

# ANTICIPATING THE GREEN LINE EXTENSION | SOMERVILLE, MA

## A study of property value trends near planned light rail from 2003 - 2012

The installation of mass transit, particularly subways and light rail, is purported to increase property values within 1/4 mile to 1/2 mile, or "walking distance", of stations. Urban planners need to anticipate this trend because increased property taxes may be used to pay for infrastructure investments, and because increased values may price out current residents, creating equity concerns. Somerville, MA is slated for seven new light rail stations by late 2014, which will

connect neighborhoods to the existing MBTA rapid transit network. Is Somerville already feeling effects from its new transit? This study reveals that it is likely too early to discern any real effects, but consistent value increases around Davis Square, an existing Red Line station (built 1984), show a promising trend of well-established transit driving values up. by Holly Masek | GSD Master in Urban Planning 2013 | For FAS Gov 1009

Land Value per SF in USD | 2003



Mean value all parcels: \$58  
Mean value parcels within 1/4 mile: \$53

Land Value per SF in USD | 2009



Mean value all parcels: \$74  
Mean value parcels within 1/4 mile: \$72

Land Value per SF in USD | 2012



Mean value all parcels: \$70  
Mean value parcels within 1/4 mile: \$65

**Legend**

- Proposed Stations
- Green Line Extension
- 0 - 50
- 51 - 100
- 101 - 150
- 151 - 200
- 201 - 350

Using Somerville Assessor's data, land value was divided by parcel size to obtain land value per SF. An initial visual analysis reveals no strong patterns around the proposed Green Line, and land values per SF within 1/4 mile of the station were found to be lower than citywide values for all three years studied.

However, higher land values were consistently seen around the Red Line station at Davis Square (in red circle). This suggests possible future increases in values near completed stations.

Percent Change in Total Value | 2003 - 2009



Mean % change all parcels: 25.2%  
Mean value parcels within 1/4 mile: 29.6%

Percent Change in Total Value | 2009 - 2012



Mean % change all parcels: -5.3%  
Mean value parcels within 1/4 mile: -6.8%

**Legend**

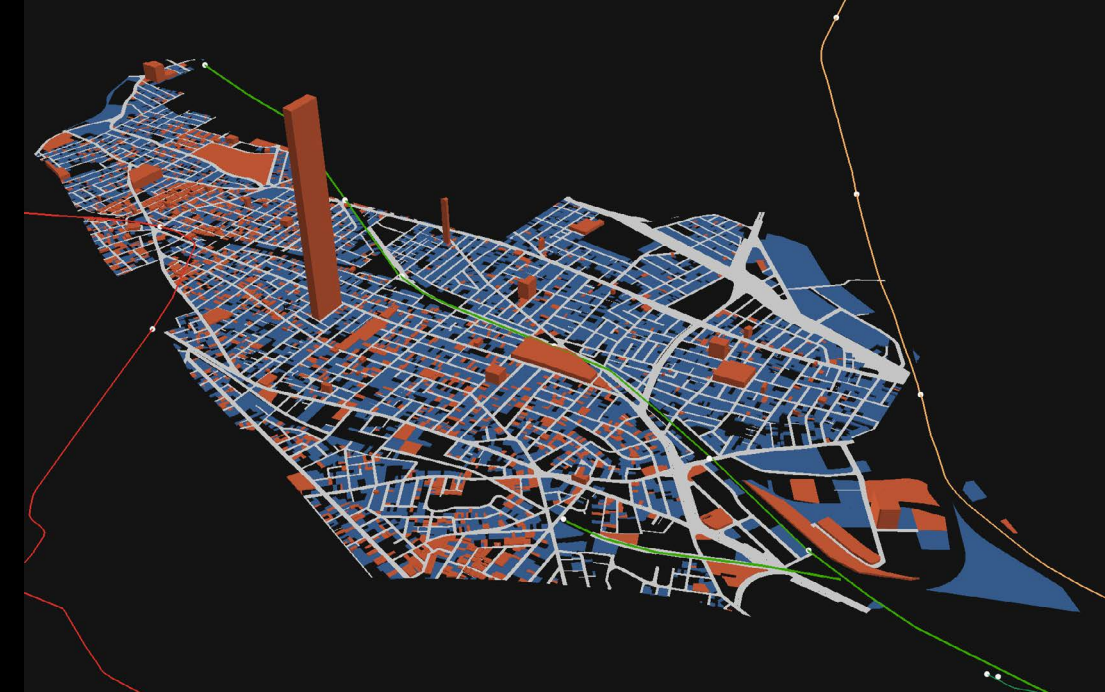
- Proposed Stations
- Green Line Extension
- 25 Radius Around New Stations
- Total Value Change 2003 - 2009
- < 0%
- 1% - 25%
- 26% - 50%
- 51% - 75%
- > 76%

From 2003 - 2009, when the route was finalized, parcels within 1/4 mile of proposed stations increased by 29.6% compared to Somerville's overall average of 25.2%, indicating that these areas did receive a boost from the anticipated new transit. From 2009 - 2012 the market experienced an overall drop in values across Somerville, and properties near stations fared worse (-6.8%) than Somerville overall (-5.4%). However, properties around Davis Square increased in value despite poor market conditions, indicating a potential for future resilient value near the proposed transit stations.

Percent Change Total Value 2003 - 2009



Percent Change Total Value 2009 - 2012



Percent Change Land Value per SF 2003 - 2009



Percent Change Land Value per SF 2009 - 2012



Three-dimensional visualization quickly shows outliers and overall patterns. Parcels in red show increases in value while parcels in blue show decreases. A hospital and a large condominium complex each added valuable buildings between 2003 and 2012, creating the spiked outliers seen in Percent Change in Total Value.

Note that the Davis Square station area in NW Somerville continued to increase in land value while most of the city declined from 2009 - 2012.

- 1920s - 1970s  
Various plans to extend Green Line to Somerville
- 1990 State agrees to extend GL as part of Big Dig
- 2004 State begins Green Line feasibility study
- 2006 State begins environmental studies
- 2008 Announcement of proposed stations
- 2009 Route 16 and Union Square Stations finalized
- 2013 Construction to begin
- Late 2014 anticipated opening of new stations

Sources: 2003 and 2009 Somerville Assessor's Parcel Data from City of Somerville via Harvard Graduate School of Design boston\_metro\_data collections. 2012 Somerville Assessor's Parcel Data obtained from MassGIS <http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-srv/office-of-geographic-information-massgis/datalayers/fpl3parcels.html>. Somerville extension data created by Paul Cote, 2010. Somerville Extension time line information obtained from Somerville Transportation Equity Partnership <http://www.somervillestep.org/GreenLineTimeline.html>. Nicole S. Stecker, A GIS Analysis on the Effects of the Hiawatha Light Rail on Single-Family Residential Property Market Values, 2005.