Atlanta BeltLine Project
Baseline Study Mid-term Review

02 October 2018

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Project Objectives

I was asked to conduct a housing/land value impact study on the communities adjacent to the BeltLine and to calculate the timing and impact of gentrification of the Pittsburgh area at the completion of the BeltLine project in 2020. The purpose of this analysis is to assist future planners for large urban development project with policy recommendations for the adjacent and directly-impacted communities about economic development strategies and initiatives that would protect at-risk populations from rapid displacement.

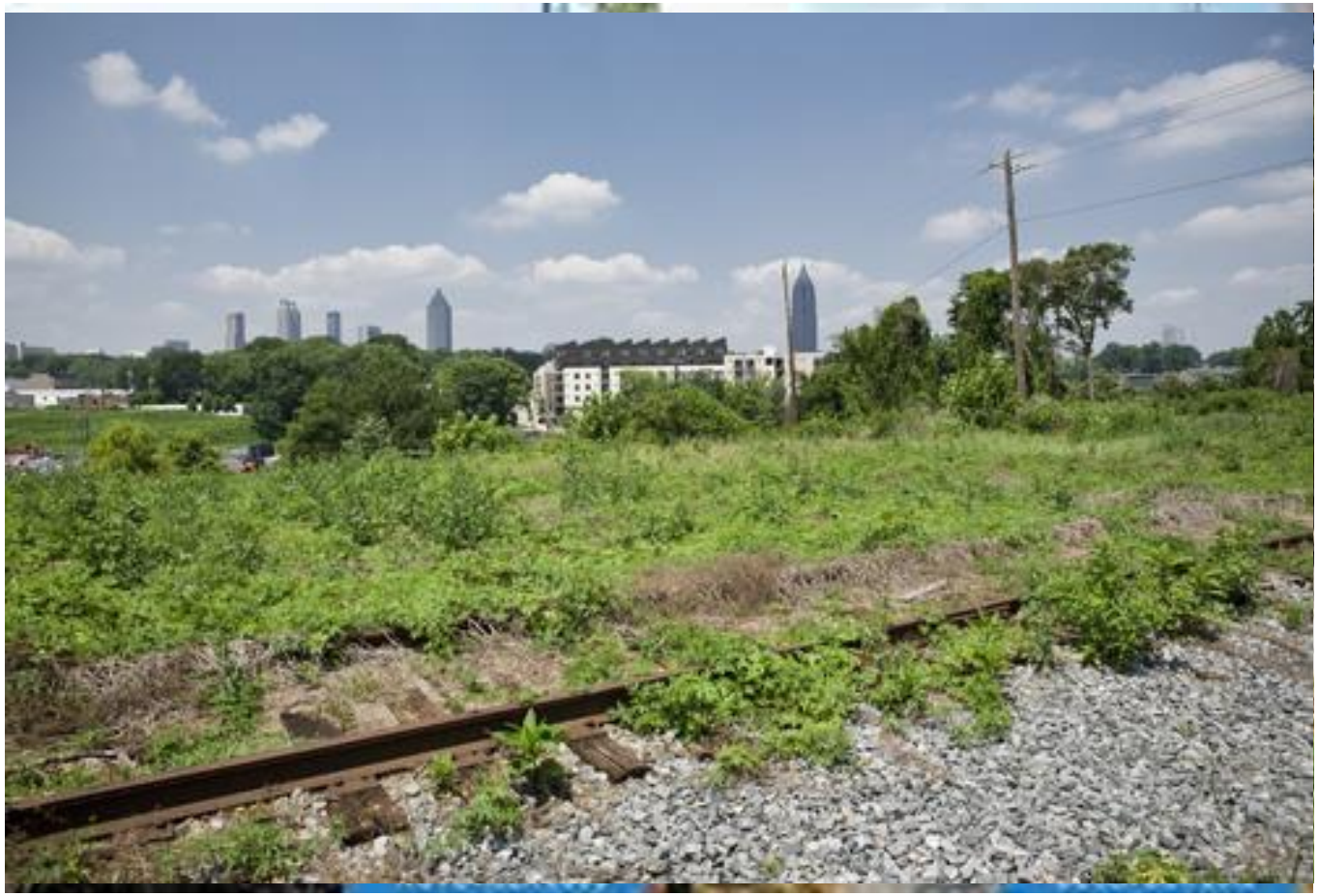
The time period for this first stage of housing/land value analysis, 2010 to 2015, includes the recovery from the Great Recession.

Atlanta BeltLine

The BeltLine is a multi-faceted, multi-decade effort to integrate parks, mobility, land use, and circulation along a 22-mile loop of historic railroads that encircle downtown Atlanta. At completion, it will connect 45 neighborhoods and more than 100,000 people that currently live within half a mile of the corridor.

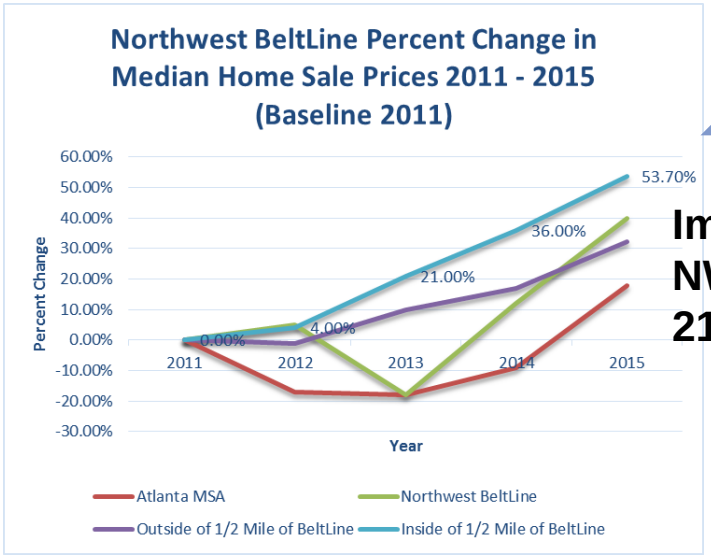
Due to its size and impact, the BeltLine is divided into ten subareas for more detailed planning and evaluation. By most measures, the completed sections of the BeltLine are a success. ***However, promises for affordable housing and addressing at-risk population displacement have presented challenges for the BeltLine's executive management team.***

