



FIRE STATION SITING STUDY

PURDUE ROAD SCHOOL

MARCH 16, 2022



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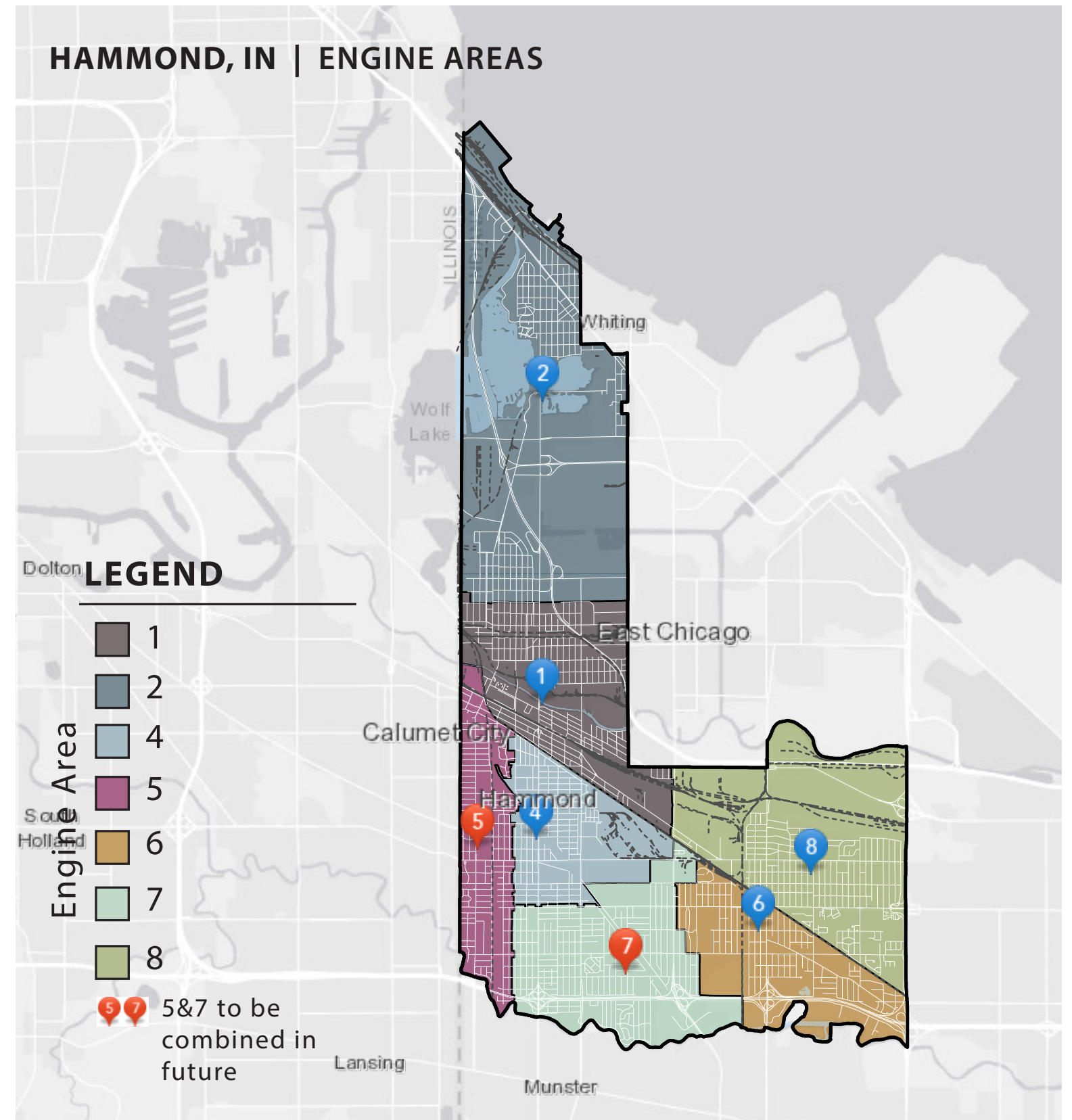
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City of Hammond

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Fire Station Location Specialist
Shive-Hattery

Why a Fire Station Siting Study?

- ➔ Understand the current conditions to **establish a baseline**
- ➔ Analyze areas of higher risk to **identify gaps in fire department coverage**
- ➔ Consider future department/city changes to **strategically plan for the future**
- ➔ This approach is **data driven, utilizes industry standards, and provides an objective perspective** to help municipalities and departments make more strategic and effective decisions



Basis of Study

SUMMARY OF DATA USED

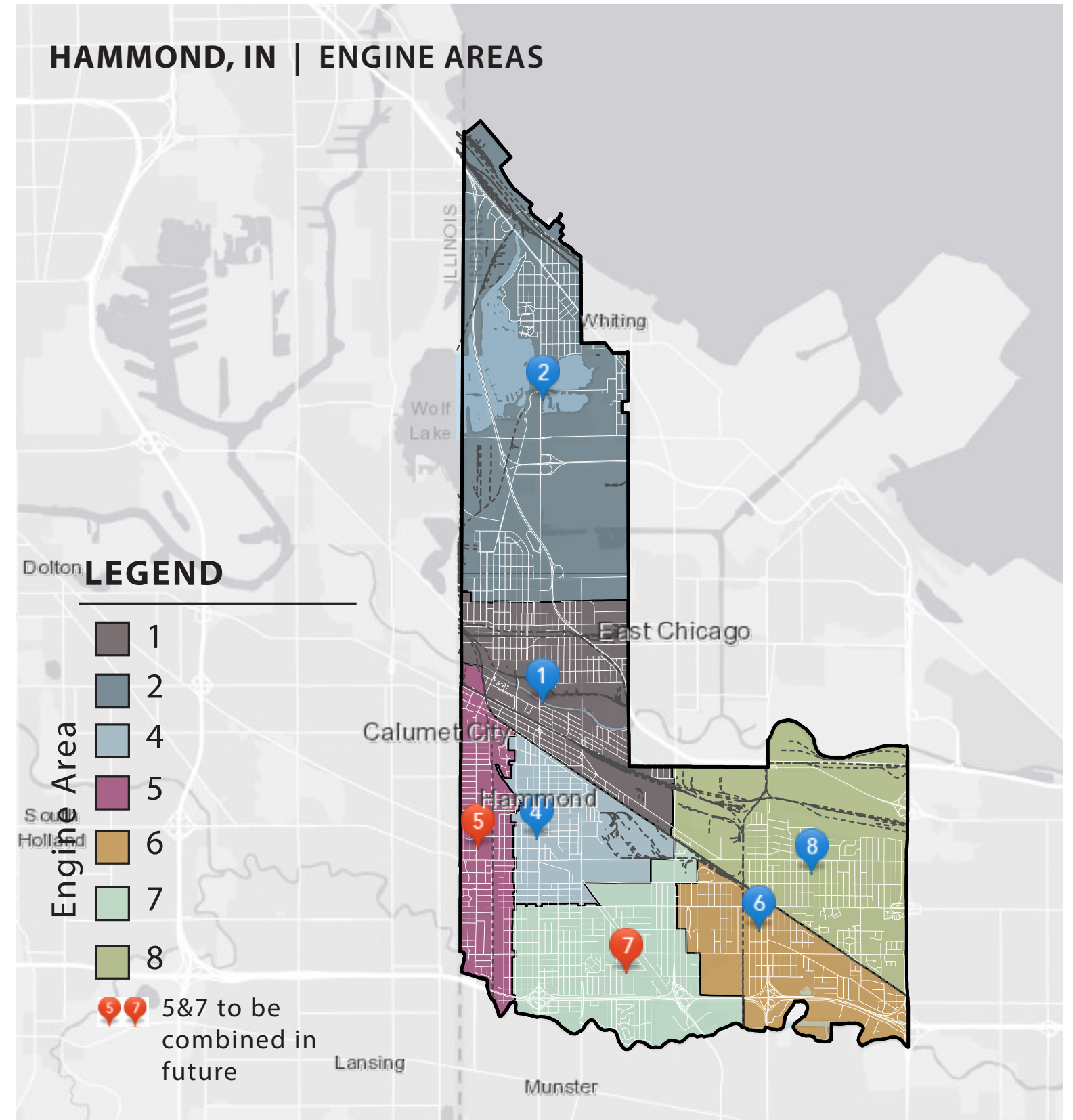
- GIS Data (ESRI & City of Hammond)
- Historic Dispatch Data
- US Census Bureau Demographic Data

OUR PROCESS

1. Develop Understanding of Existing Conditions
 - Where is the most call & population density?
 - How do current station locations relate to this?
2. Determine Areas of Opportunity
 - Where are these “gaps”
 - How can coverage be improved?
 - How could the population be impacted by future changes?

