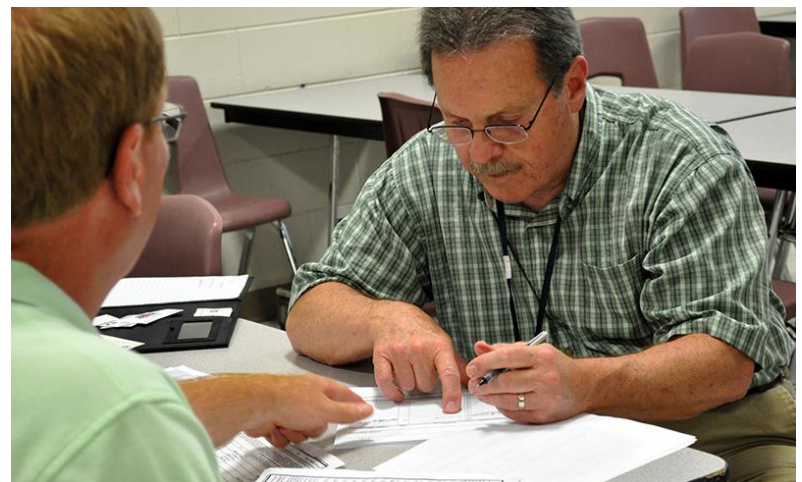
Performance measures:

- Long-range planning
- Joint development / TOD projects

Public relations:

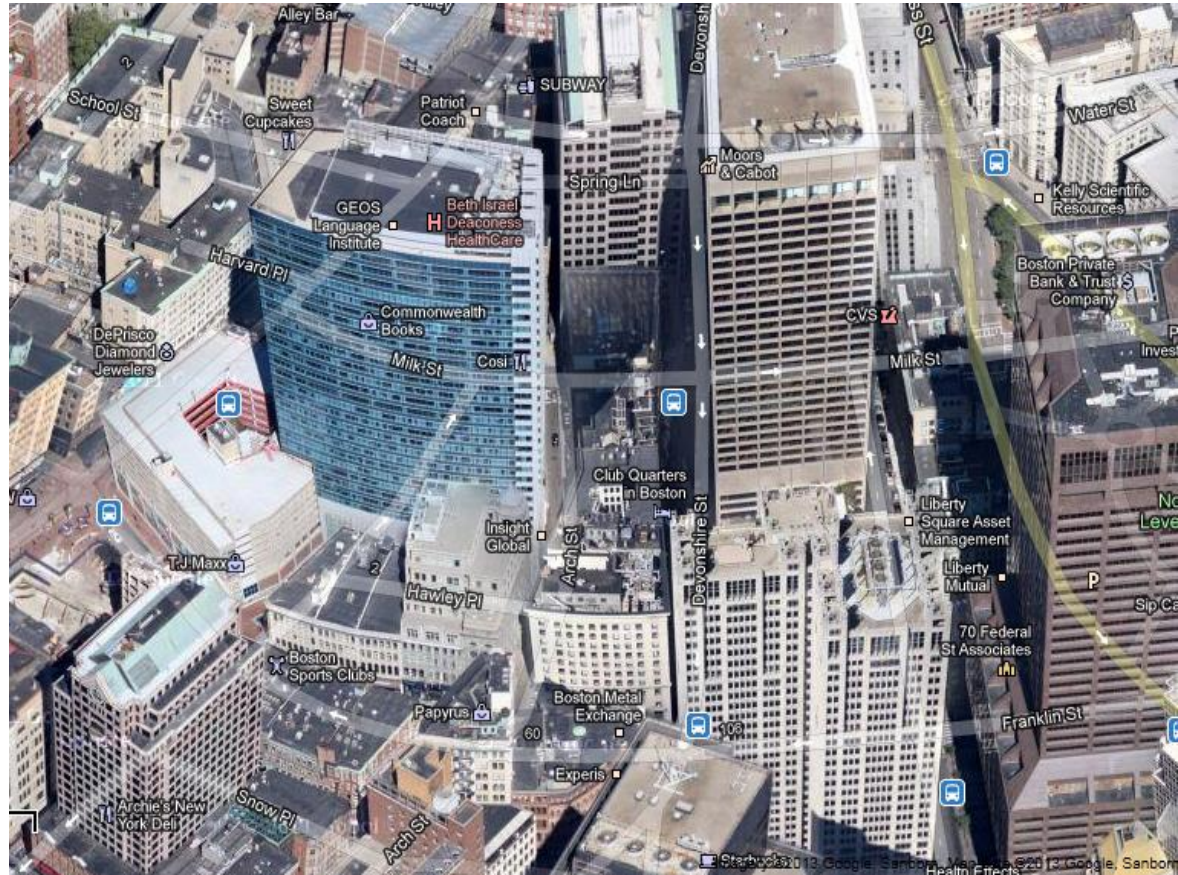
It's not all about costs

Applying for grants



It matters for Boston too

- **Transit adds value** to land and labor markets in ways that “mobility” metrics do not capture
- Cities only **grow and prosper** when the costs associated with higher density outweigh the costs of density, such as congestion.
- When the costs outweigh the benefits, firms seek more **favorable locations** elsewhere for expansions and relocations.



Thank You

A collage of three images related to transportation. The left image shows a person wearing a white tank top and a dark backpack riding a bicycle on a city street. The middle image shows a high-speed train in motion, blurred to suggest speed. The right image shows a bus with the destination 'CARY/SO' visible on its front display.

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