Before

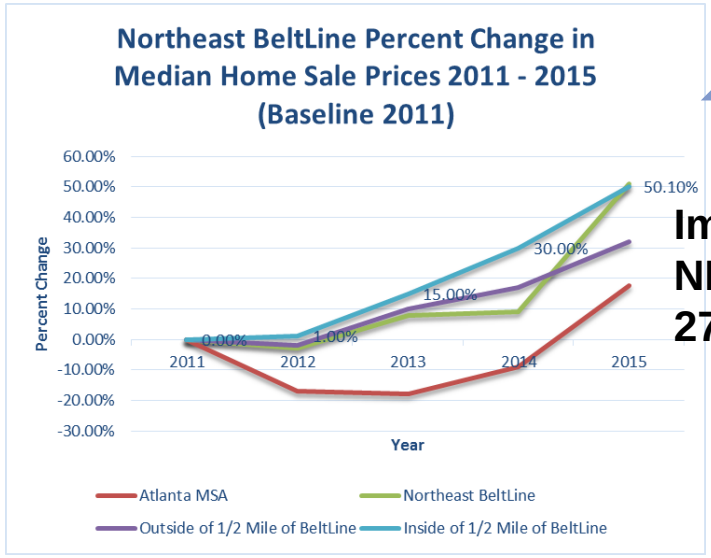


After

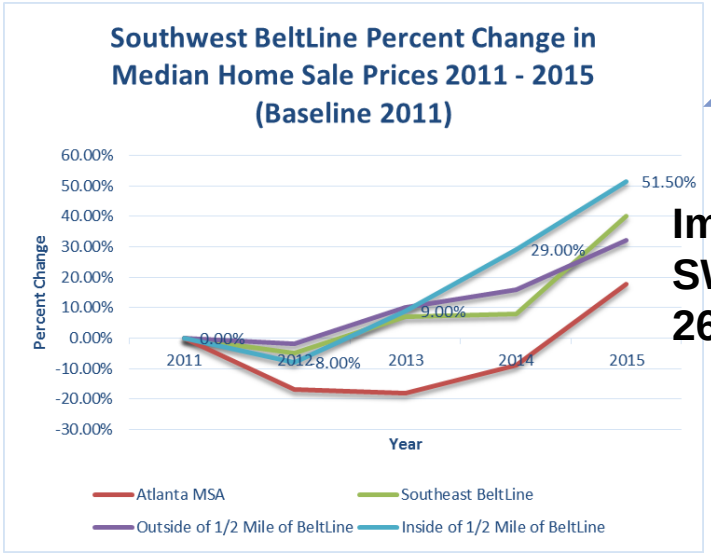
The BeltLine Impact on Home Sale Prices



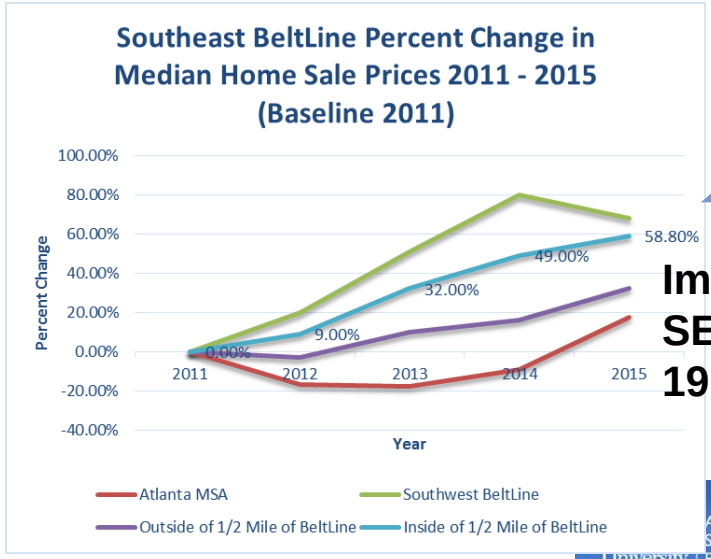
Impact NW 21.5%



Impact NE 27.9%



Impact SW 26.6%



Impact SE 19.3%

Source: Home Price Trends Near BeltLine, Immergluck and Balan 2017

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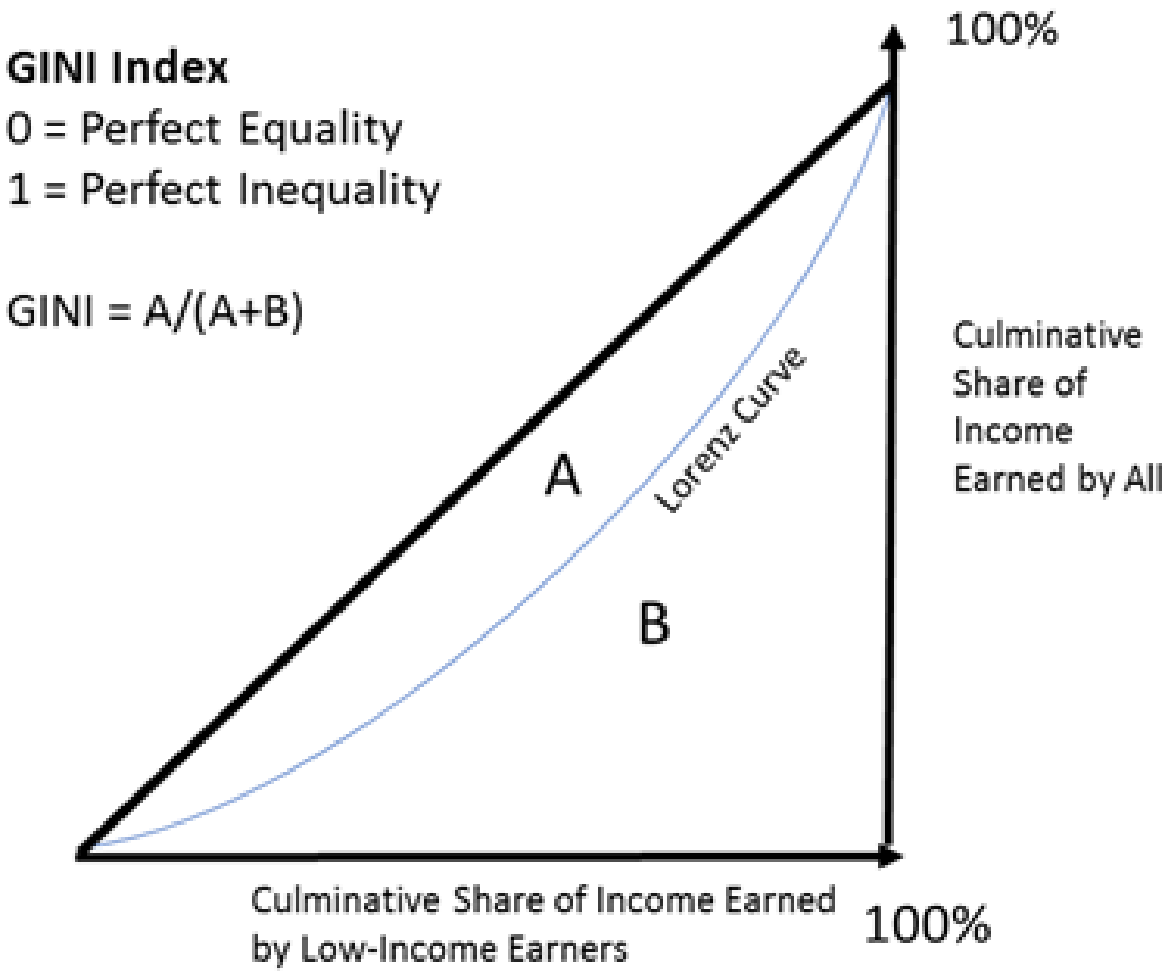
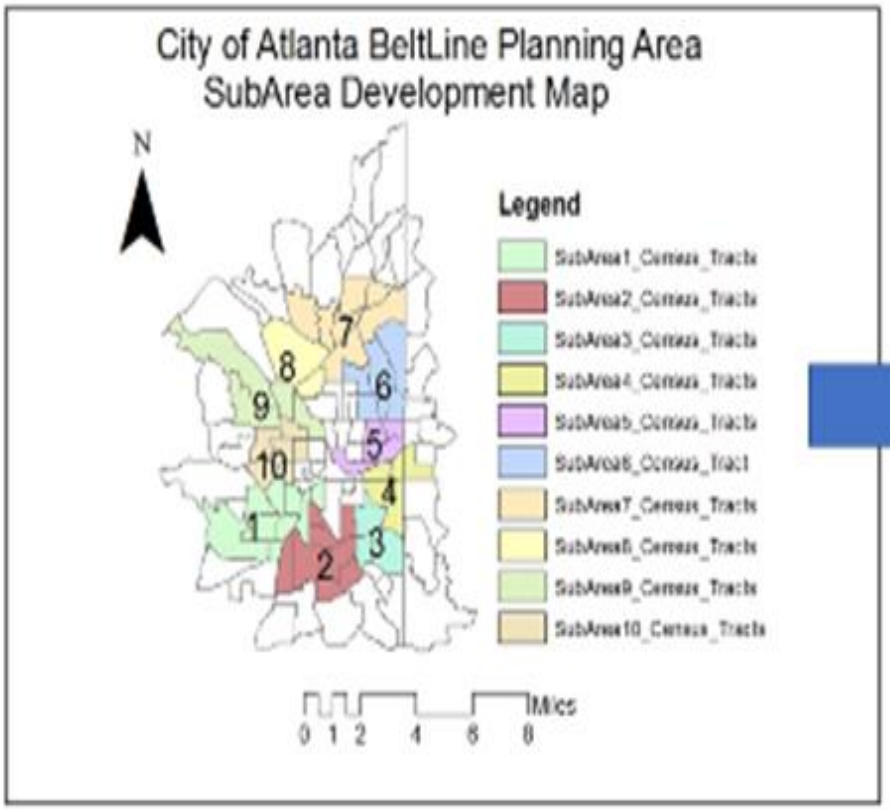
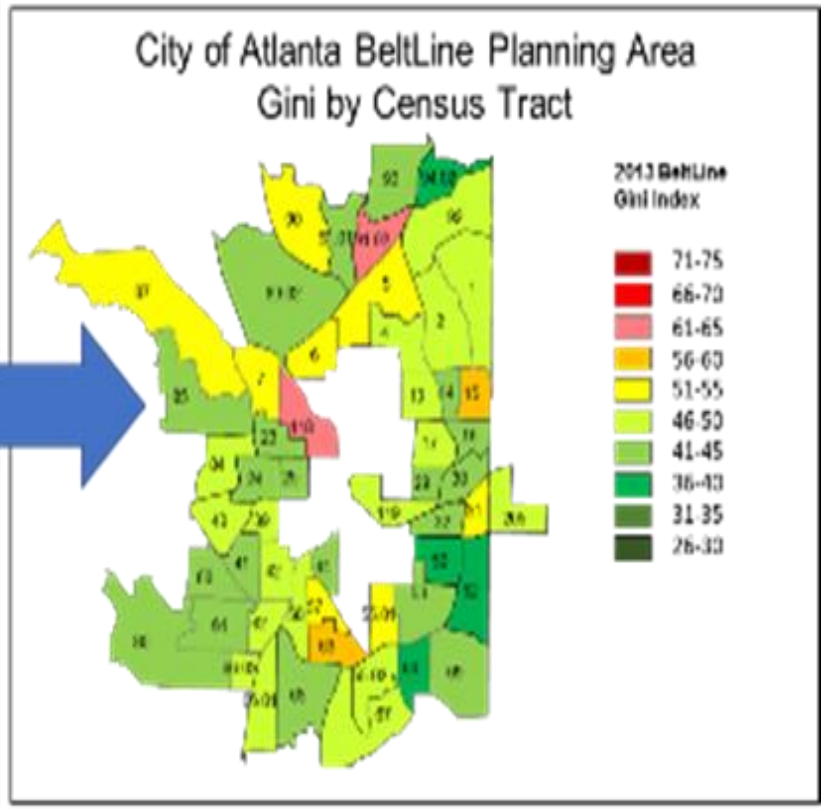
What impact did the BeltLine have on changes in equalities in adjacent census tracts?



Atlanta BeltLine

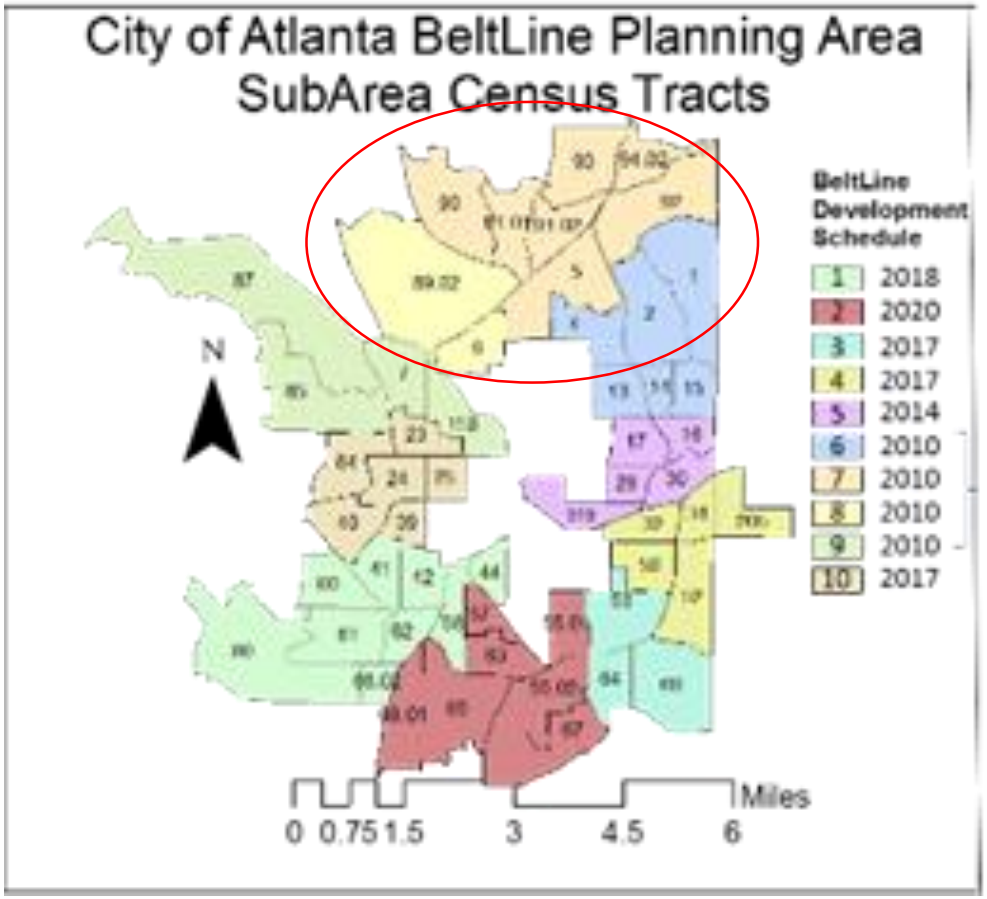
A snapshot of the Gini Quotients along the BeltLine in 2013 after completion of SubAreas 6 – 9. There does not appear to be any relationship between proximity to the BeltLine projects and the Gini quotients. In fact, the uncompleted SW and SE SubAreas already show relative equality.