OTHER CONSIDERATIONS

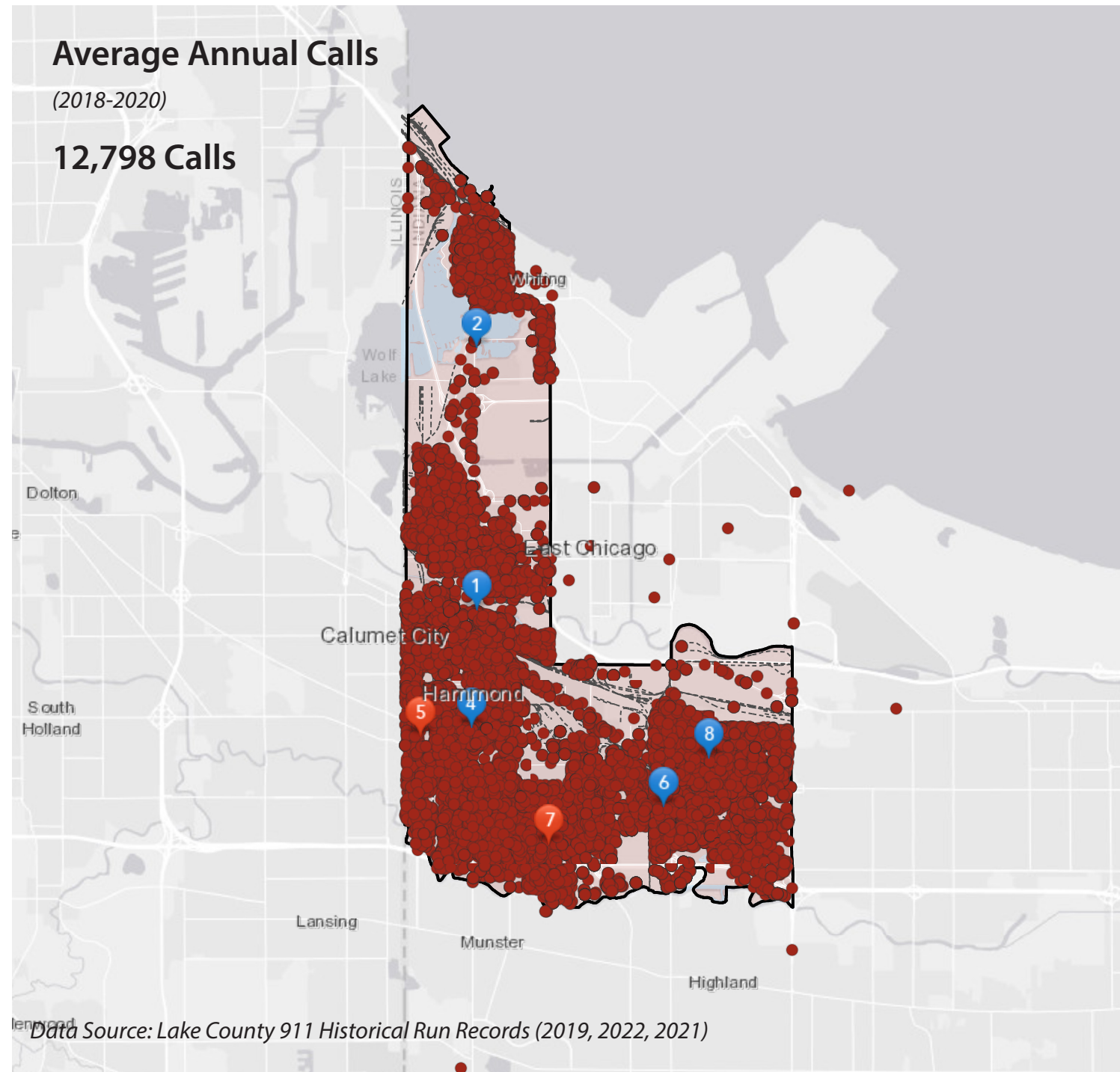
- NFPA 1710 Standards (4-minute drive time)
- No at-grade railroad crossings



