GESU Housing Development

Estimated Impact to Residential and Commercial Property Values
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City of Detroit
Housing and Revitalization Department
Policy and Implementation Division
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Background

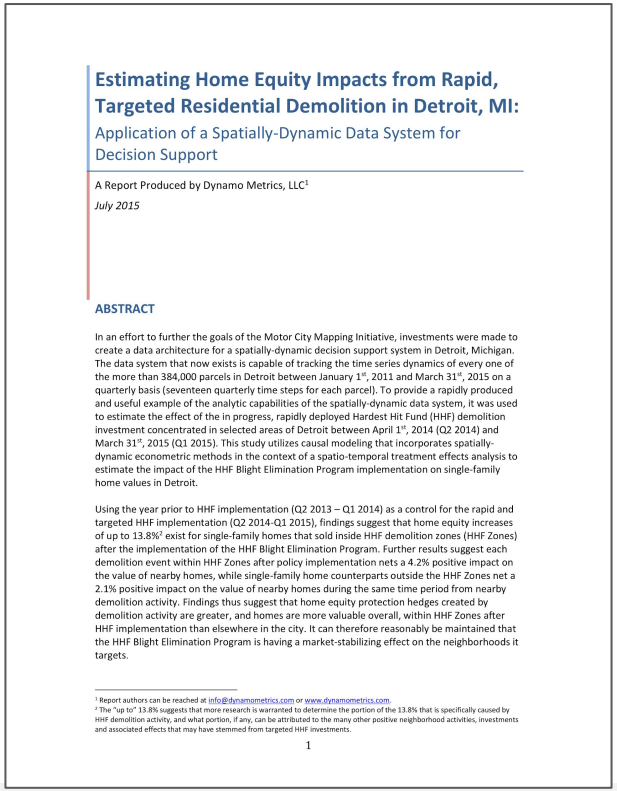
The City of Detroit uses the *Munetrix Neighborhood Intel* software model to estimate how the sale price of real estate is impacted by new construction and building rehabilitation. The model provides a dollar figure of sale price impact for all residential and commercial structures within a 500 foot radius of a development site.

The economic model deployed within Neighborhood Intel is built using hedonic non-market valuation theory rooted in neoclassical economic theory.

Simply put, the sale price of a home is determined by numerous factors such as bedroom count, square foot, and garage size. The Neighborhood Intel model isolates the value of new construction on home values within 500 feet of a development site.

The model indicates that, based on the characteristics of the area, the proposed development will have a **positive impact** on surrounding property values.

Previous Example of the Model



Estimating Home Equity Impacts from Rapid, Targeted Residential Demolition in Detroit, MI:

Application of a Spatially-Dynamic Data System for Decision Support

A Report Produced by Dynamo Metrics, LLC[1]

July 2015

ABSTRACT

In an effort to further the goals of the Motor City Mapping Initiative, investments were made to create a data architecture for a spatially-dynamic decision support system in Detroit, Michigan. The data system that now exists is capable of tracking the time series dynamics of every one of the more than 384,000 parcels in Detroit between January 1st, 2011 and March 31st, 2015 on a quarterly basis (seventeen quarterly time steps for each parcel). To provide a rapidly produced and useful example of the analytic capabilities of the spatially-dynamic data system, it was used to estimate the effect of the in progress, rapidly deployed Hardest Hit Fund (HHF) demolition investment concentrated in selected areas of Detroit between April 1st, 2014 (Q2 2014) and March 31st, 2015 (Q1 2015). This study utilizes causal modeling that incorporates spatially-dynamic econometric methods in the context of a spatio-temporal treatment effects analysis to estimate the impact of the HHF Blight Elimination Program implementation on single-family home values in Detroit.

Using the year prior to HHF implementation (Q2 2013 – Q1 2014) as a control for the rapid and targeted HHF implementation (Q2 2014-Q1 2015), findings suggest that home equity increases of up to 13.8%[2] exist for single-family homes that sold inside HHF demolition zones (HHF Zones) after the implementation of the HHF Blight Elimination Program. Further results suggest each demolition event within HHF Zones after policy implementation nets a 4.2% positive impact on the value of nearby homes, while single-family home counterparts outside the HHF Zones net a 2.1% positive impact on the value of nearby homes during the same time period from nearby demolition activity. Findings thus suggest that home equity protection hedges created by demolition activity are greater, and homes are more valuable overall, within HHF Zones after HHF implementation than elsewhere in the city. It can therefore reasonably be maintained that the HHF Blight Elimination Program is having a market-stabilizing effect on the neighborhoods it targets.