Atlanta BeltLine

The ACS Survey data from 2008 to 2012 was used to calculate the net change in Gini Index for SubAreas 7 – 9. ***Analysis did not show any relationship between proximity to the BeltLine and shifts in inequality.***



Census Tract	GINI 2007	GINI%Δ
5	0.57	-15.59%
90	0.44	
91.01	0.50	-12.00%
91.02	0.50	
92	0.50	-32.49%
93	0.45	-21.02%
94.02	0.34	
6	0.51	
89.02	0.43	-4.35%
7	0.37	
85	0.43	-18.94%
87	0.57	-10.53%
118	0.45	

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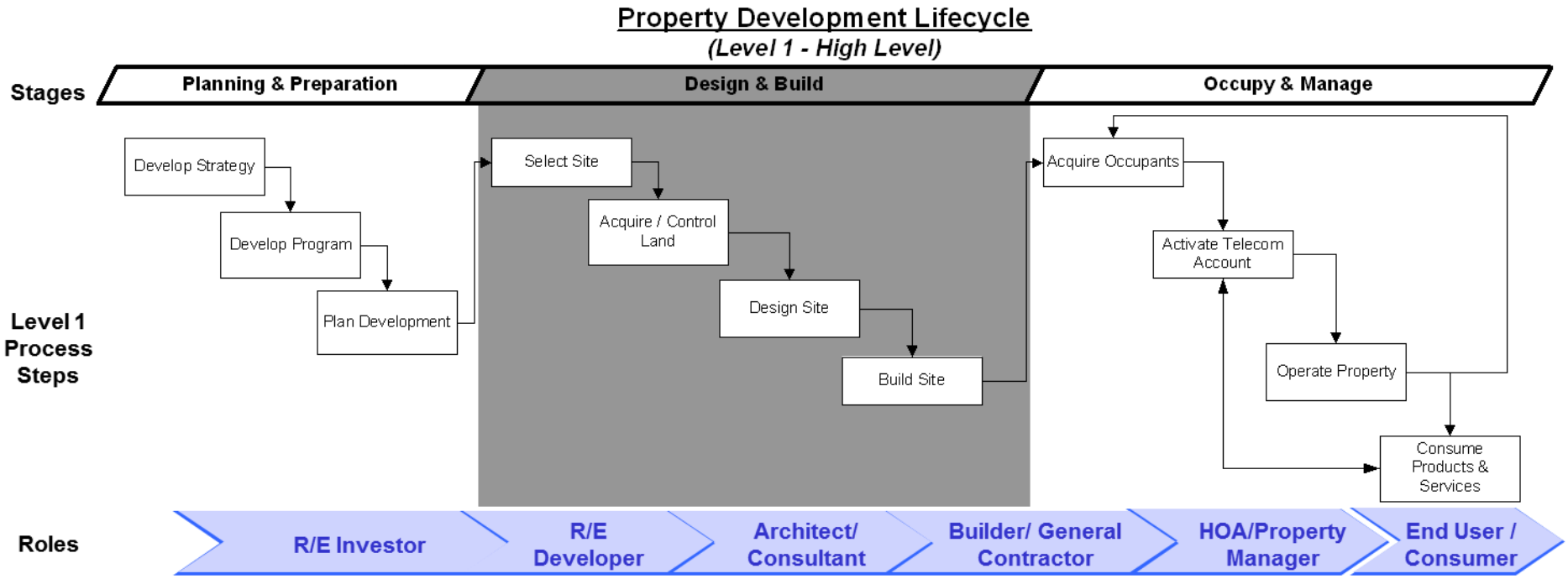
Atlanta BeltLine

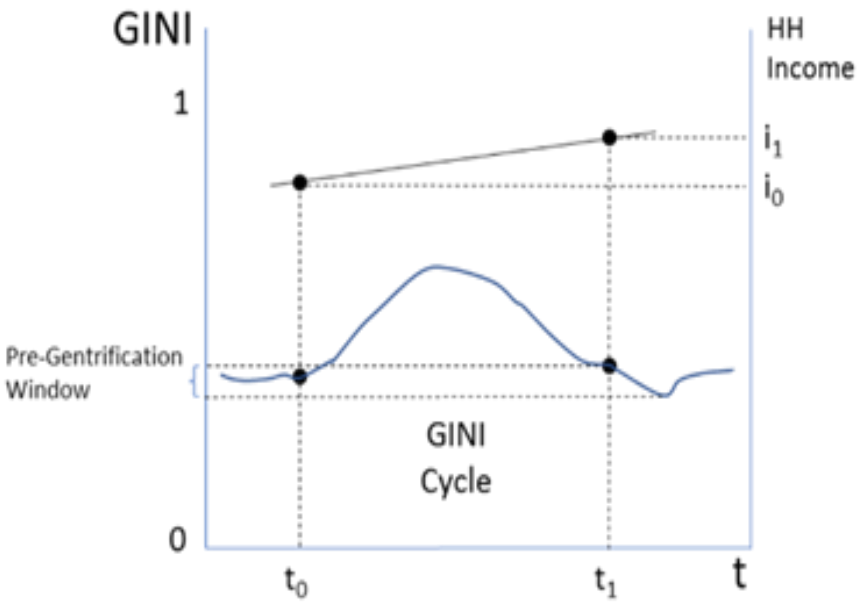
What makes this study different than others? A review of the existing literature found that most were longitudinal studies focused on the impact on populations before and after the economic development project was completed. Understanding the property development cycle at each stage is critical.

This study is focused on identifying a combination of shifts throughout the duration of the project from pre-planning to its operation which, for the BeltLine, span 6-7 years.



Atlanta BeltLine

Our hypothesis is that combining shifts in the Gini quotient with changes in household income over the entire property development cycle could yield a profile that identifies census tracts that have low-income household displacement.



GINI Index
0 = Perfect Equality
1 = Perfect Inequality

GINI Velocity Index
Within the GINI Cycle
GVI = Δi/Δt (months)

BeltLine Study Components
Stage 1: Identify Census Tracts based on SubArea GINI Cycles and 2007-2013 Census Tract data
Stage 2: Identify change in low-income population, number of rental units and Gross Rent by census tract by cycle. Calculate GVI for Census Tracts.
Stage 3: Regress GVI model

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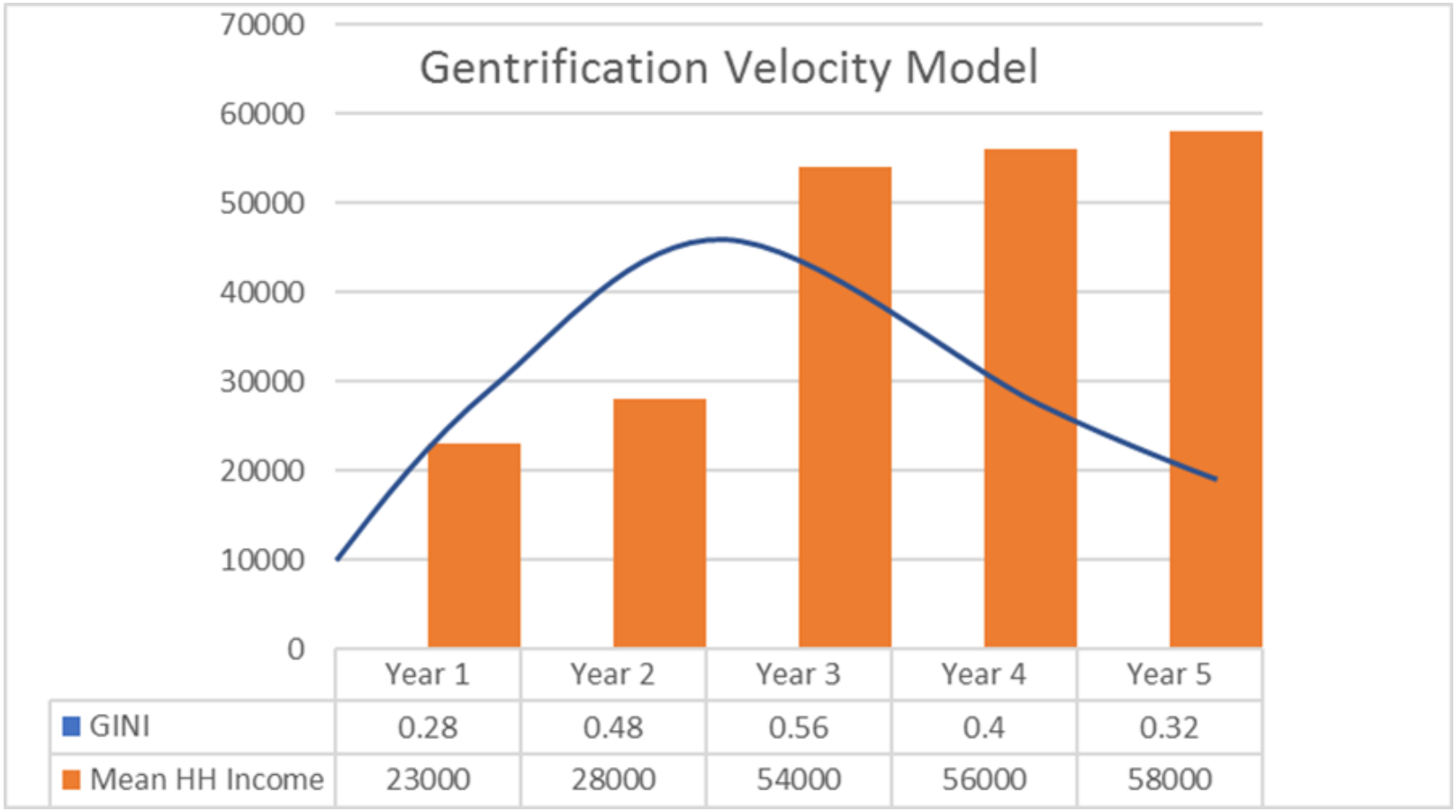
Atlanta BeltLine

Our "perfect" profile will show simultaneous HH income growth and the Gini Bubble.