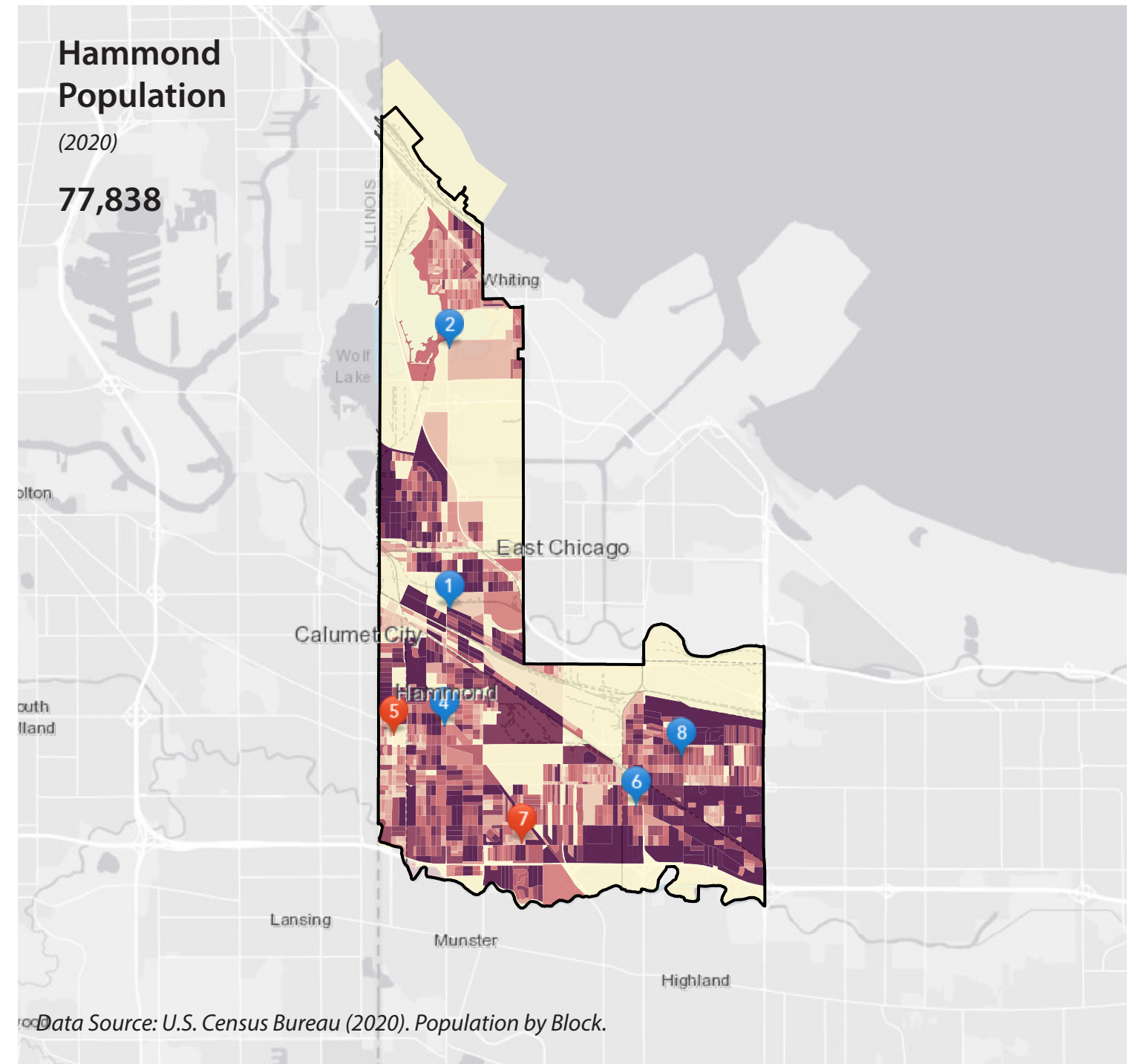
Data Overview

Historical Dispatch & Population by Block

CALL DENSITY



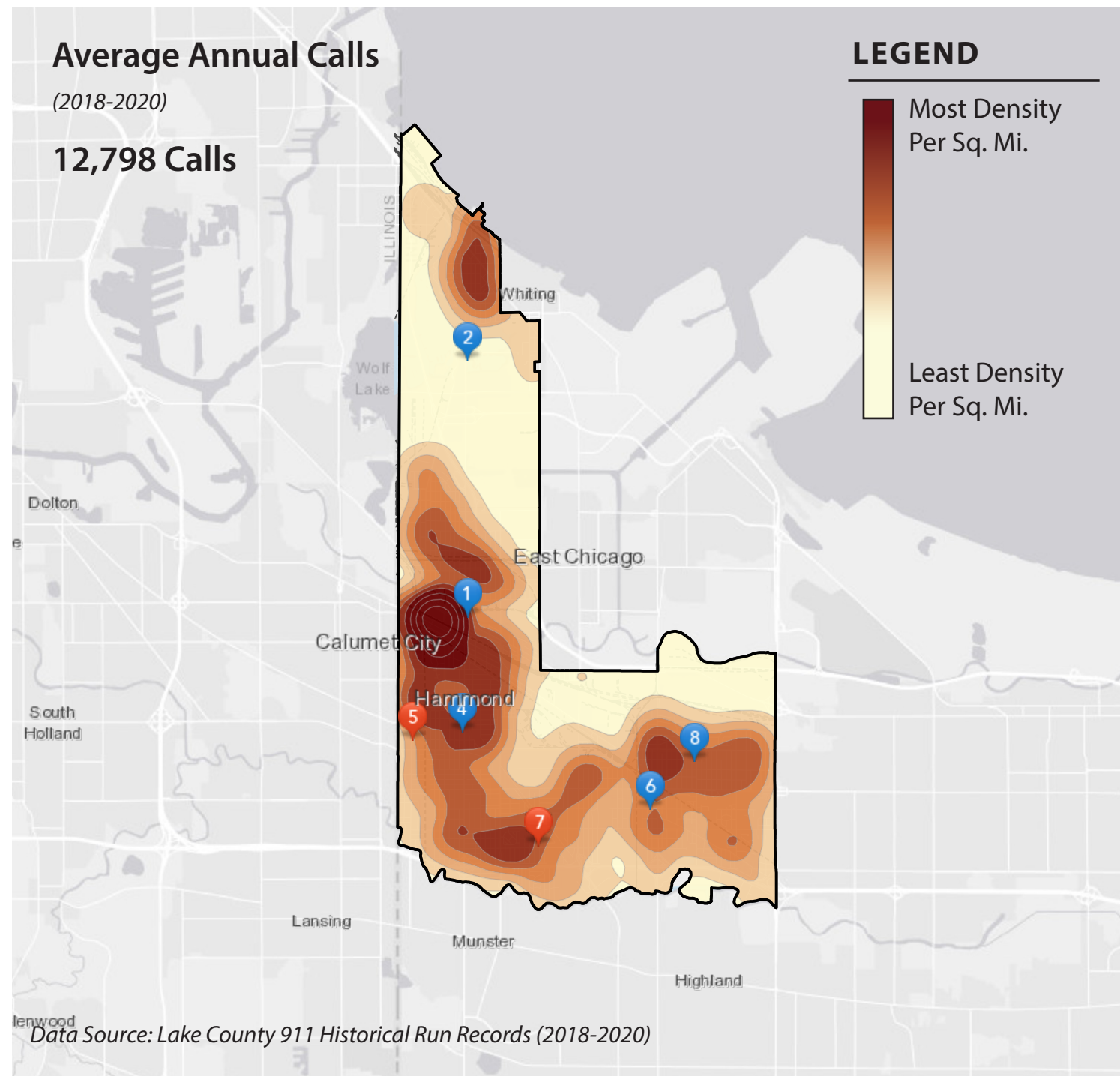
POPULATION DENSITY



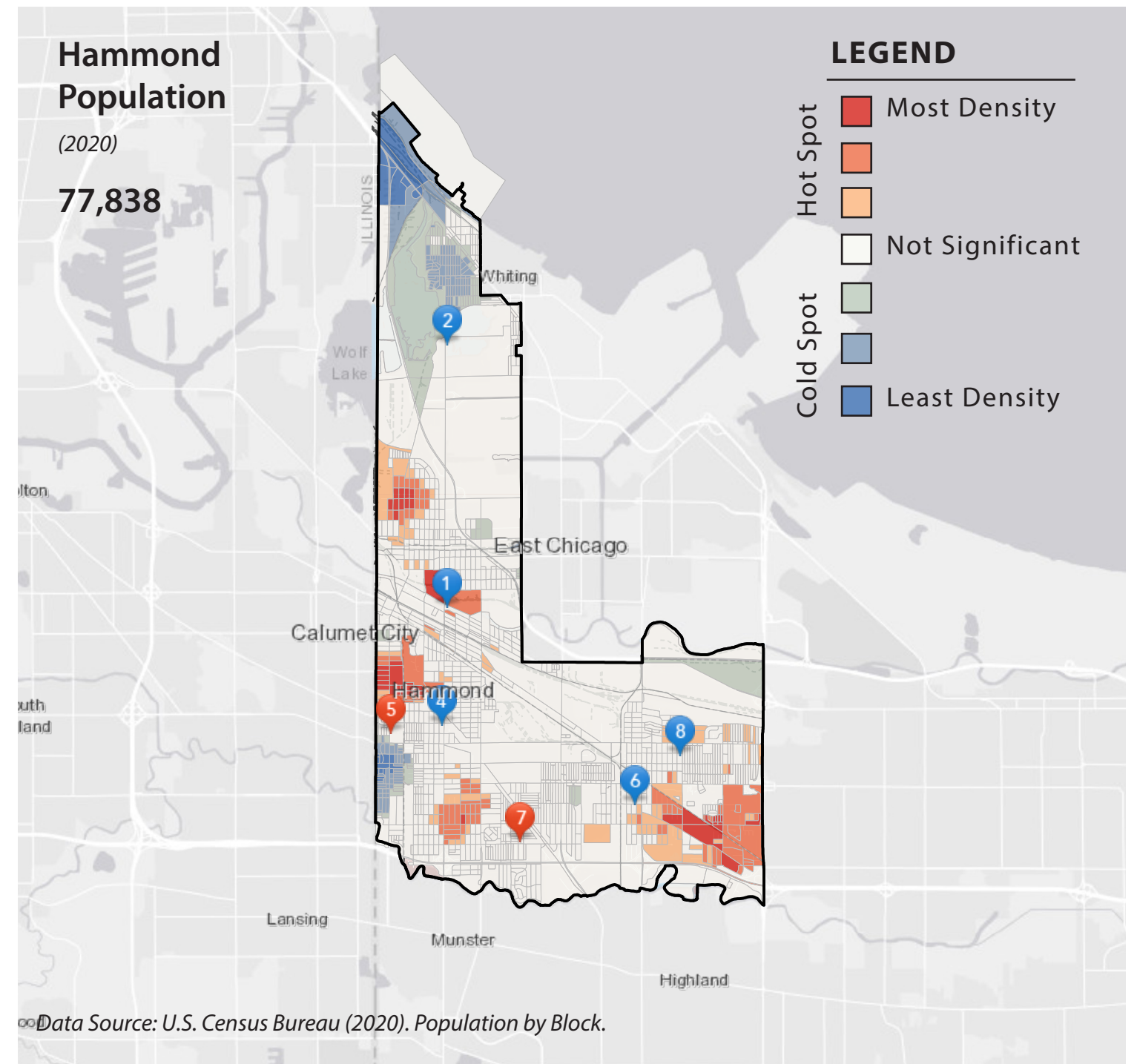
