

# Predicting Effects of the MBTA Green Line Extension to Somerville: Parcels Vulnerable to Gentrification

## OVERVIEW

With the proposal for new MBTA Green Line stations in Somerville comes a variety of new issues, problems, and opportunities for the city. The Somerville Community Corporation (SCC) is interested in the potential effects of the Green Line extension of Boston's trolley line on Union Square in Somerville. According to their website, SCC “provides leadership for sustaining the city of Somerville as a vibrant, diverse and tolerant community. We develop and preserve affordable housing.” Last summer, SCC, with the non-profit organization Groundwork Somerville, coordinated a survey for the residents and business owners in the area and had the data entered and coded onto an Excel spreadsheet. The parcels shaded in the map to the left were included in this analysis (due to data issues, other parcels did submit surveys but were excluded from this analysis). While viewing the results of the survey in spreadsheet-form can provide SCC with interesting results, there are some spatial conclusions to be made. This project's main goal was to use GIS to analyze the data from the survey and compare the qualitative survey data to quantitative information from the City of Somerville's Assessor's Database.

The survey asks participants questions which address the current state of the grounds, any buildings, and adjacent properties. While most answers are “yes” or “no,” they typically rely on the subjective opinion of the participant. This qualitative, often opinion-based information provides us with a deeper understanding of how a parcel is perceived in its neighborhood, as opposed to factually based information which often cannot tell the complete story.

SCC is particularly concerned with both the surveyed parcels' potential opportunity for new affordable housing developments and their vulnerability to gentrification once the proposed MBTA Green Line stations are opened. The analysis depicted on this poster only includes the gentrification vulnerability portion of the project.