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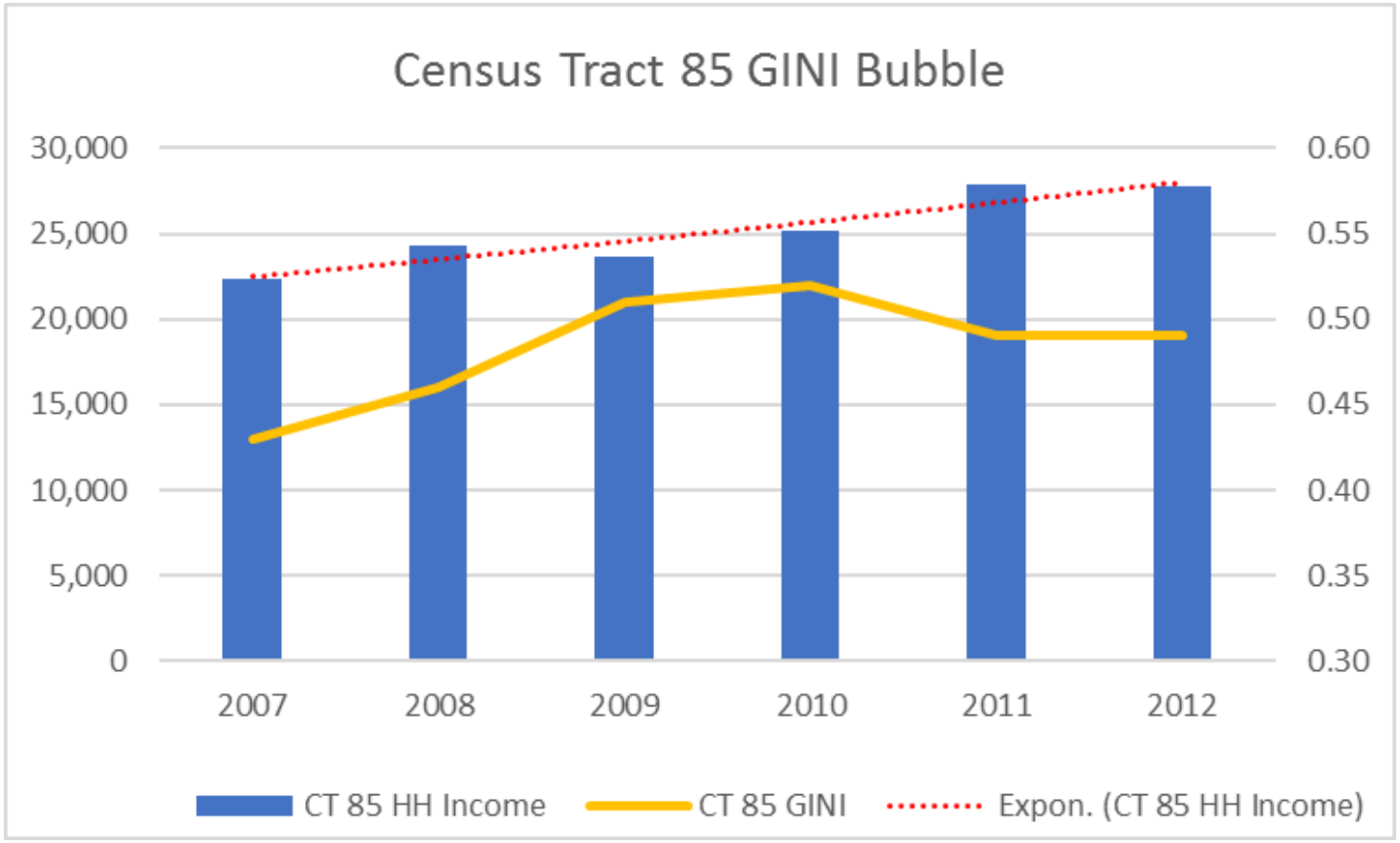
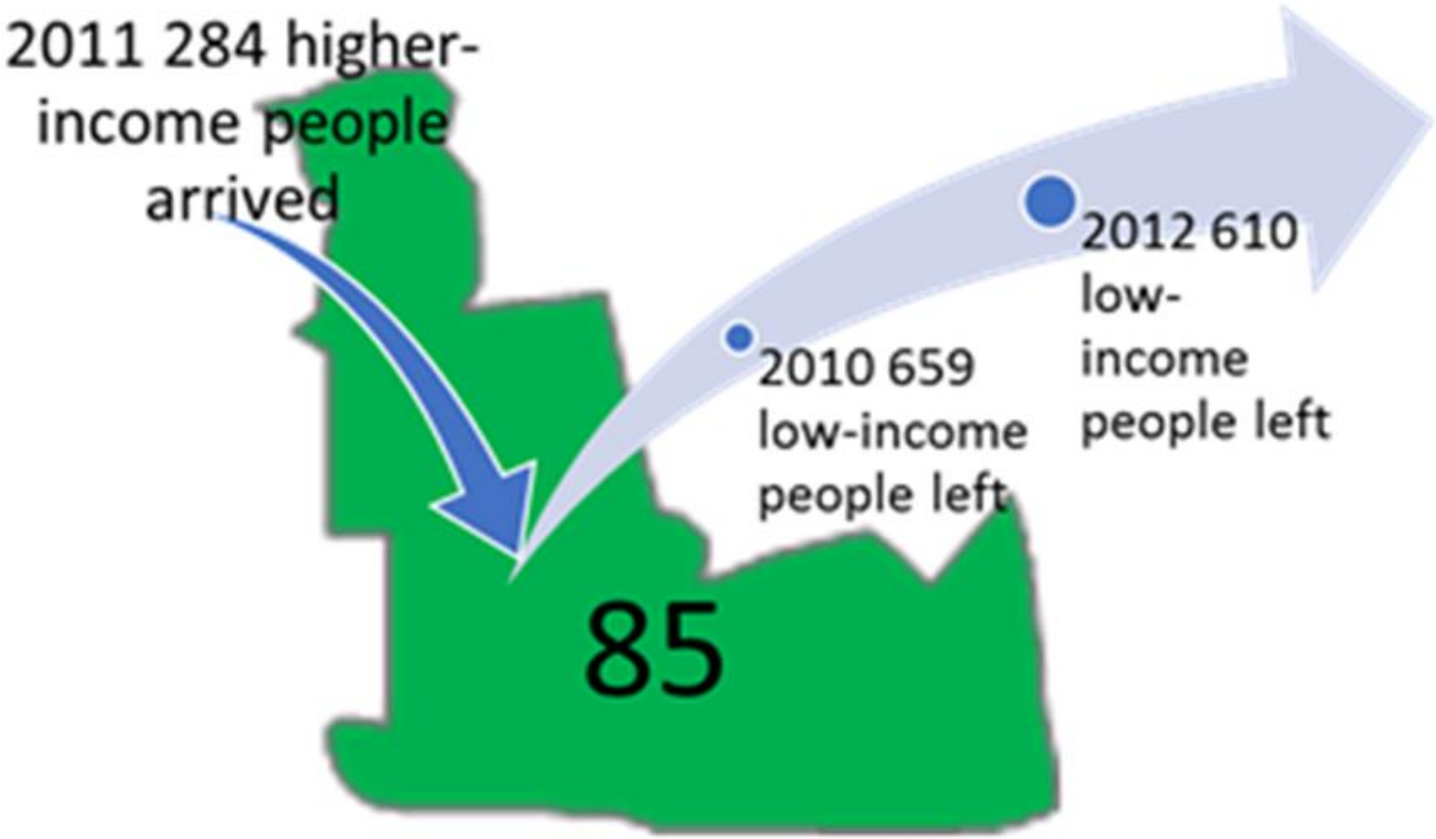
Atlanta BeltLine

Census tract 85, where the BeltLine was completed in 2010, exhibits the expected profile.



2007 – 2012 GVI Score = 1002

Atlanta BeltLine



Atlanta BeltLine: Impact on the Communities adjacent to the Southern Trails

For our study, we focused on the community of Pittsburgh which is between Turner Field and the proposed Southern Trail of the Atlanta BeltLine. When compared to the rest of the BeltLine, this community has:

- Significantly higher percentage Afro-American population (97%)
- Fewer 20 – 34 year olds but a much higher 45 – 65 year old population
- Significantly lower household and per capita incomes ($19k, $12k) with over 52% in poverty
- In a mostly residential neighborhood, of the 61% homes that are occupied, 70% are rental.
- Median property values are only $57k.

What we gather from these results is that the community of Pittsburgh is at higher risk of rapid displacement than any other population on the BeltLine.

