

Access to Voting in Richmond Virginia

GIS 120, Professor Kimambo

By Jorre Dahl



Access to a Vehicle and Polling Stations

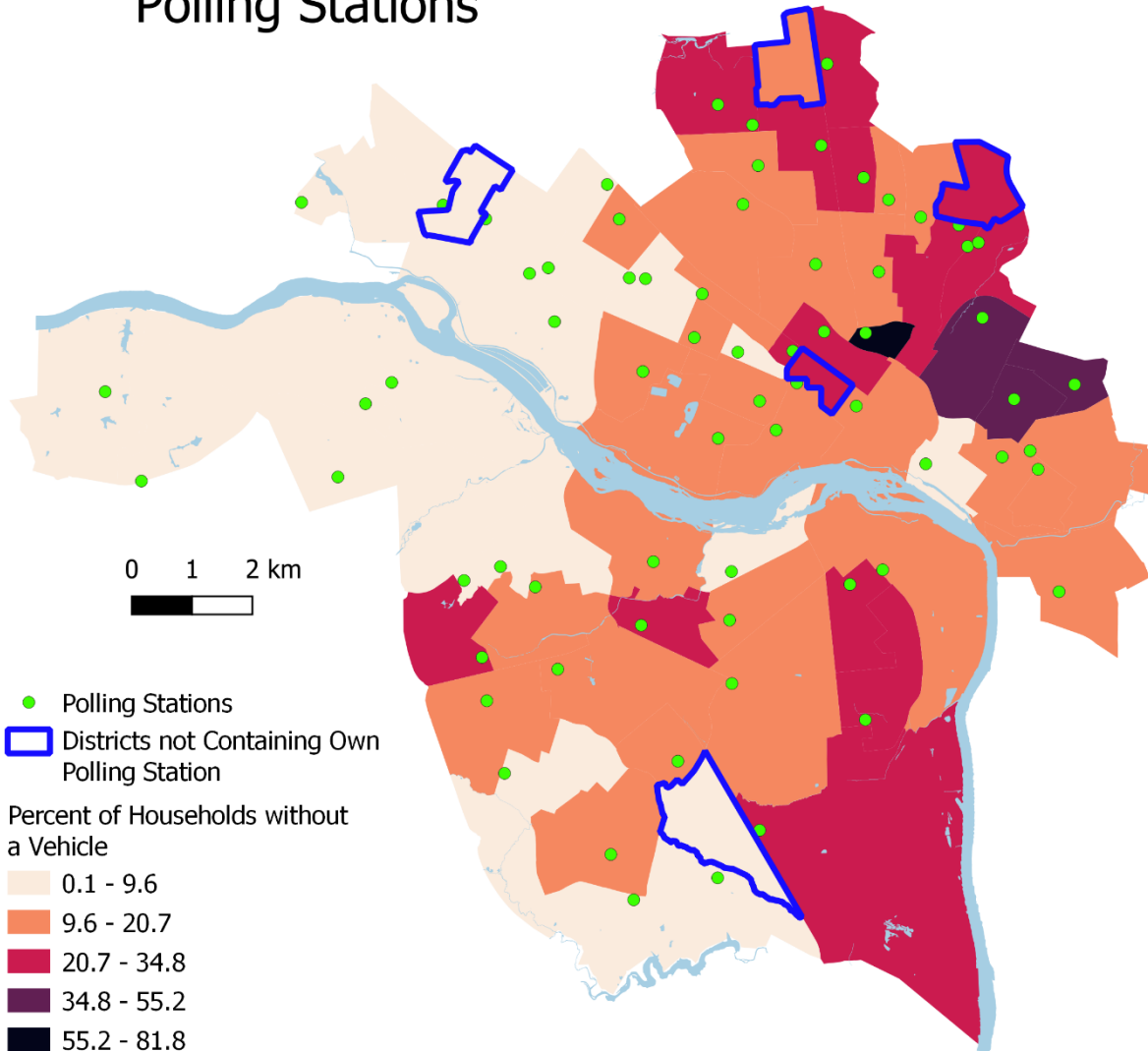


Figure 1: Percentage of Households without Access to a Vehicle and Polling Stations in Richmond, VA