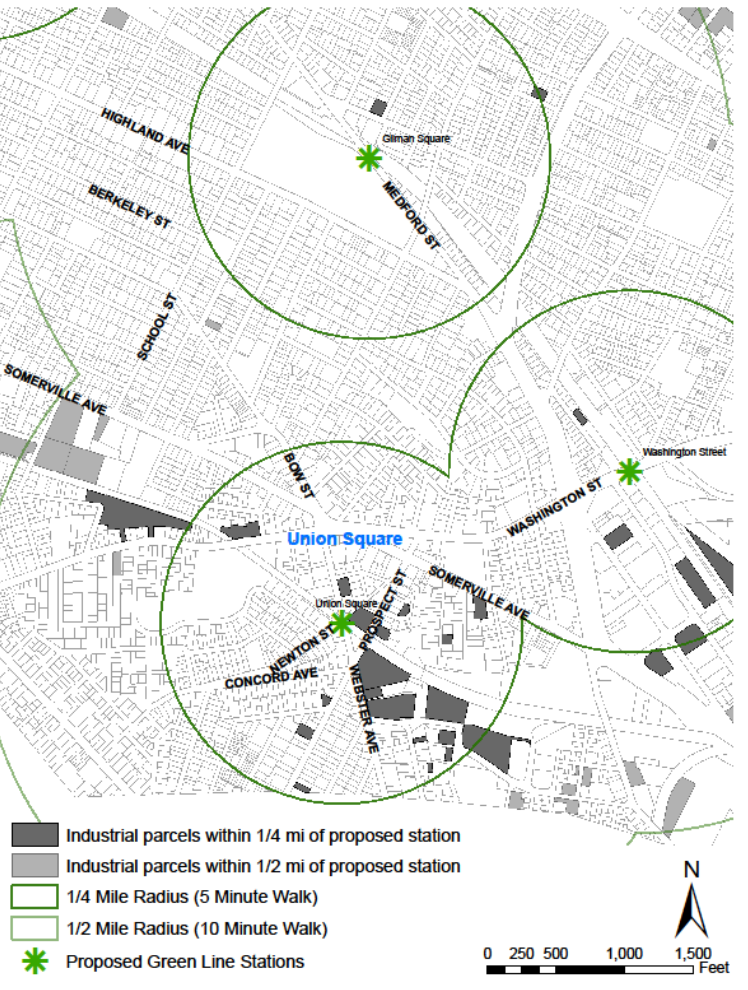
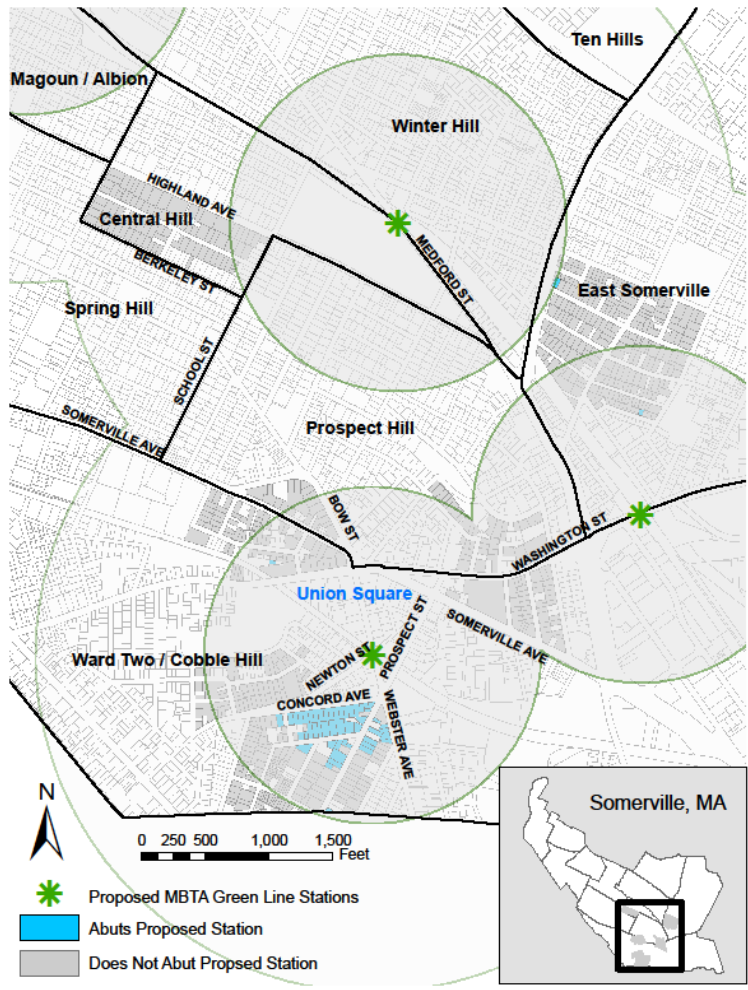
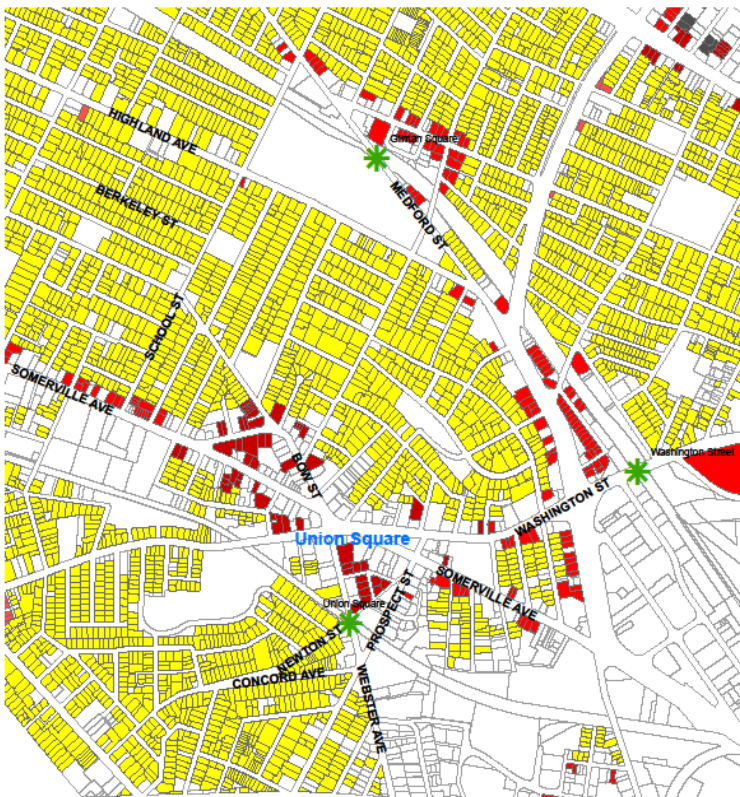
Address	
Please check the boxes that appear to be accurate (check all that apply). If you are not sure, place a "1" next to the box.	
<b>Properties with buildings</b>	<b>Properties with no building</b>
<input type="checkbox"/> At least one floor is vacant (floor # _____)	<input type="checkbox"/> Playground
<input type="checkbox"/> Building is vacant or abandoned	<input type="checkbox"/> Community garden
<input type="checkbox"/> Used for community purposes	<input type="checkbox"/> Parking lot, owner: _____
<input type="checkbox"/> Other church/religious center/other _____	<input type="checkbox"/> Other _____
<input type="checkbox"/> Owned by City/State	<input type="checkbox"/> Paved, but no apparent use
<input type="checkbox"/> Owned by MBTA	<input type="checkbox"/> Unpaved, but no apparent use
<input type="checkbox"/> Has "for sale" sign	<input type="checkbox"/> Owned by City
<input type="checkbox"/> Has large lot next to building	<input type="checkbox"/> Owned by MBTA
<input type="checkbox"/> Has large lot next to proposed train station	<input type="checkbox"/> Other apparent owner _____
<input type="checkbox"/> Building includes units with 3+ bedrooms	<input type="checkbox"/> Can't tell who owns this