Data Overview

Hot Spot Analysis

CALL DENSITY



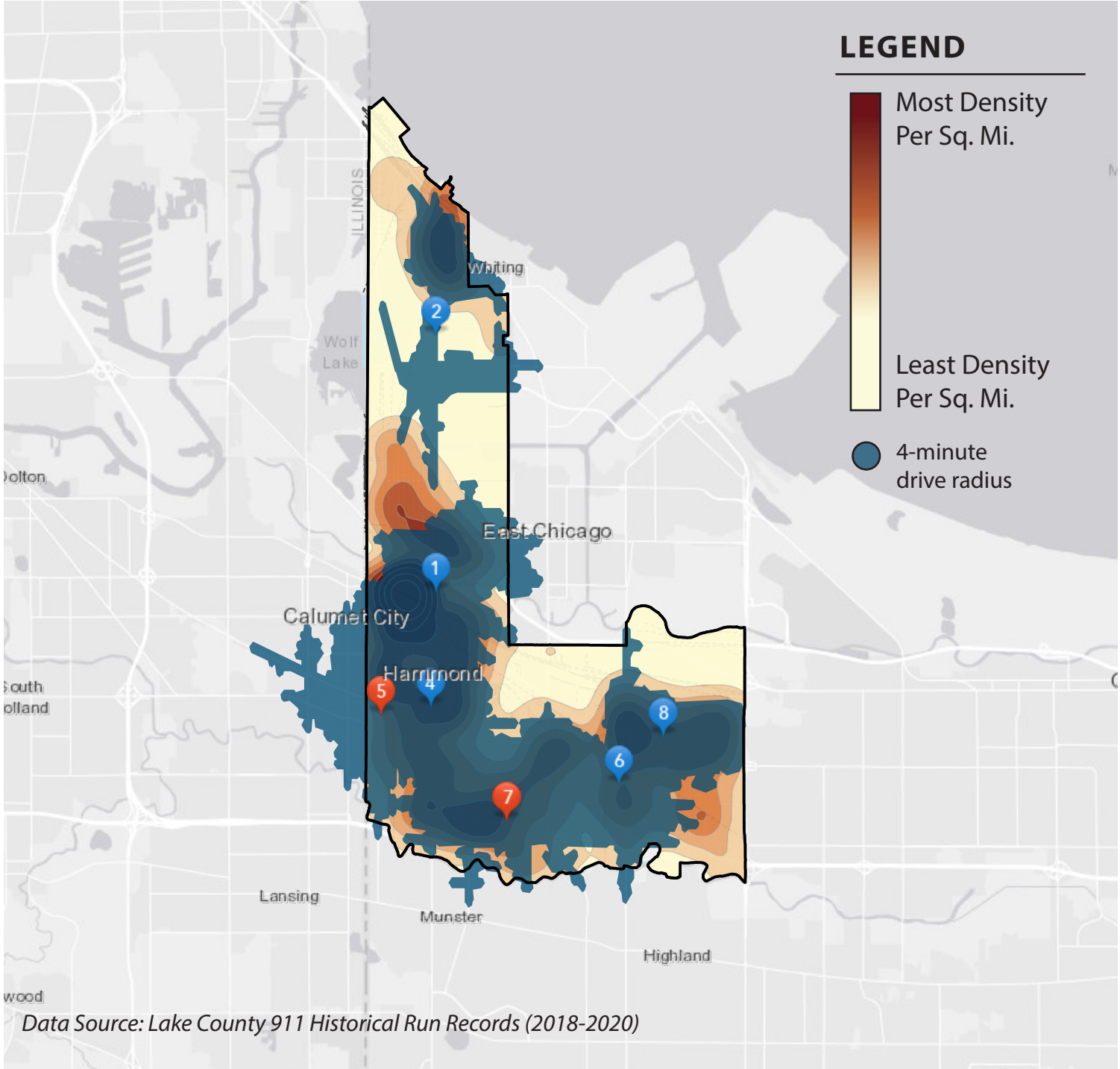
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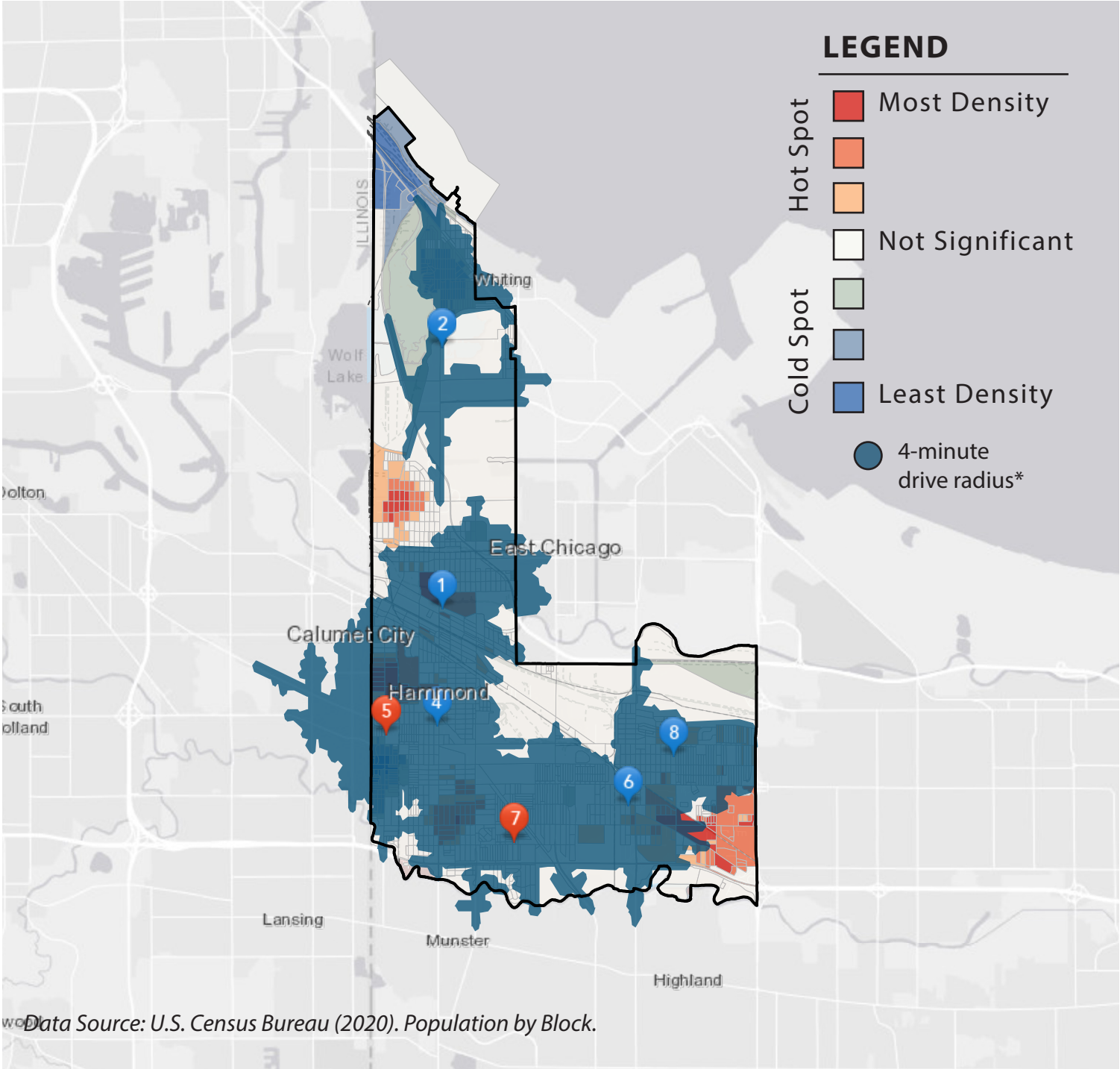
Siting Analysis