Table 1: Percentages of Households without Access to a Vehicle in Precincts not Containing Own Polling Station

| Precinct | Percent Households w/o Vehicle |
|----------|--------------------------------|
| 102 | 2.0 |
| 214 | 30.9 |
| 308 | 19.9 |
| 606 | 23.8 |
| 814 | 7.6 |

In Richmond, Virginia, citizens are required to vote at the polling station assigned to their precinct. Sometimes this means that polling stations for a given precinct are outside the borders of that precinct. According to Figure 1 and Table 1, not having the corresponding polling station within the precinct is not correlated with the percentage of households owning vehicles. In figure 1, the population that does not own vehicles mostly lives on the East of the city.

Population of Voters and Distance to Corresponding Polling Station

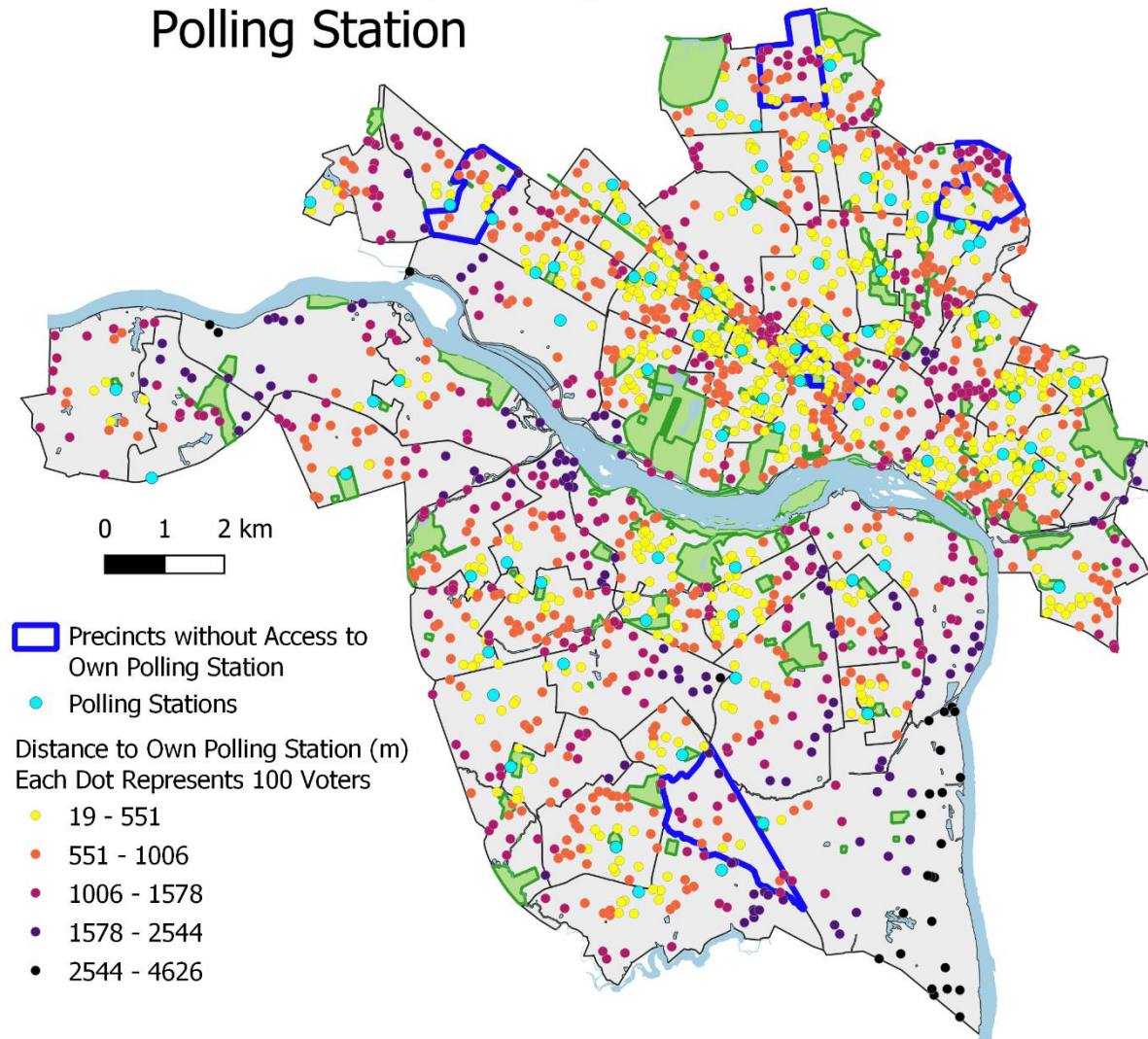
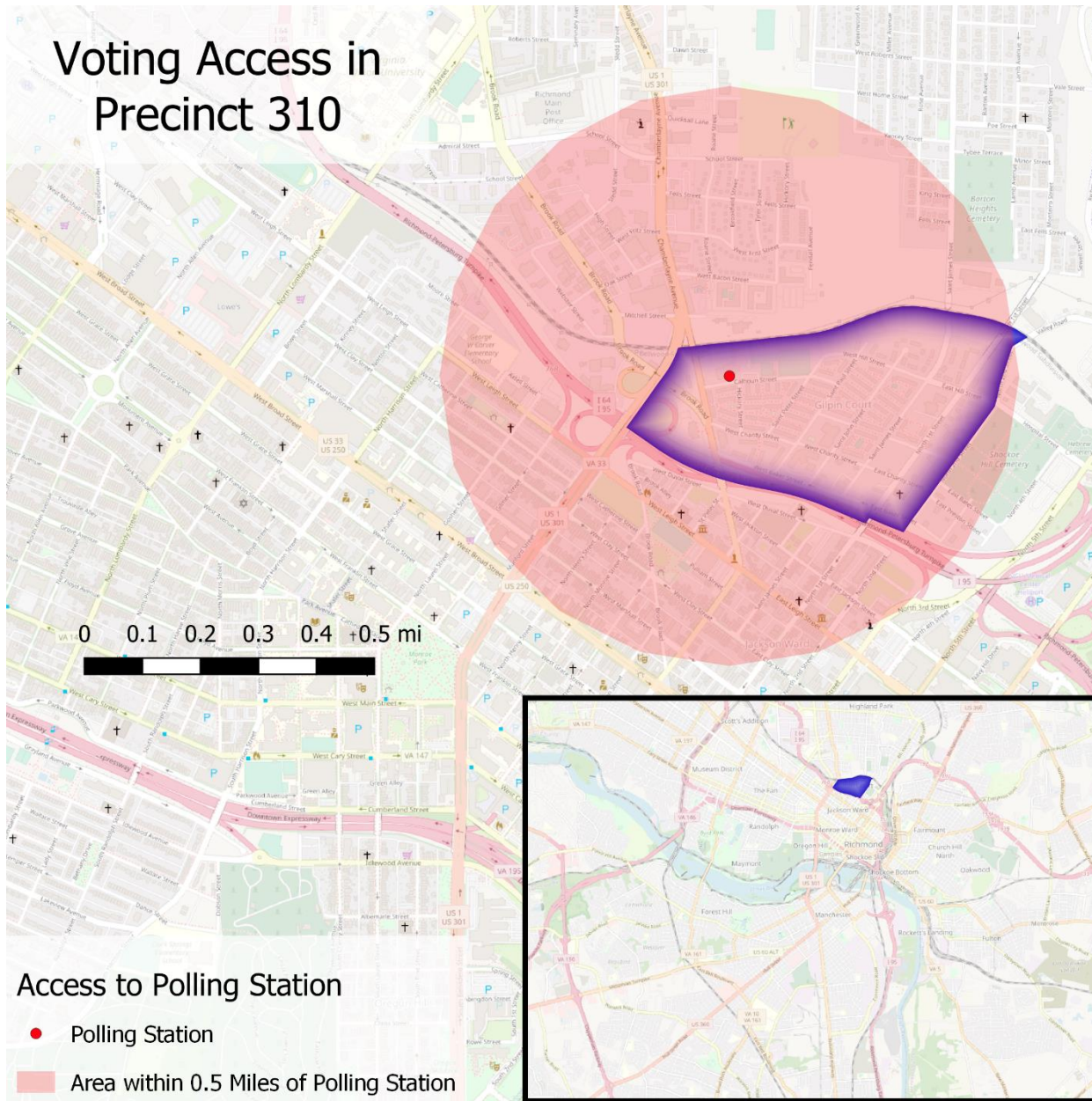