<input type="checkbox"/> Under current renovation	<input type="checkbox"/> Next to train line or proposed train station
<b>Anecdotal:</b>	<input type="checkbox"/> Additional description: _____
<input type="checkbox"/> I want to property that is likely to be redeveloped. How do you know? _____	
<input type="checkbox"/> Use does not fit with other nearby properties (use: _____)	
<b>Anecdotal: Blighted Properties</b>	<b>Environment/Green Space/Food System</b>
<input type="checkbox"/> In disrepair (broken windows, falling apart)	<input type="checkbox"/> Has flat roof (potential for rooftop garden)
<input type="checkbox"/> Junk yard	<input type="checkbox"/> Has active flower garden
<input type="checkbox"/> Pollution is evident	<input type="checkbox"/> Has active vegetable garden
<input type="checkbox"/> Uncared for (overgrown lots, trash)	<input type="checkbox"/> Has significantly large trees
<input type="checkbox"/> Apparent owner _____	<input type="checkbox"/> Has permeable (unpaved) ground, % of parcel _____
<input type="checkbox"/> No apparent owner	<input type="checkbox"/> Has potential for garden space or open space _____
<input type="checkbox"/> Additional description: _____	<input type="checkbox"/> Can see or hear highway from parcel
<b>Word on the Street:</b>	<b>Other observations about this property:</b>
Neighbors have made following comments about this property: _____	
Names of people surveying property: _____	