[1] Report authors can be reached at info@dynamometrics.com or www.dynamometrics.com.

[2] The "up to" 13.8% suggests that more research is warranted to determine the portion of the 13.8% that is specifically caused by HHF demolition activity, and what portion, if any, can be attributed to the many other positive neighborhood activities, investments and associated effects that may have stemmed from targeted HHF investments.

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Demolition Impact in Detroit

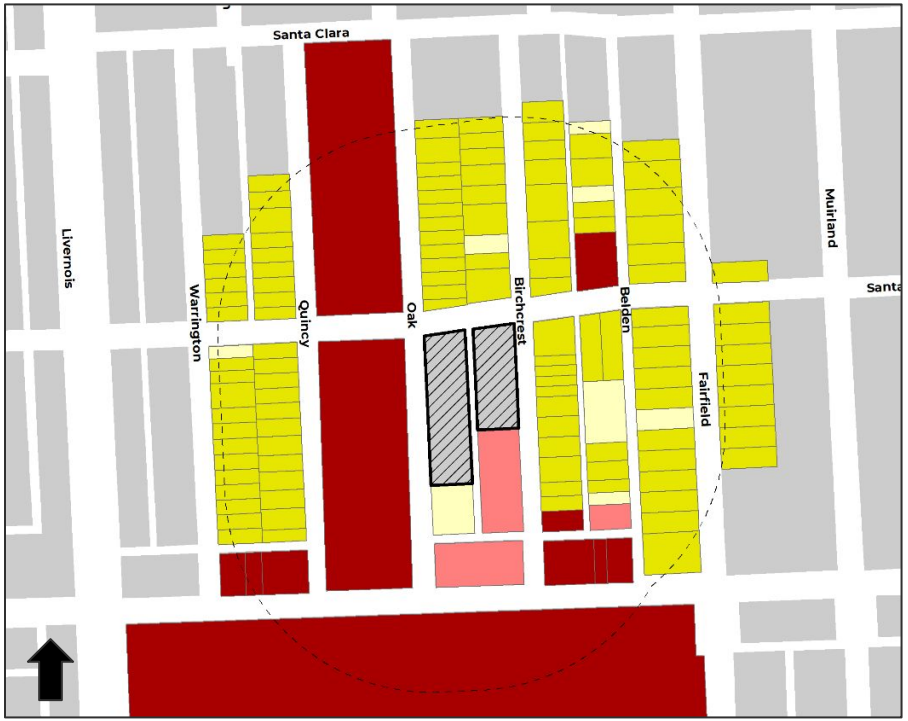
2015 study completed by the City of Detroit

Each demolition increased the value of occupied single family homes within 500 feet by an estimated 4.2%

GESU Development Impact Area

Development Impact Area
500 ft. from the property line of the development

136 total properties
- 114 residential structures
- 11 commercial structures
- *8 residential vacant parcels**
- *3 commercial vacant parcels**



Map Legend

- Residential - Structures
- Residential - Vacant
- Development Site
- Commercial - Structures
- Commercial - Vacant
- 500 foot radius**

*Vacant parcels (meaning no structure) are not included in the estimate
**The 500 foot radius is not a perfect circle because we measure 500 feet from the development property line