Figure 2: Population Density of Voters and Distance to their Corresponding Polling Station in Richmond, VA

Generally, voters are situated nearby to their corresponding polling station. However, combinations of far distances and low access to vehicles can limit a citizen's ability to vote. Figure 1 shows that the problem does not necessarily lie with precincts without corresponding polling stations within its borders, but instead that large or inconveniently-shaped precincts in urban areas can lead to lower access in voting. In the southern part of the city, distances to polling stations become much larger as the precincts become larger, less compact, or polling stations are placed along the periphery.

Voting Access in Precinct 310



Access to Polling Station

- Polling Station
- Area within 0.5 Miles of Polling Station

Figure 3: Voting Access in Precinct 310 in Richmond, VA

Table 2: Access to a Vehicle in Precinct 310

| Percent of Households w/o Vehicle | Voters w/o Vehicle |
|-----------------------------------|--------------------|
| 81.7 | 1003 |

Richmond’s voting precinct 310 contains the neighborhood of Gilpin Court. Gilpin Court is a predominantly Black neighborhood in Richmond, and is characterized by its high number of public housing projects. As a result, residents of the neighborhood have higher rates of poverty and thus have under 20 percent of households not owning a vehicle. Here, the polling station is close enough to the entire precinct to provide for this inadequacy, with every building being within a suitable walking range to the polling station.