Survey used to collect qualitative data from residents and property owners of Somerville parcels. Surveyors focused on parcels within 1/2 mile (considered "walking distance") of proposed Green Line stations, focusing on Union Square since this area has the most anticipated land use change.

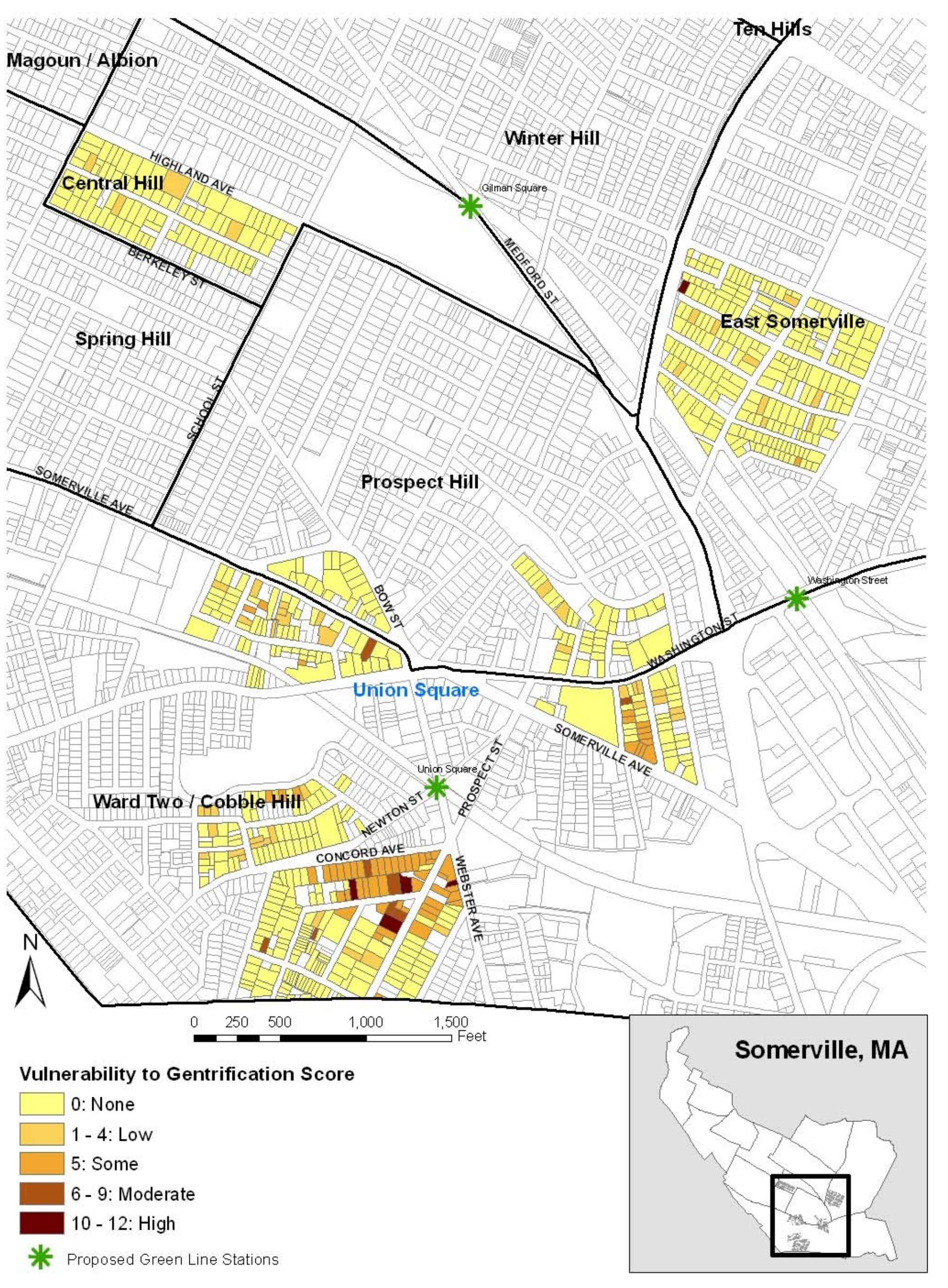
## METHODOLOGY

Once the survey data was coded and cleaned up to be utilized in GIS, the data was joined to the existing Assessor's Database for the City of Somerville. Criteria relevant to a parcel's vulnerability to gentrification were selected from the survey data and are displayed in individual maps on the bottom left of the poster. A rating system was assigned to these criteria in order to weigh them by importance. The parcels' Vulnerability Scores were calculated by summing the weighted criteria. Subsequently, the parcels were mapped in color-gradations, according to their Scores.