4-Minute Drive Radius | Existing Coverage

CALL DENSITY



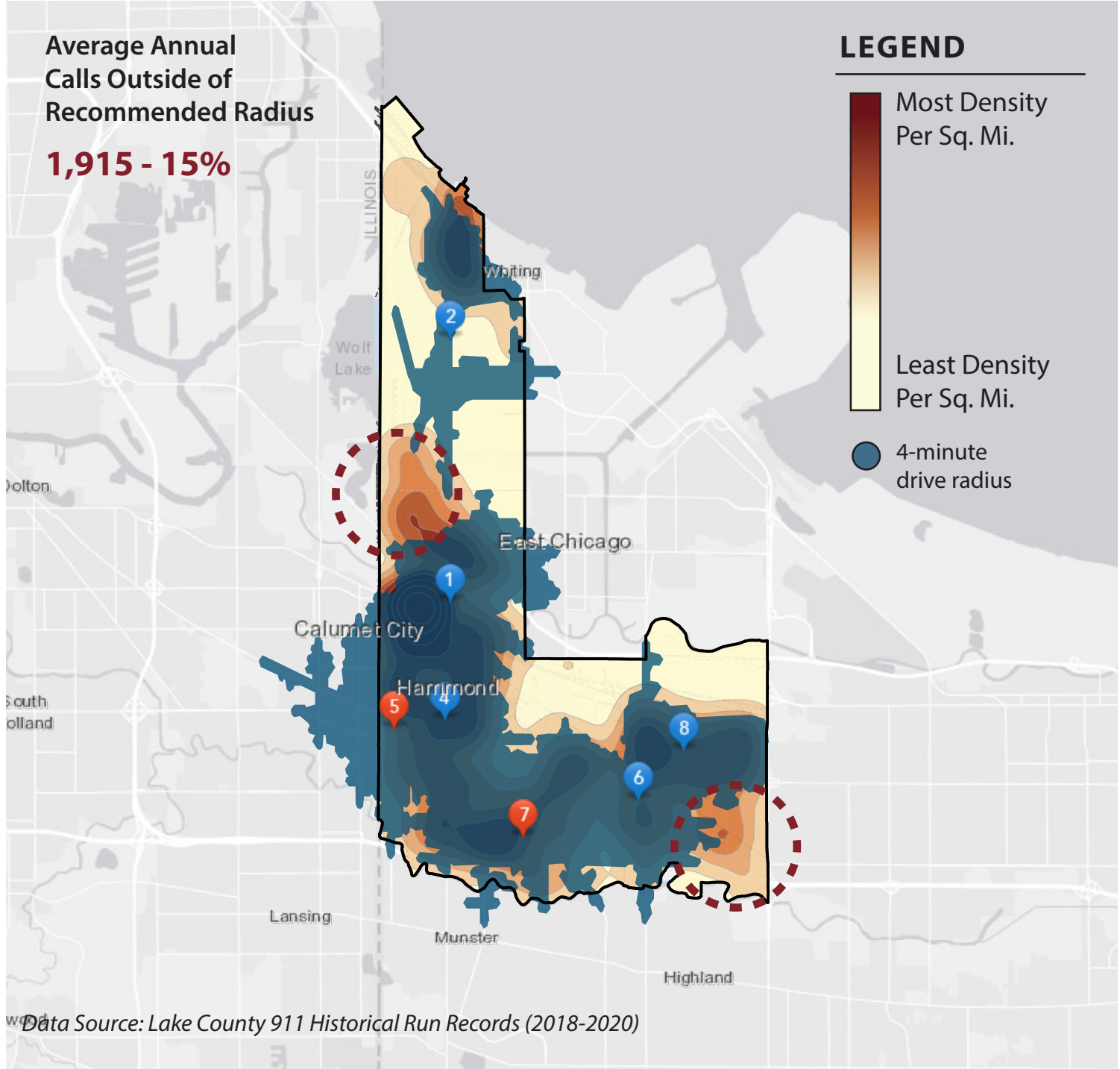
POPULATION DENSITY



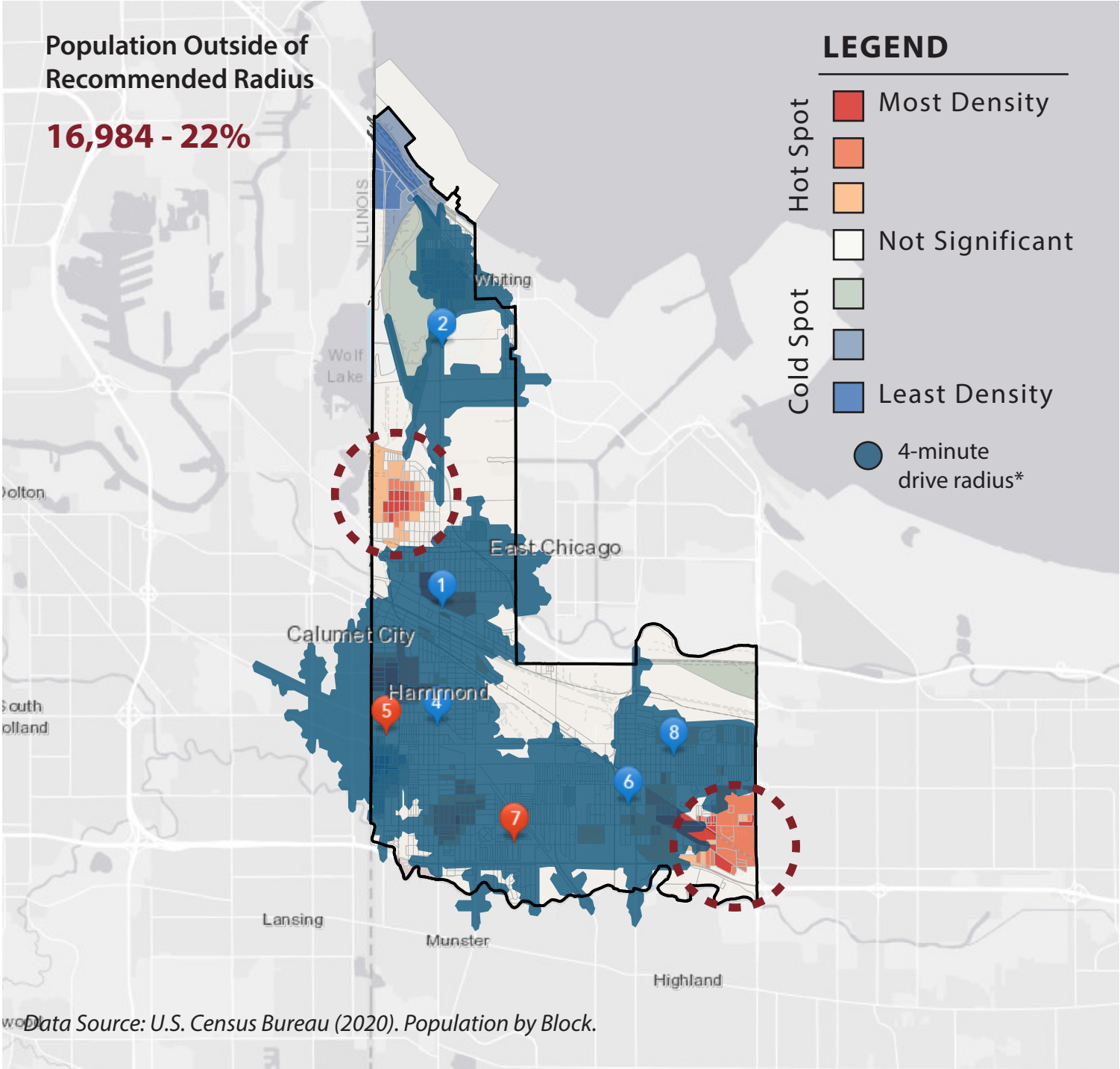
Siting Analysis

4-Minute Drive Radius | Existing Coverage