Voting Access in Precinct 814

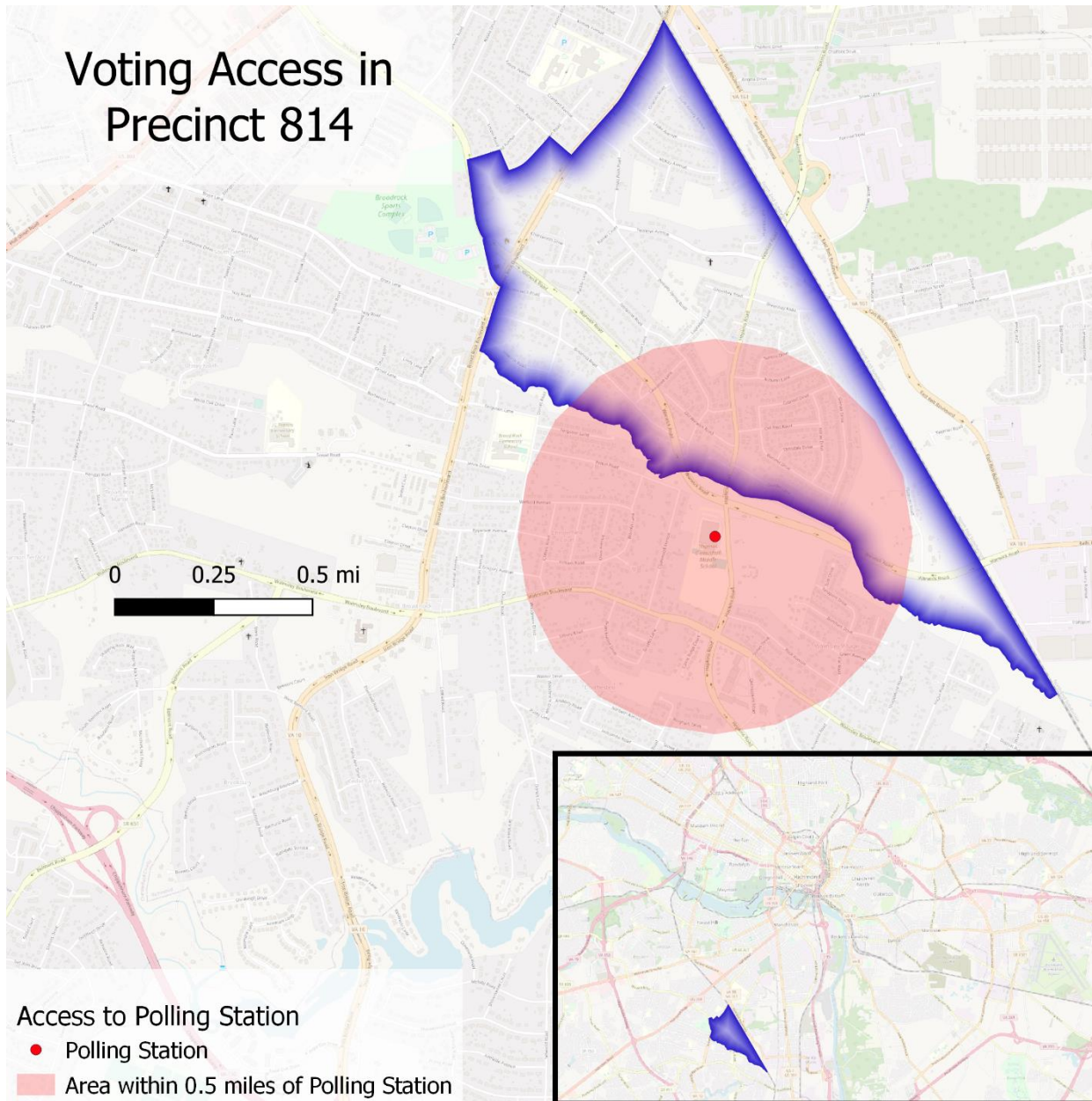


Figure 4: Voting Access in Precinct 814 in Richmond, VA

Table 3: Access to a Vehicle in Precinct 814

| Percentage of Households w/o Vehicle | Voters w/o Vehicle |
|--------------------------------------|--------------------|
| 7.6 | 124 |

Richmond’s voting precinct 814 contains the neighborhoods of Hickory Hill and Deerbourne. Both neighborhoods have high percentages of Black and Hispanic population. Income rates are just under the city average, yet many households have access to a vehicle. As a result, not many voters are left without access to a polling station, despite only a small part of the precinct being covered by an accessible walking distance to the polling station.