Next, the Assessor's Database was used to extend vulnerability analysis with quantitative sources. A variety of maps were created to highlight parcels that are "under-zoned" (for example, single-family house on a zoned multifamily residential parcel which is large enough to develop higher use); to compare the qualitative survey data to actual proximity to proposed stations, testing the accuracy of the survey; and to highlight industrial parcels in proximity of the proposed stations, which are likely to be redeveloped. These maps are displayed to the right.

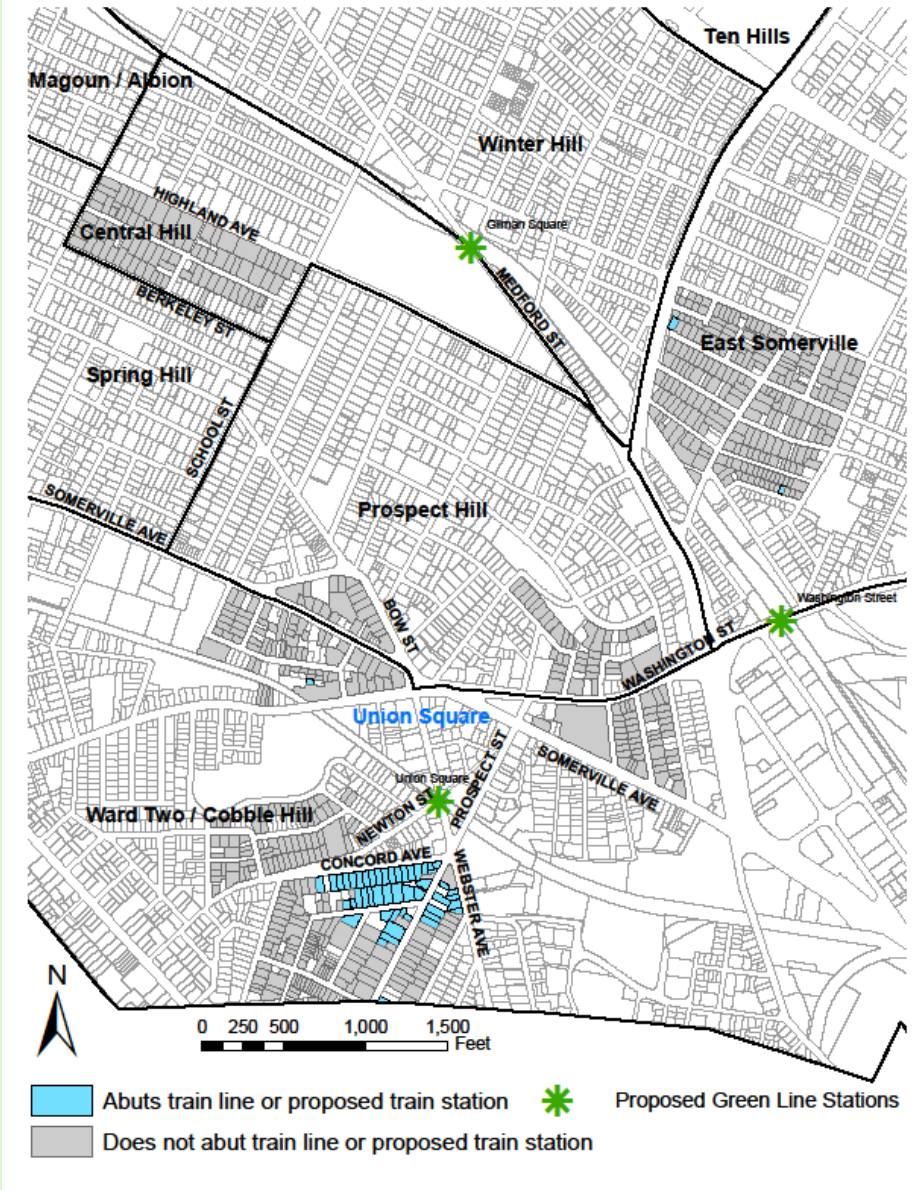


## VULNERABILITY SCORE DISTRIBUTION



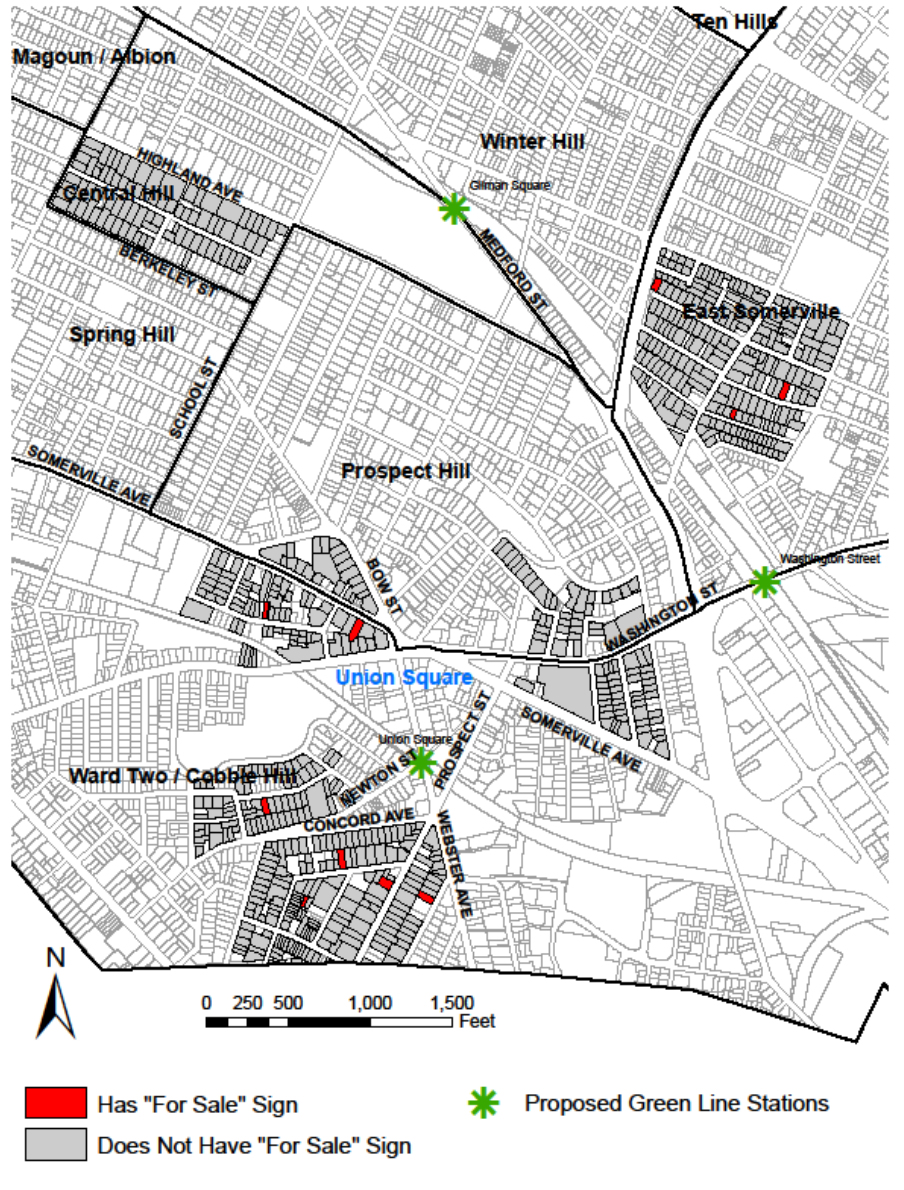