Data: Neighborhood Intel, City of Detroit analysis

Residential Impact

Estimated Residential Impact
$6,782,050

Residential Structures within Impact Area
114

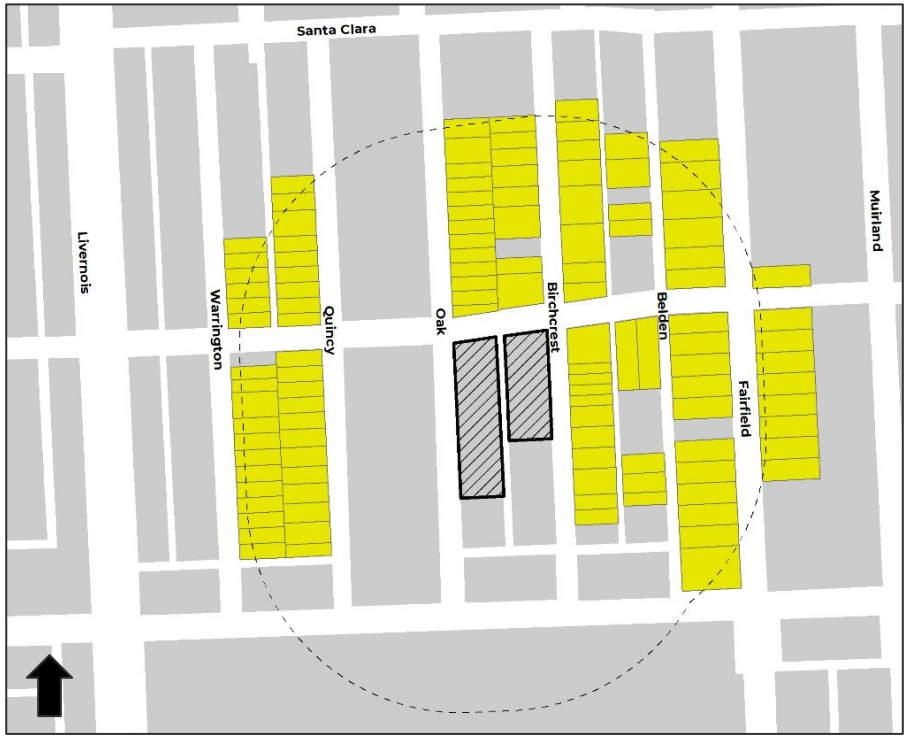
Estimated Impact Per Residential Structure
$59,492

Map Legend

Residential - Structures

Development Site

500 foot radius



Data: Neighborhood Intel, City of Detroit analysis

Commercial Impact

Estimated Commercial Impact
$1,201,057

Commercial Structures within Impact Area
11

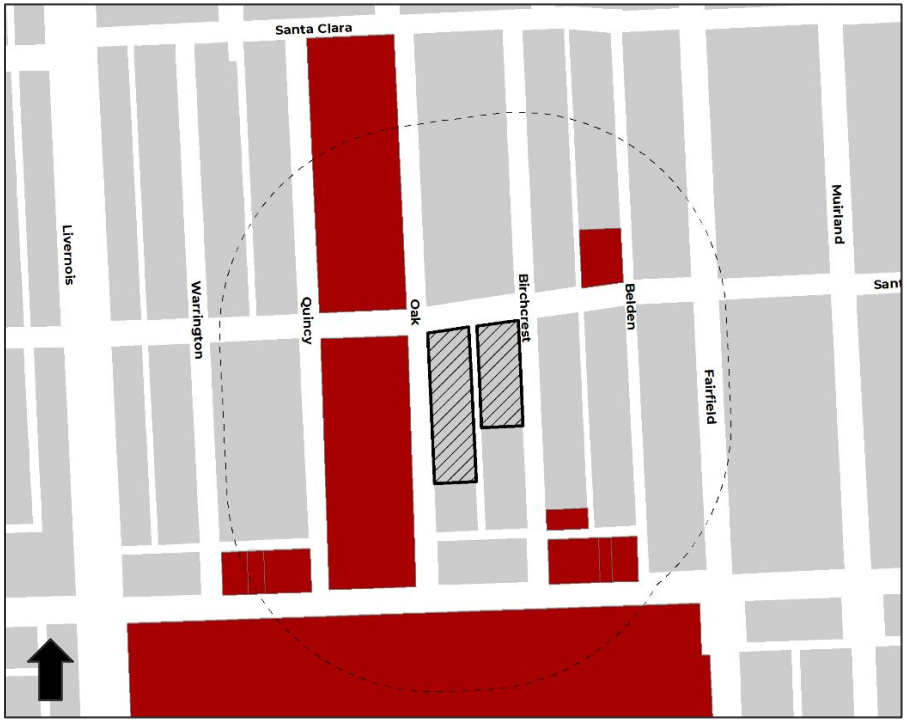
Estimated Impact Per Commercial Structure
$109,187

Map Legend

Commercial - Structures

Development Site

500 foot radius



Data: Neighborhood Intel, City of Detroit analysis