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The BeltLine Communities

West Trail

Segment Statistics	
Average ETA	14 - High
Total Poverty	11,695
% Poverty	*38%*
Total Minority	29,470
% Minority	*96%*

East Trail

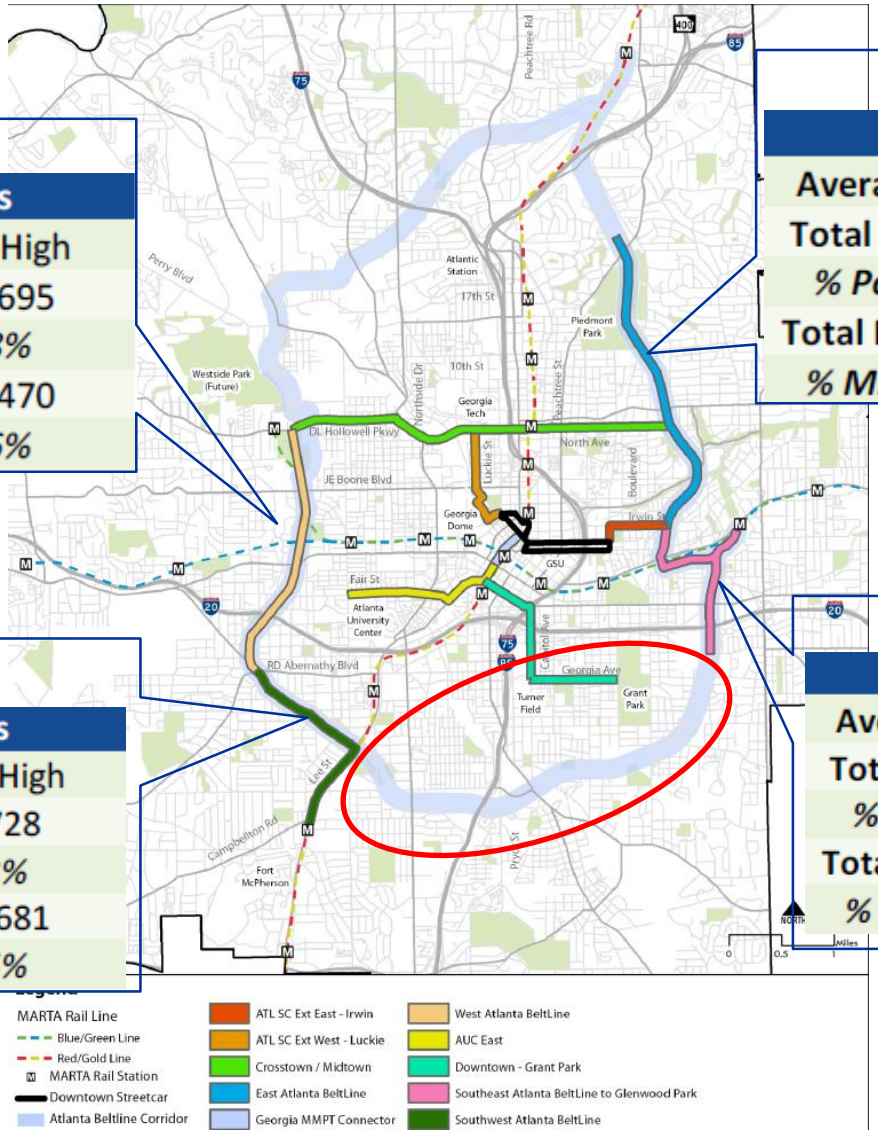
Segment Statistics	
Average ETA	6 - Low
Total Poverty	3,033
% Poverty	*9%*
Total Minority	7,331
% Minority	*23%*

Southwest Trail

Segment Statistics	
Average ETA	13 - High
Total Poverty	5,728
% Poverty	*33%*
Total Minority	16,681
% Minority	*95%*

Southeast Trail

Segment Statistics	
Average ETA	7 - Low
Total Poverty	5,728
% Poverty	*20%*
Total Minority	6,484
% Minority	*35%*



The BeltLine Impact

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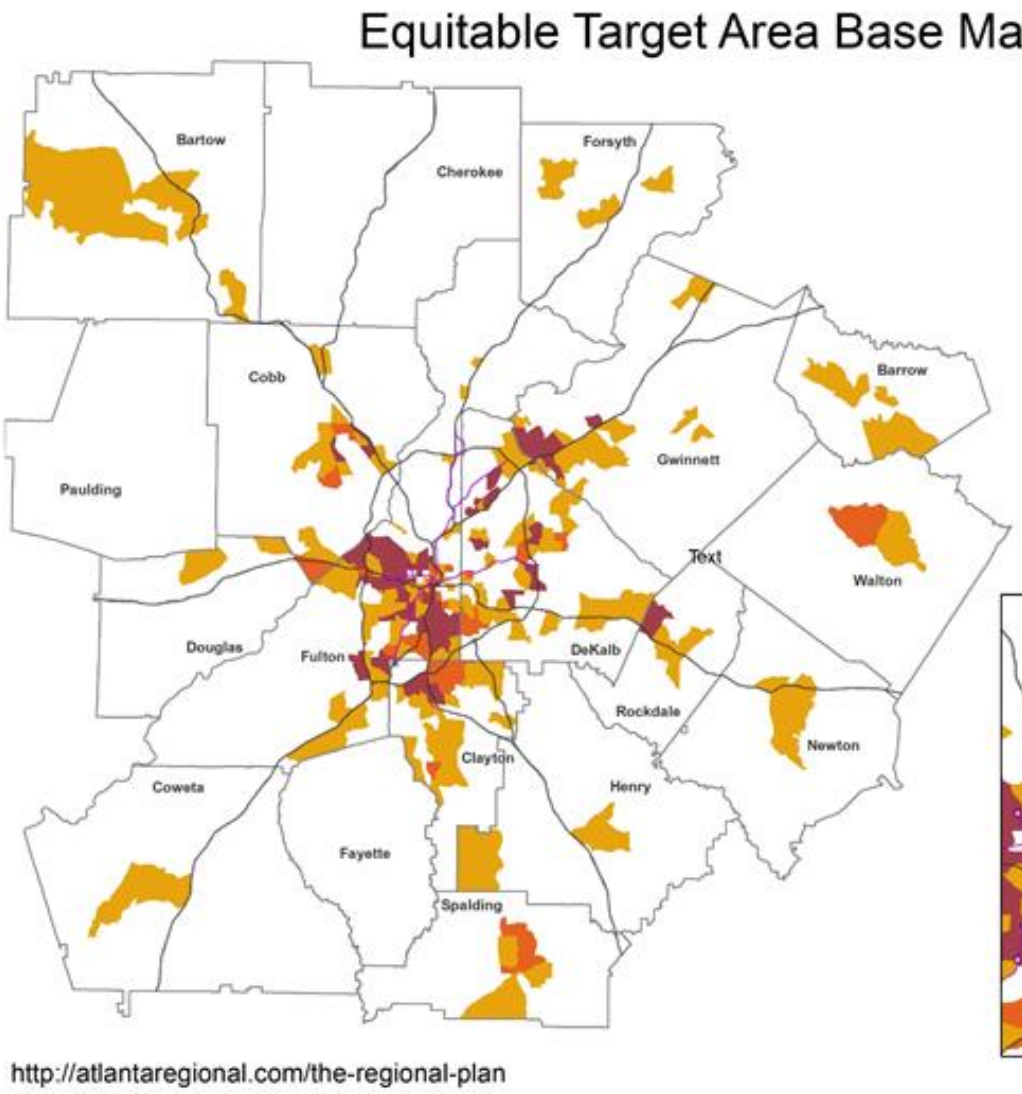
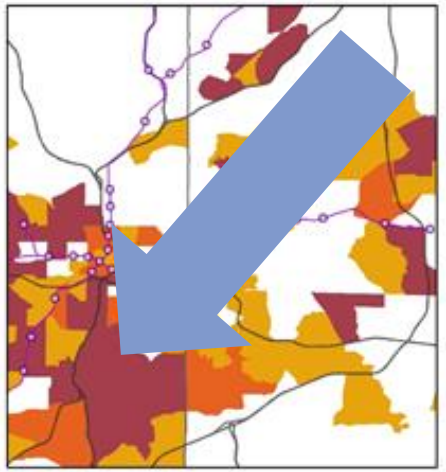
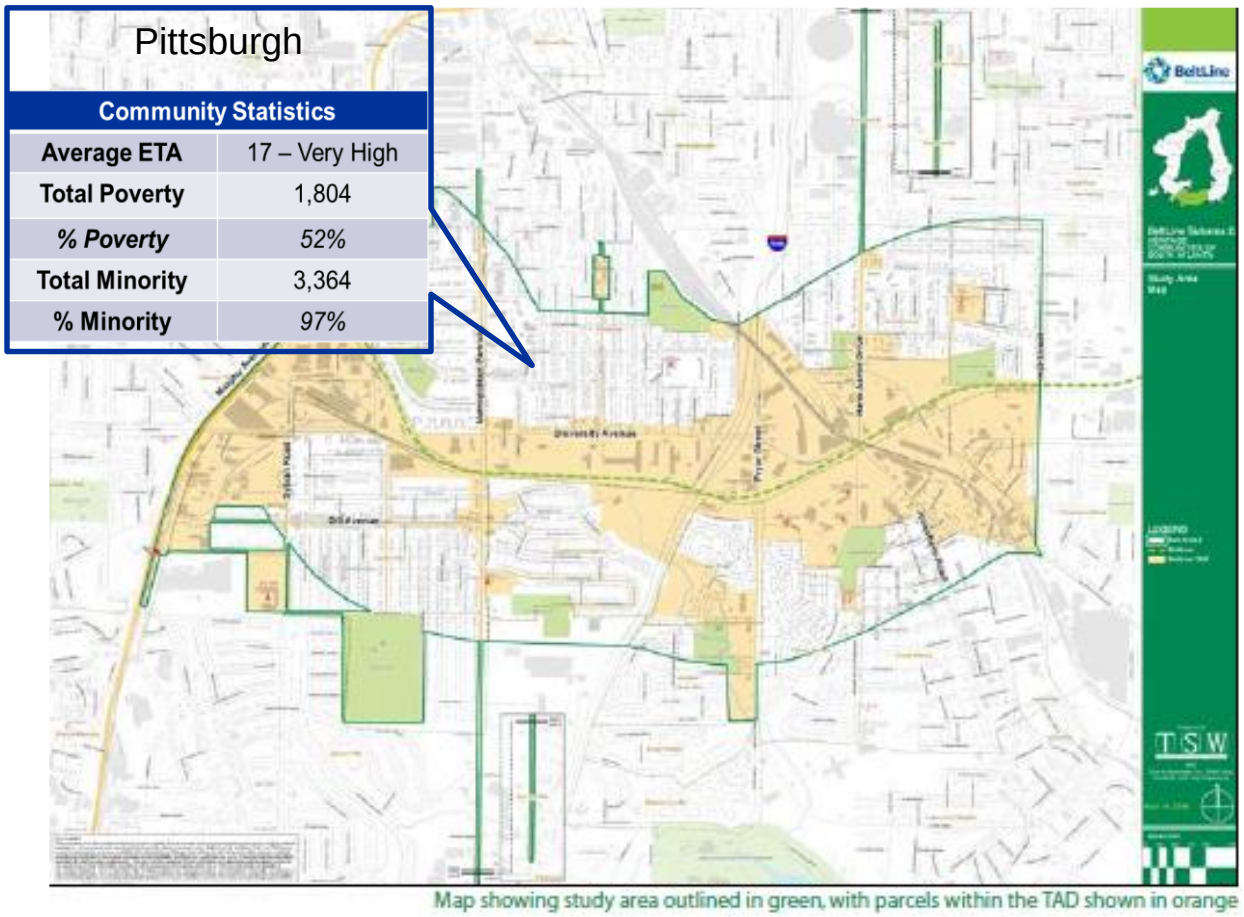