## INDIVIDUAL CRITERIA

### Proximity to Proposed Green Line Station



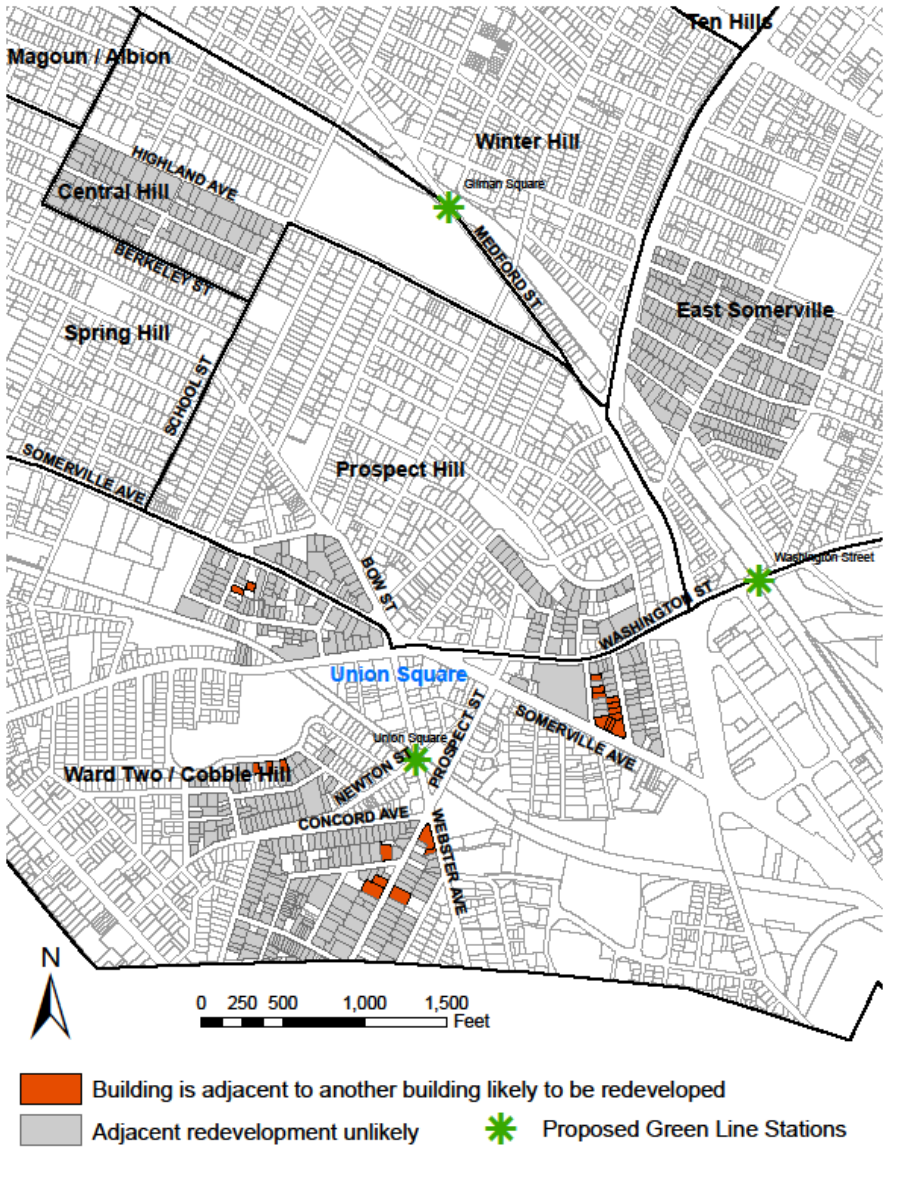
Weight: 5

### Presence of "For Sale" Signs



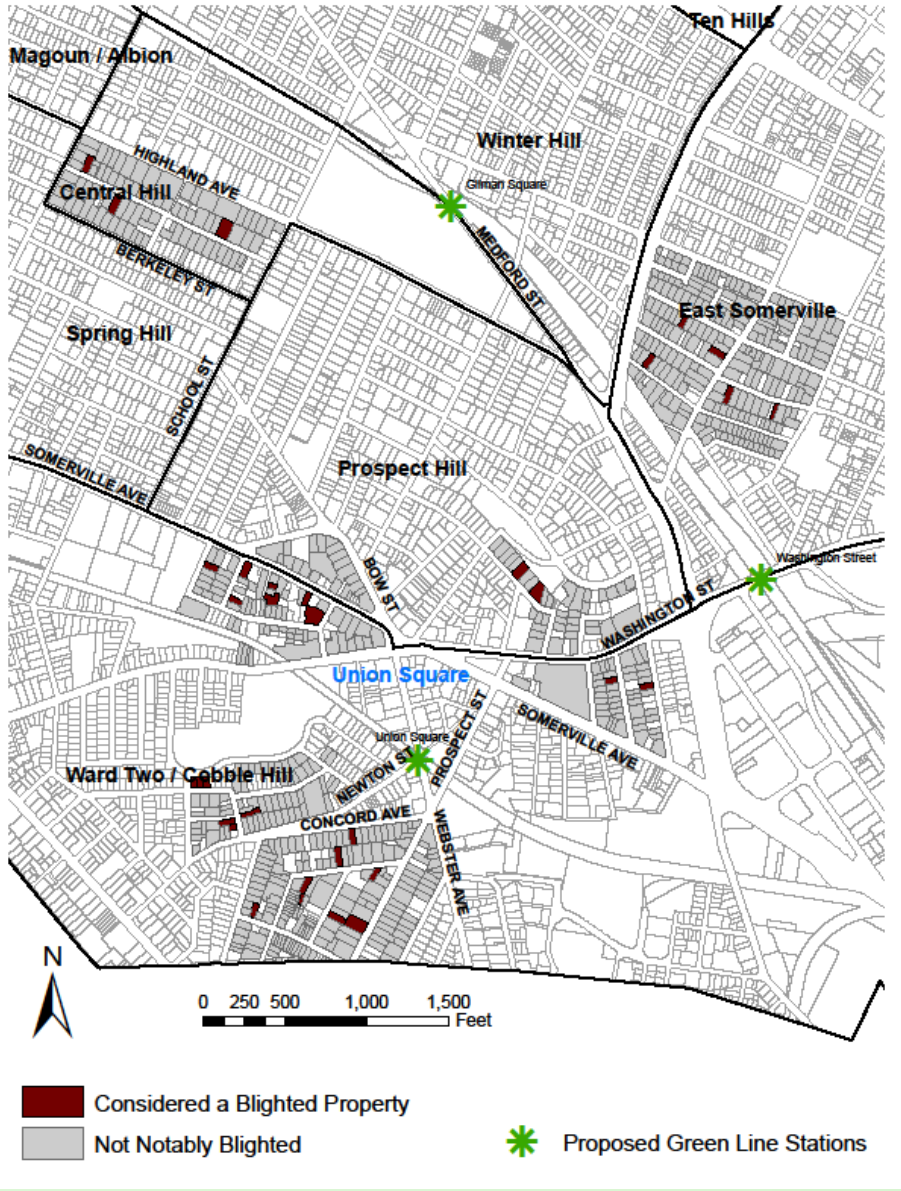
Weight: 3

### Proximity to Anticipated Redevelopment



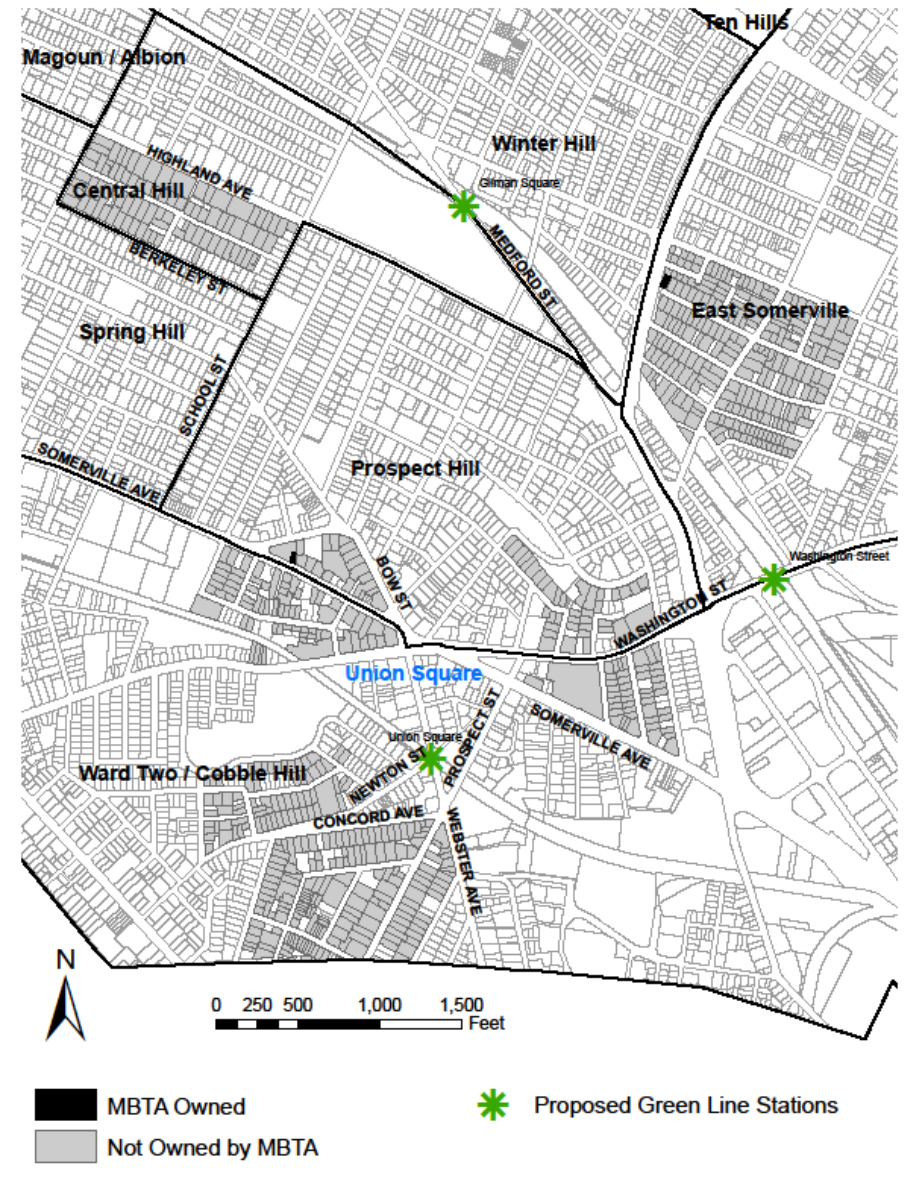
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### Considered a Blighted Property