CALL DENSITY



POPULATION DENSITY

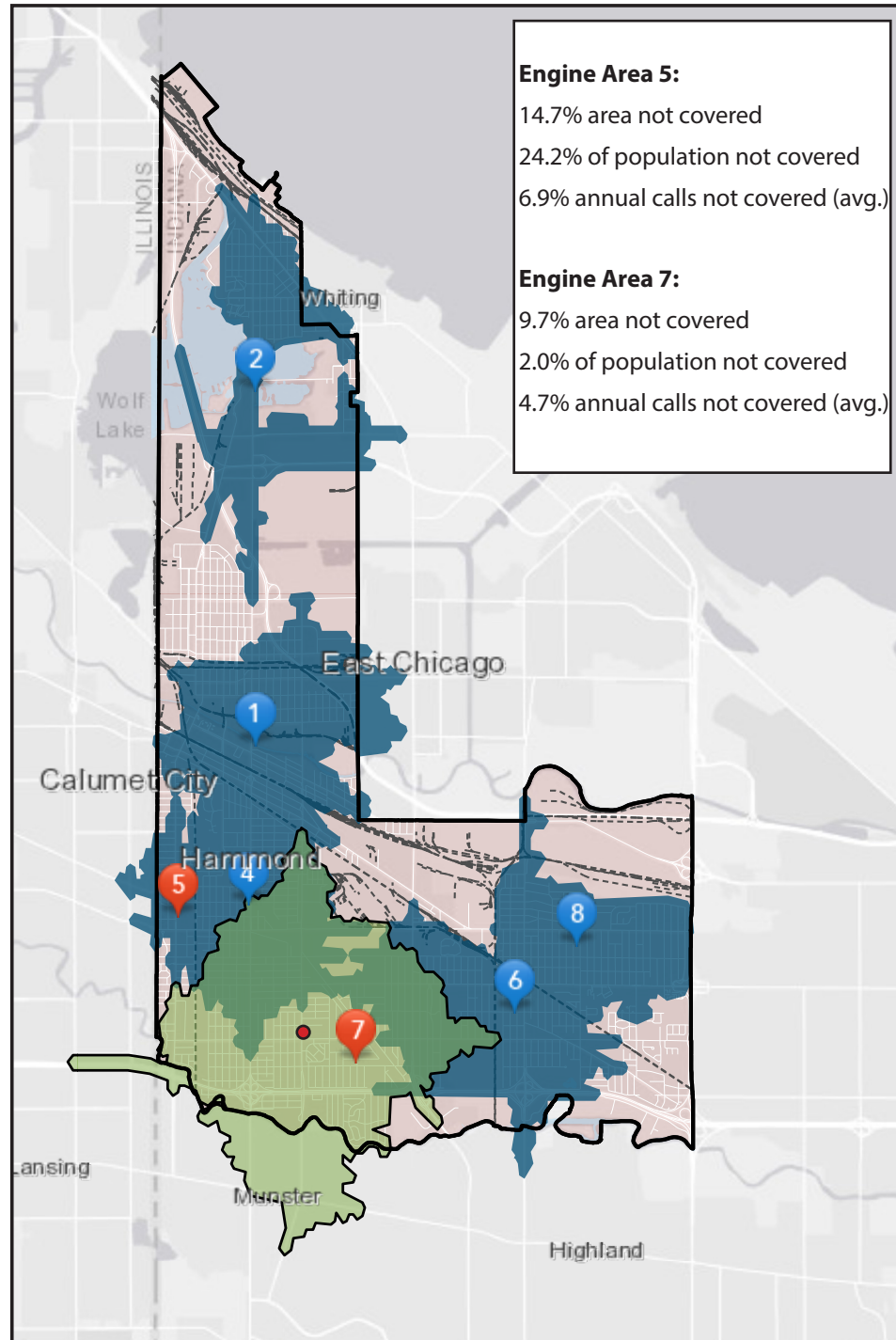


Siting Analysis

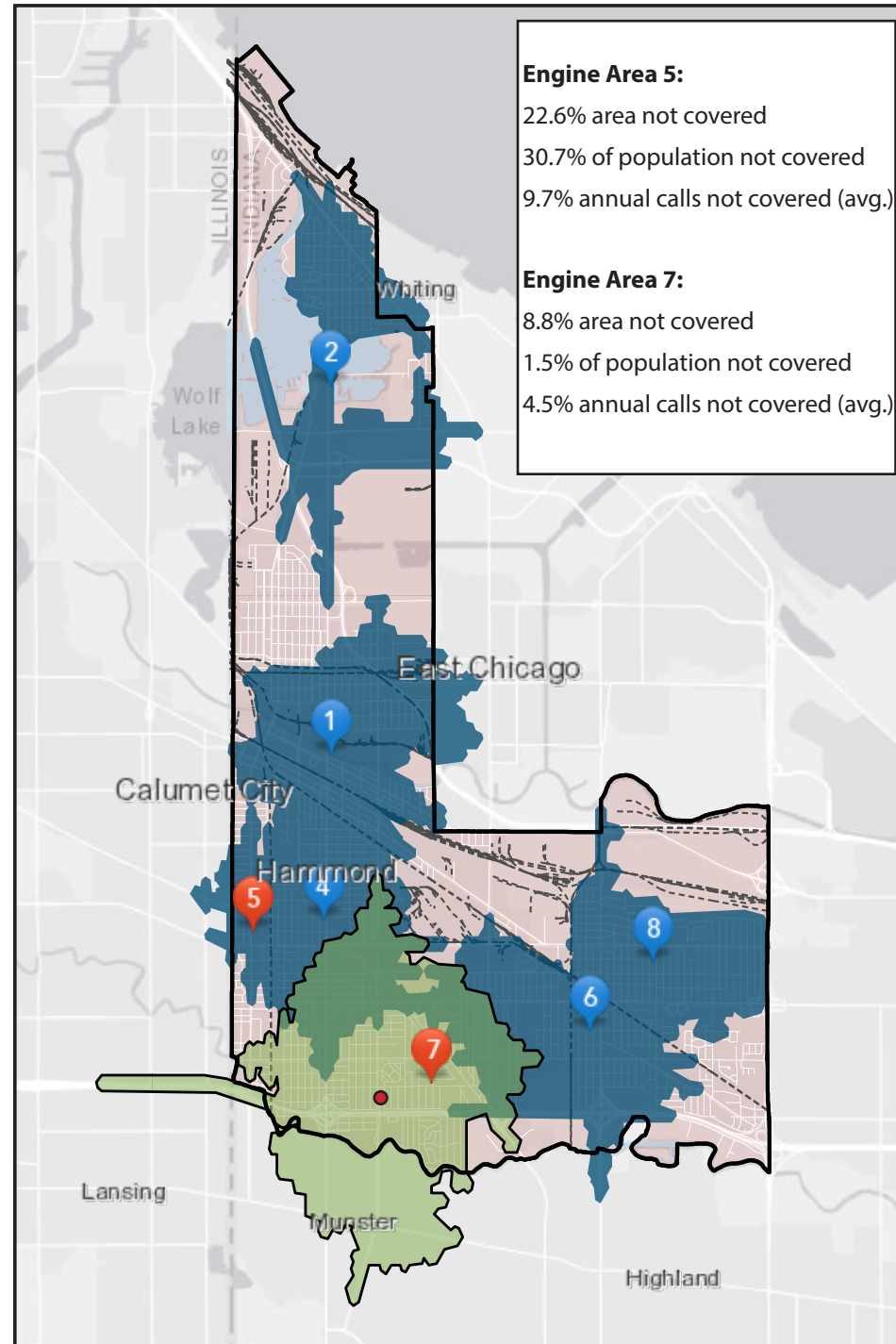
4-Minute Drive Radius | Side-By-Side Coverage Comparison