The BeltLine Eco-System

Atlanta BeltLine 'extremely positive' about $16 million federal grant to jump start Southside Trail construction



Map showing study area outlined in green, with parcels within the TAD shown in orange

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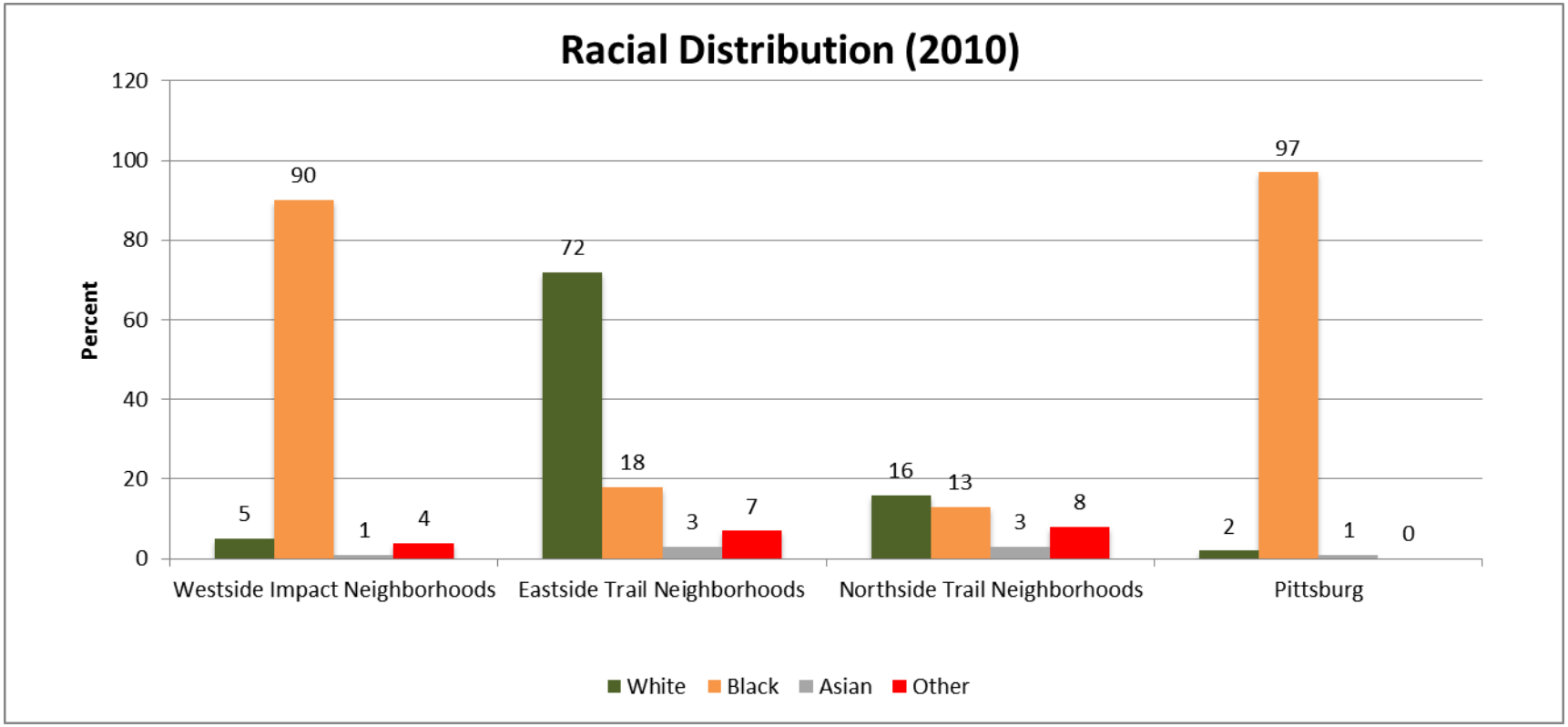
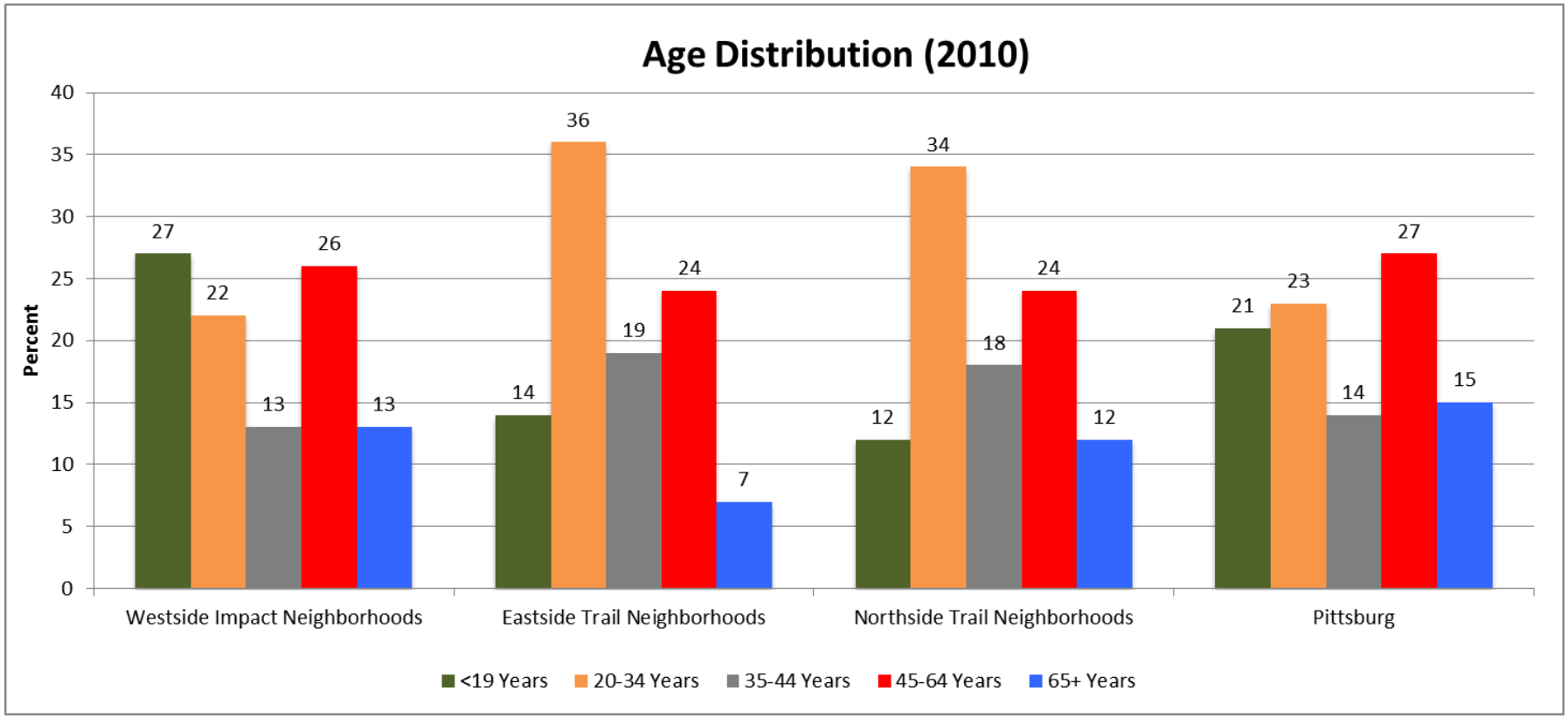
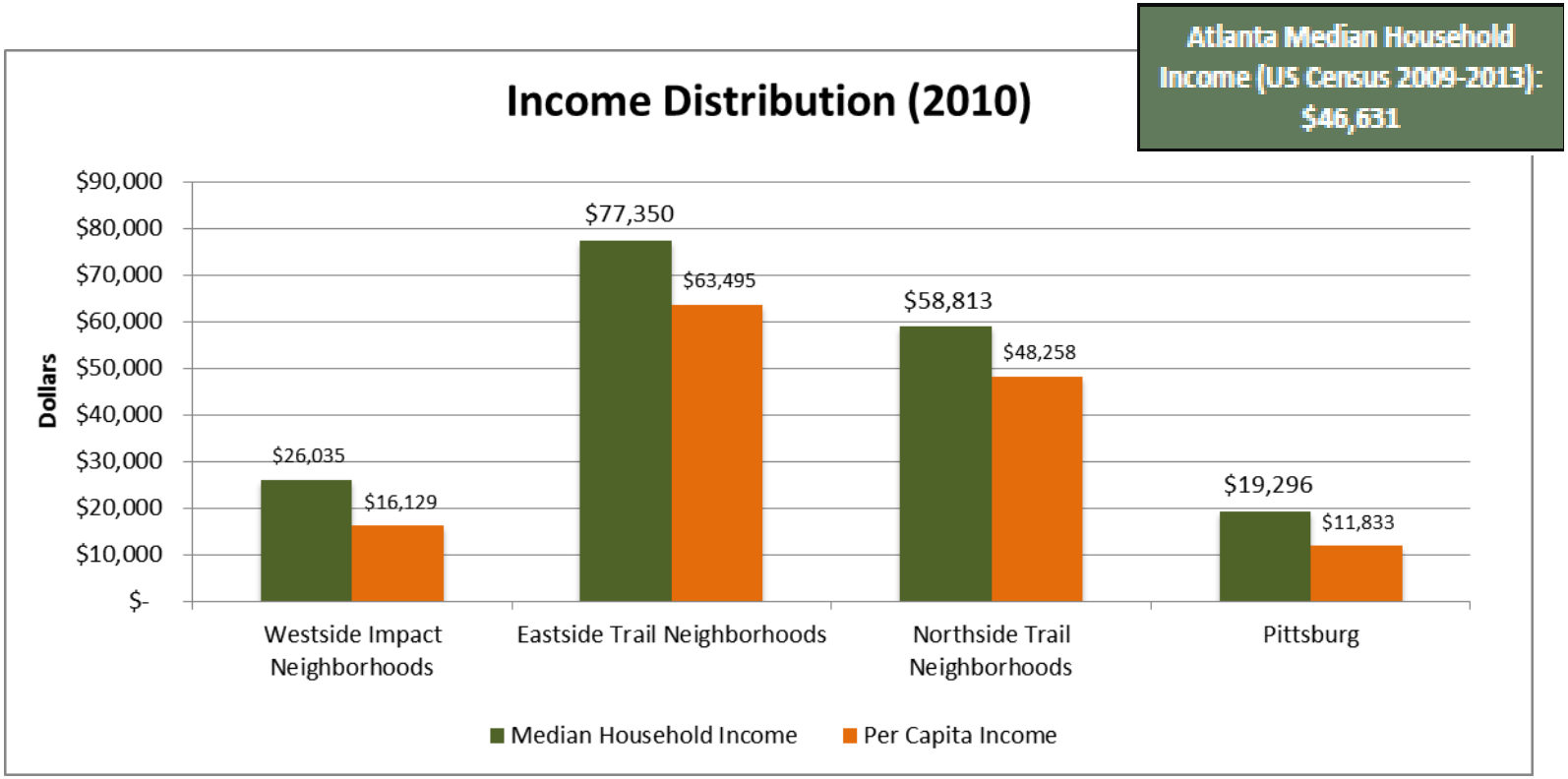
Comparing BeltLine Segments – Race Distribution