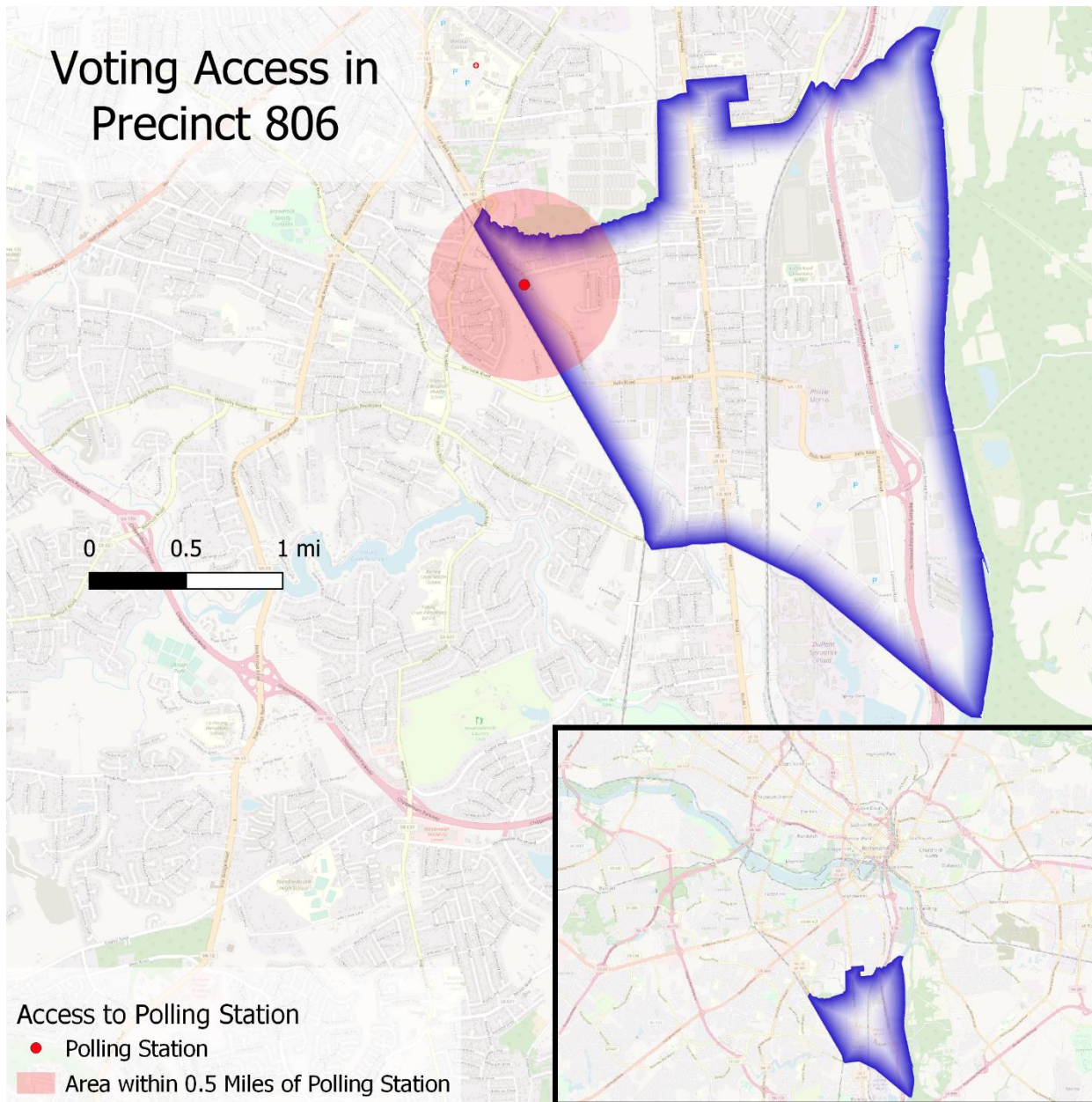


Figure 5: Voting Access in Precinct 806 in Richmond, VA

Table 4: Access to a Vehicle in Precinct 806

| Percentage of Households w/o Vehicle | Voters w/o Vehicle |
|--------------------------------------|--------------------|
| 24.3 | 1037 |

Richmond’s voting precinct 806 is large, encompassing multiple industrial parks as well as the neighborhoods of Cherry Gardens, Cullenwood, Jeff Davis, Windsor, and Davee Gardens. The neighborhoods are also primarily Black and Hispanic, as well as being below average in income rates. The precinct has a relatively high population and percentage of households without a vehicle. This factor combined with non-central placement of the polling station results in a large number of citizens without access to voting.

Data Sources:

Census Block Group Data:

Source: United States Census API <https://www.census.gov/developers/> via R tidycensus
<https://walkerke.github.io/tidycensus>

Streams, Lakes, Parks, Polling Stations, Precinct Borders:

Source: City of Richmond, VA <https://richmond-geo-hub-cor.hub.arcgis.com>