- 4-minute recommended drive radius
- New Station 4-minute Drive Coverage
- Engine Areas 5 & 7 - not currently covered

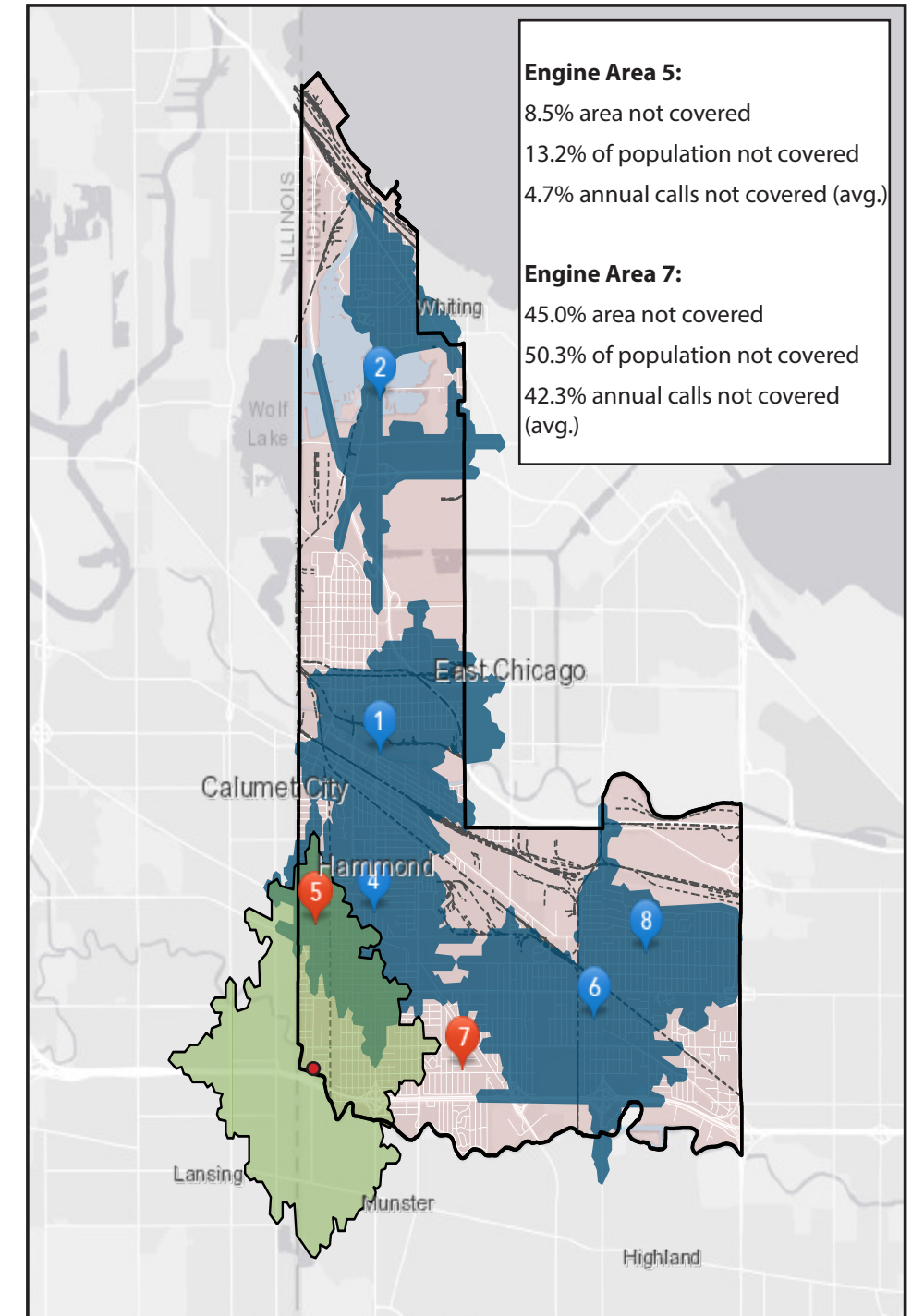
① Columbia & 173rd



② Columbia & 175th



③ 7500 Hohman Ave.