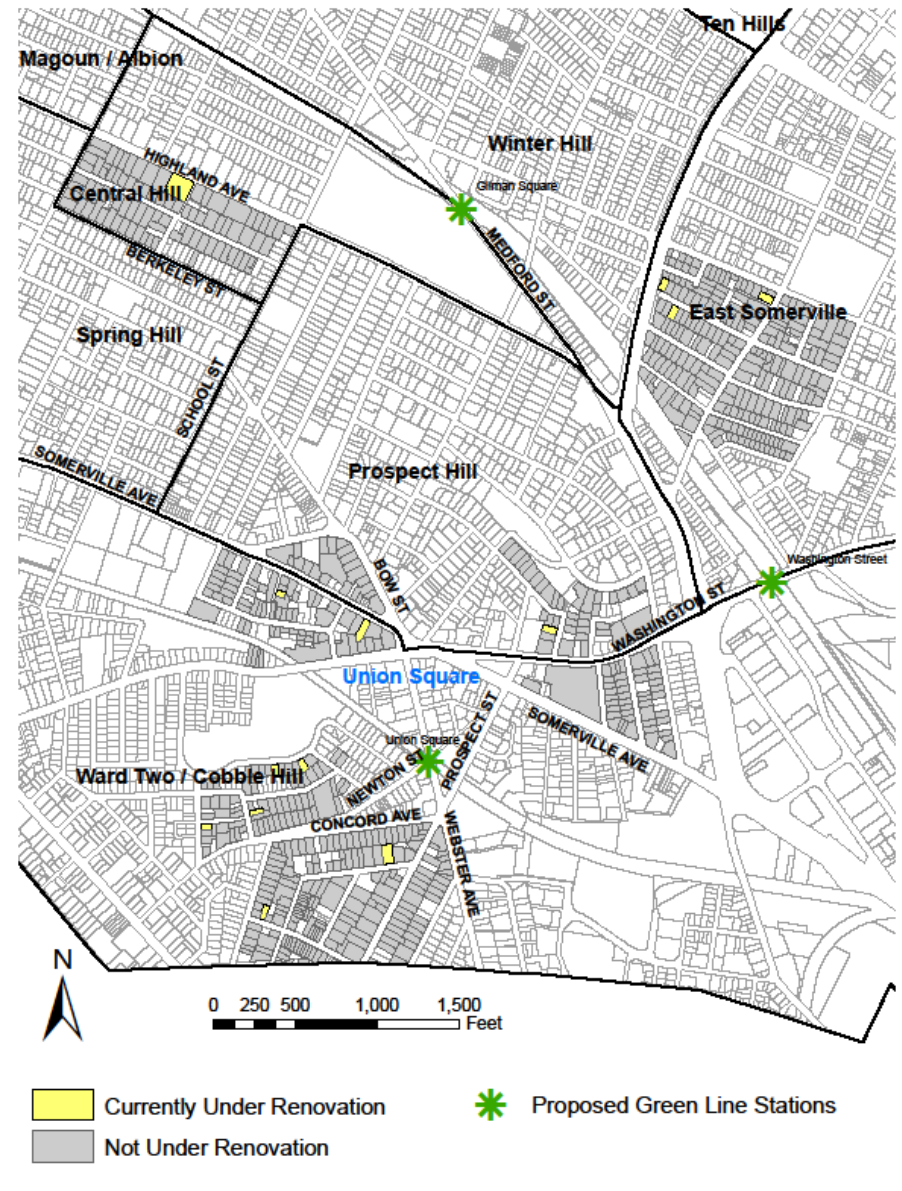
Weight: 4

### Owned by MBTA



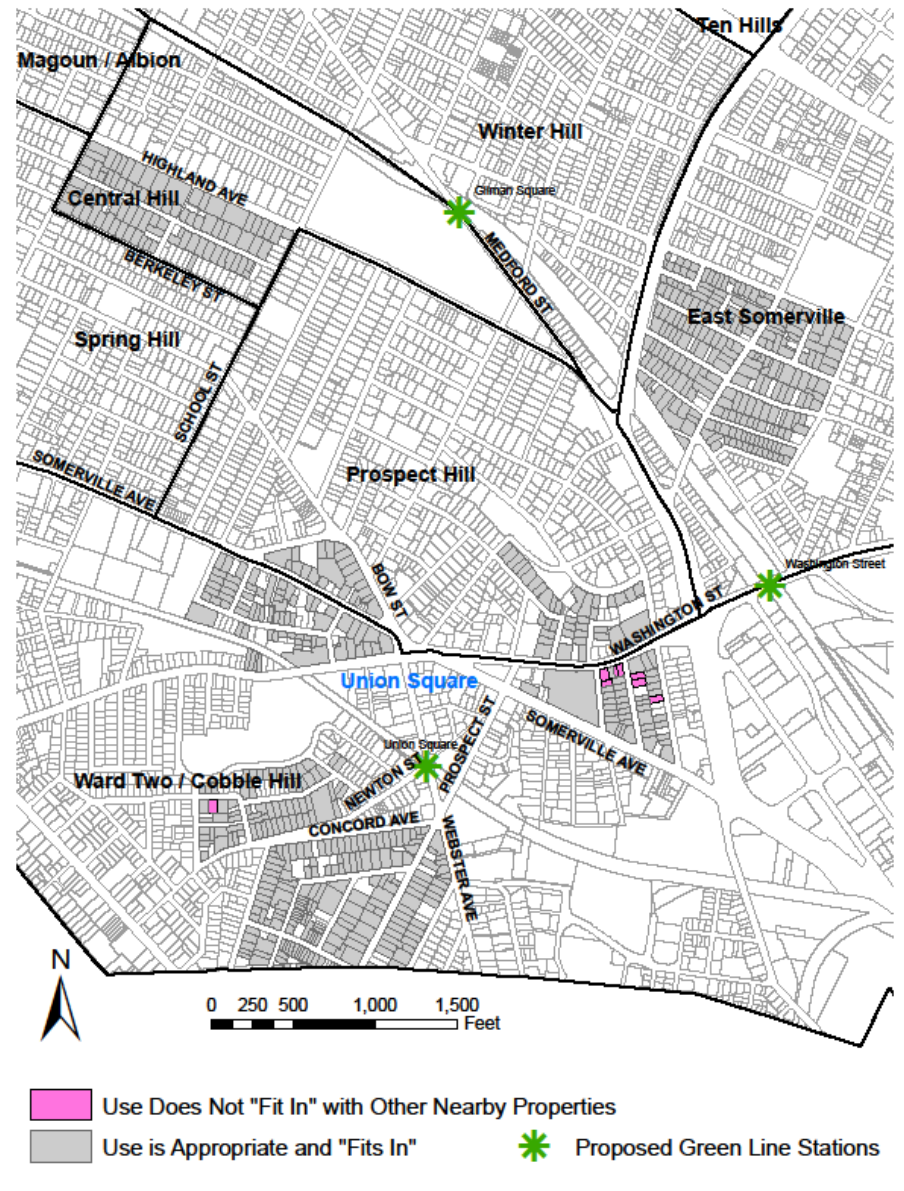
Weight: 1

### Currently Undergoing Major Renovation



Weight: 4

### Building is Considered Out of Place



Weight: 3