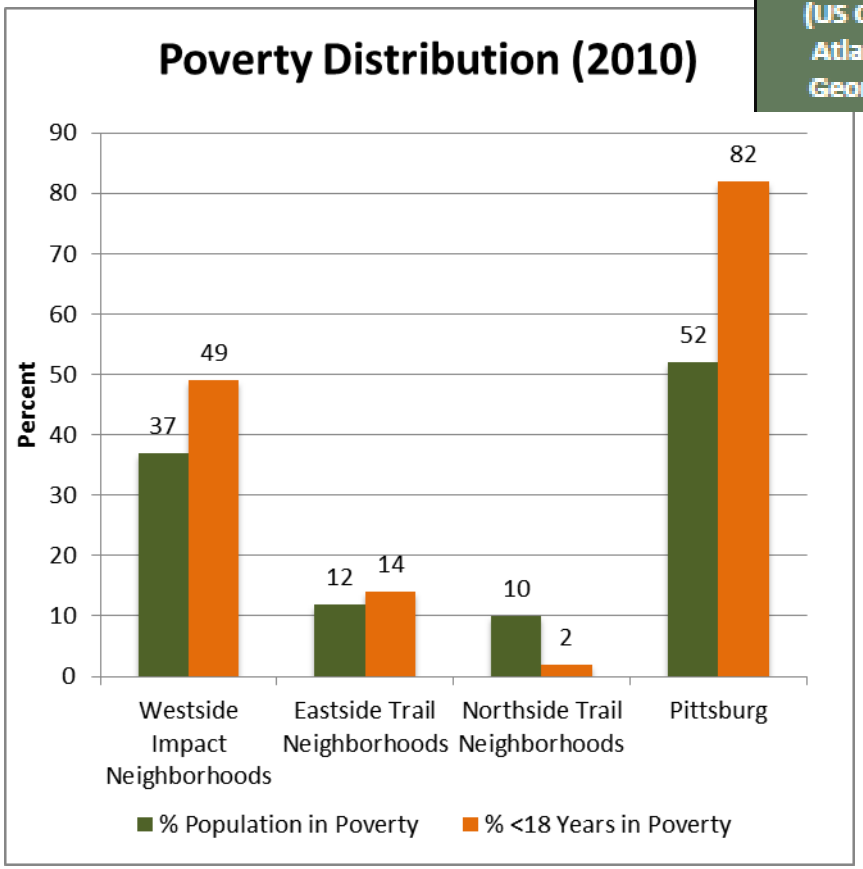
Comparing BeltLine Segments – Age Distribution



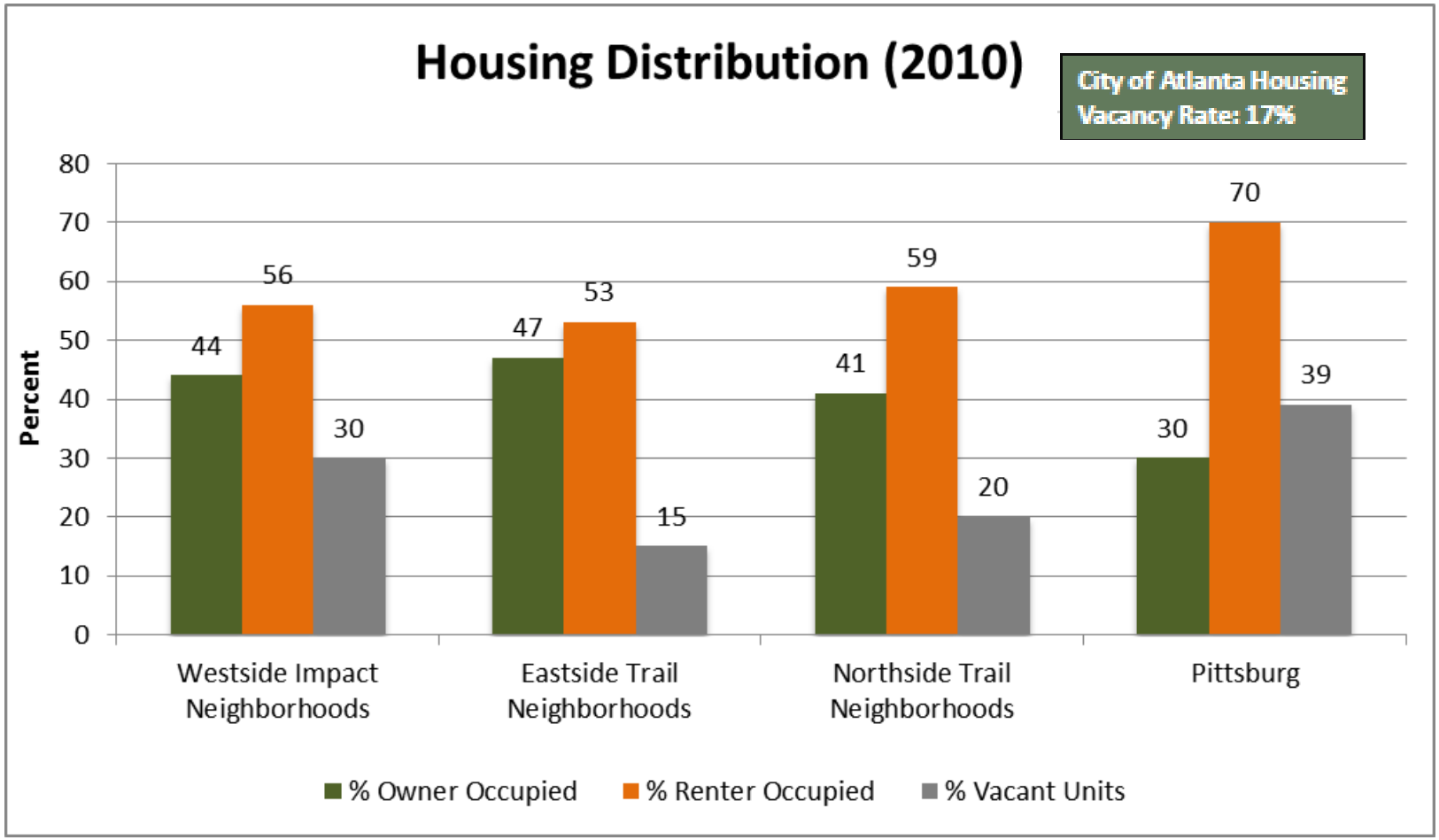
Comparing BeltLine Segments – Income Distribution