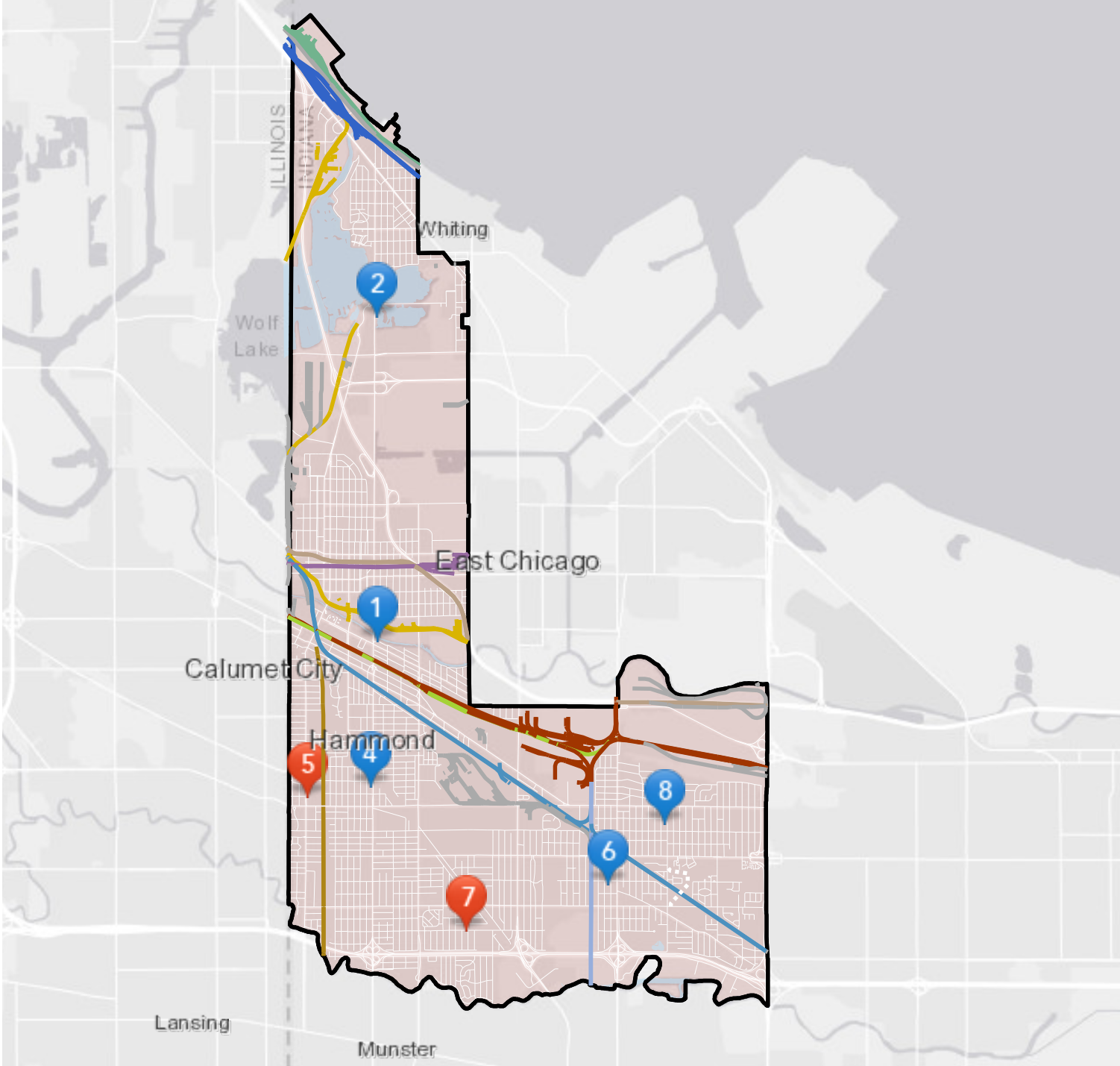
Additional Considerations

Railroads & Trains

RAILROAD LOCATIONS

LEGEND

- I.H.B. Gibson Rail Yard
- Indiana Harbor Belt
- N.S. Lakefront
- E.J.&E. Lakefront
- C.S.X. B.O.C.T.
- Chicago Southshore
- N.S. Nickel Plate
- C.S.X.
- Norfolk & Southern
- Abandoned-Old Monon



Additional Considerations

Introducing a New Road

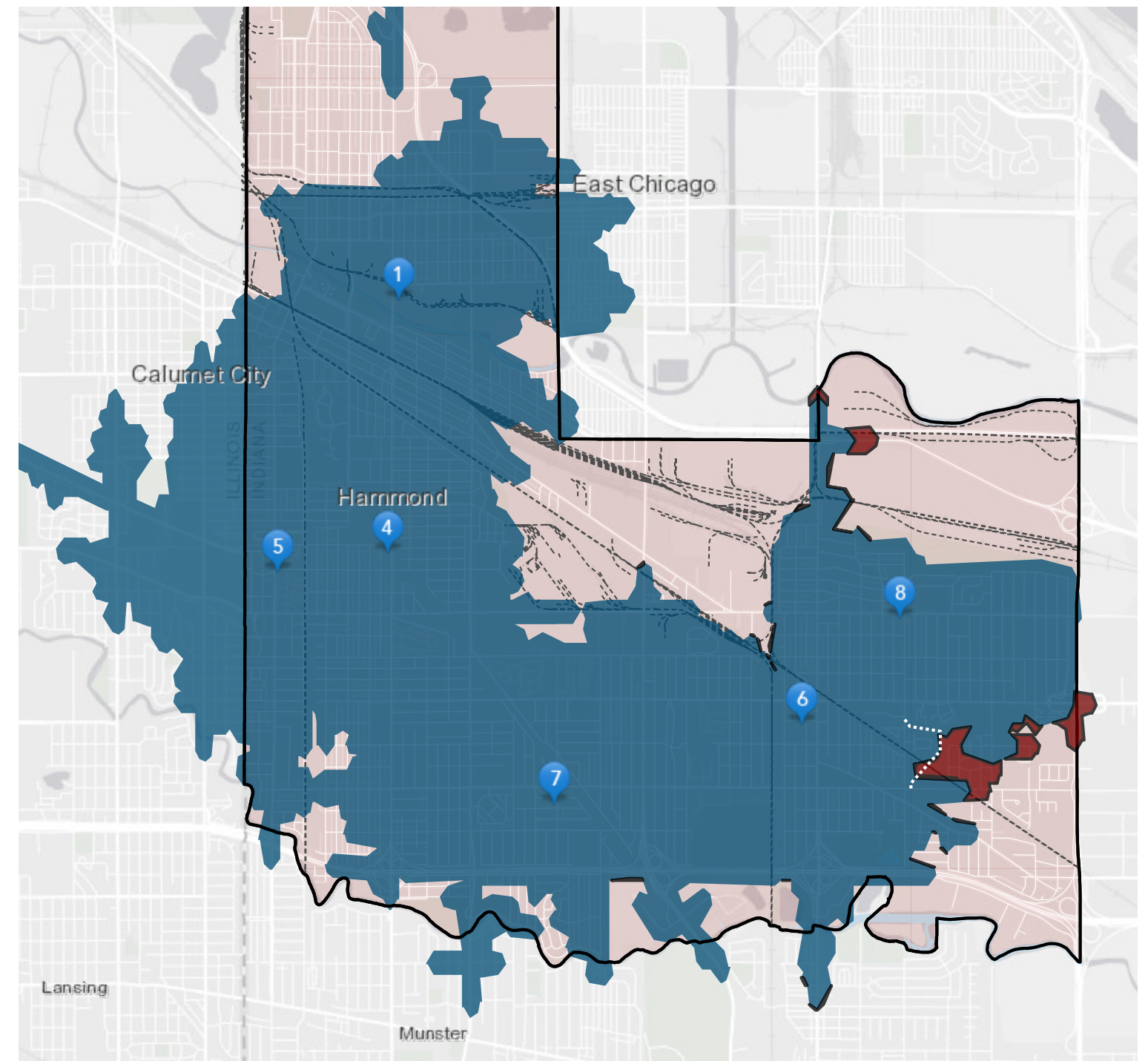
With the new road, coverage for Stations 6 & 8 are improved:

- 7.3% additional population within 4-min response time
- 2.2% additional annual calls within 4-min response time
- Shortened response time to the furthest residence
 - *Avoiding railroad can take upwards of 15-20 minutes to travel to furthest house. With the new road, this could be cut down to 6 minutes or less to the furthest home*

LEGEND

- 4-minute recommended drive radius from stations
- Additional coverage gained from new road & overpass

ANTICIPATED IMPACT FROM NEW ROAD





Thank you!

Questions?

SHIVEHATTERY
ARCHITECTURE+ENGINEERING