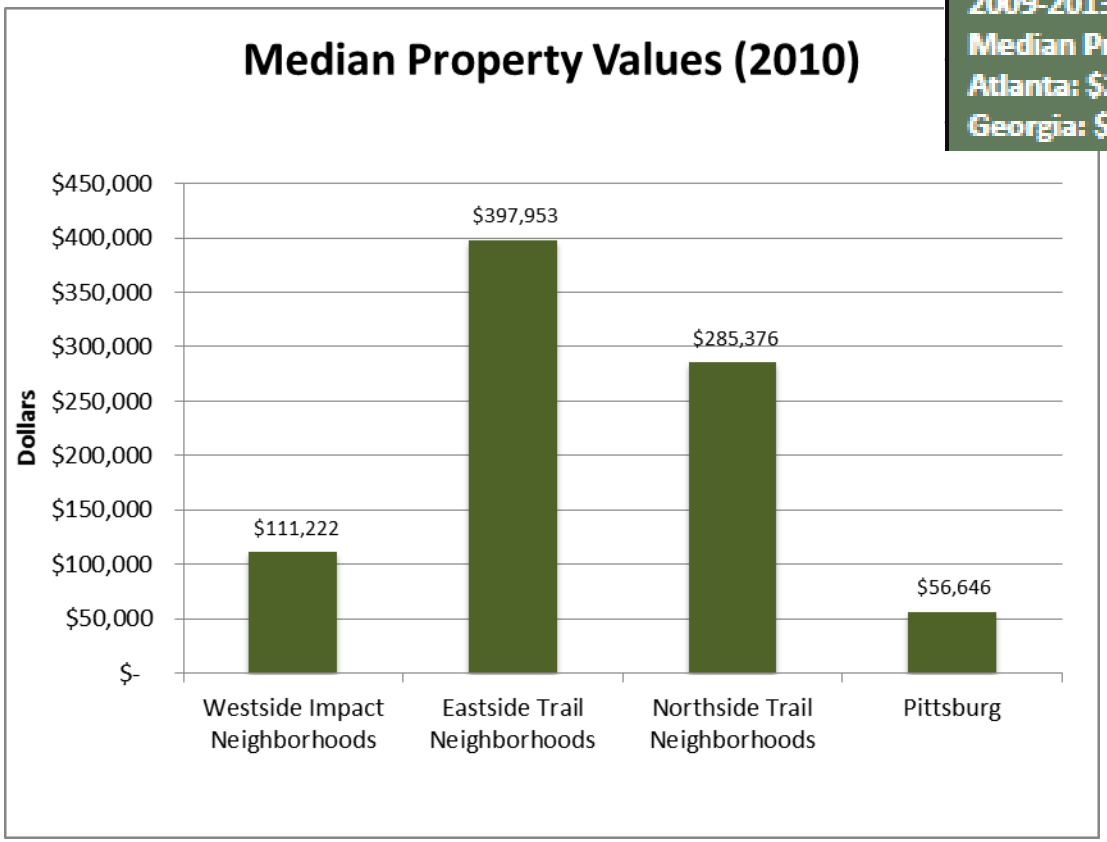
Comparing BeltLine Segments – Poverty Distribution



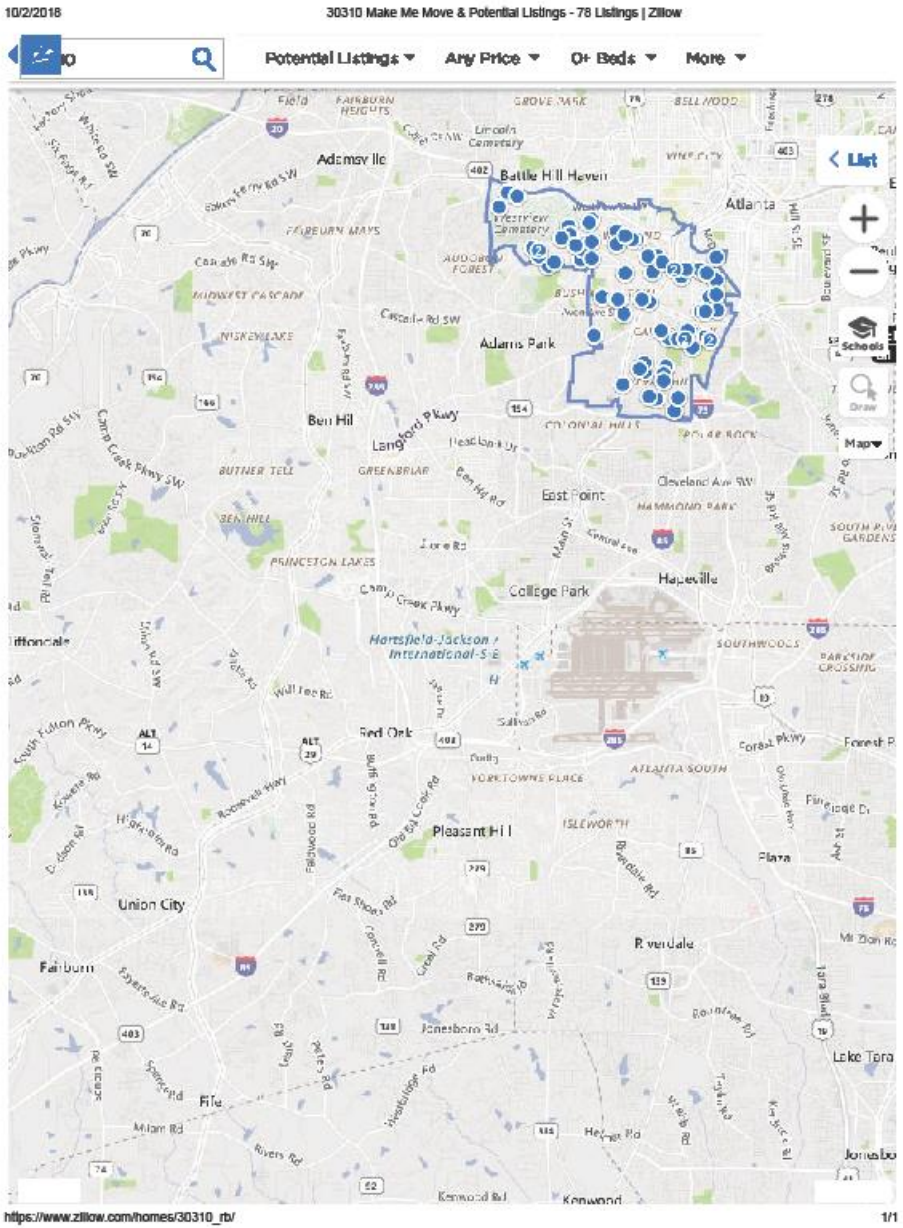
Comparing BeltLine Segments – Housing Distribution



Comparing BeltLine Segments – Property Values



Comparing BeltLine Segments – Foreclosures and Pre-Foreclosures in 30310



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Project Methodology

Data was collected and analyzed from sources including the U.S. Census, Neighborhood Nexus, County Tax Ledgers and the Atlanta BeltLine Technical and Subarea Reports. The following data at the neighborhood and/or census tract level for the most recent data available (ranges between 2010-2015) will be used to predict gentrification velocity in the community of Pittsburg:

- ✓ Ln_Land-Acres
- ✓ Ln_Living Space-sq. Feet
- ✓ Ln_Assessed Value
- ✓ Pr_ Assessed Value
- ✓ Age of House
- ✓ Violent Crime Rate
- ✓ Distance to CBD
- ✓ Distance to BeltLine < ½ mile
- ✓ SW Median Home Sale pct change
- ✓ SE Median Home Sale pct change
- ✓ SW Average Days Listed
- ✓ SE Average Days Listed
- ✓ Ln_Assessed Value Adjacent Tract
- ✓ Pr_Assessed Value Adjacent Tract
- ✓ Rental

The regression model will build on the study provided by Dan Immergluck, PhD and Tharunya Balan at Georgia Tech's School of City and Regional Planning.

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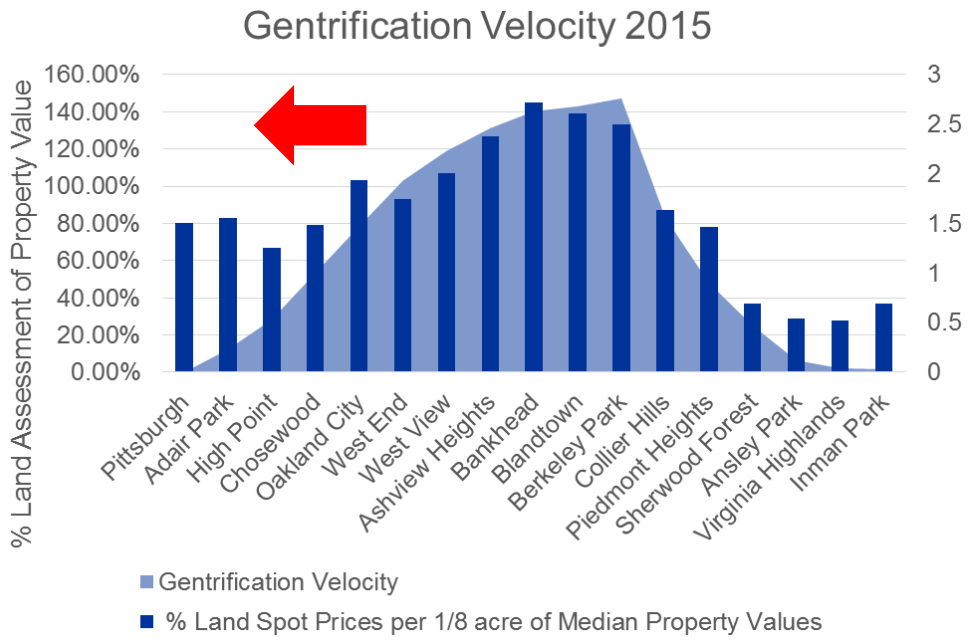
Project Methodology

Gentrification Velocity Calculations:

Our hypothesis is that once land prices approach 150% of property values, gentrification velocity accelerates until land prices return to below 40% of property values.



In essence, a GVI of 1.0 should equate to a normal gentrification cycle (50% of housing stock) of 10 years. While a GVI of 2.00 will gentrify to the same level within 5 years.

While the theory looks plausible, it will require further analysis to determine the impact of other factors. The existing model only explains 37% of the variances.

Gentrification Velocity Index = $b + x_1$(Assessed Property Value/Assessed Land Value) + x_2 (Violent Crime Rate) + x_3(Adjacent Tract Property Value) + x_4(Age of House) + x_5(Rental) + x_6(Distance to CBD) + x_7(<1/2 Mile from BeltLine)

Policy Implications

This baseline study is still collecting data for the SubAreas just completed on the Westside and it will continue to collect data for the 2020 completion of the Southern Trail.

The Timing of Affordable Housing

Availability of affordable housing must happen sooner.

Educating At-Risk Populations on High-Density Living

Communities are unique because of people not aging housing stock. Transitioning to high-density housing will happen to all socio-economic groups in high demand urban markets eventually.

Leveraging Hybrid Steel/Concrete Construction

Stick-built high-density house age badly. Hybrid structural designs reduce the number of columns, open floor plans and allow mixed-use construction to evolve over time.

Financing Options for Affordable Housing must precede Construction of the Economic Development Project

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Questions?