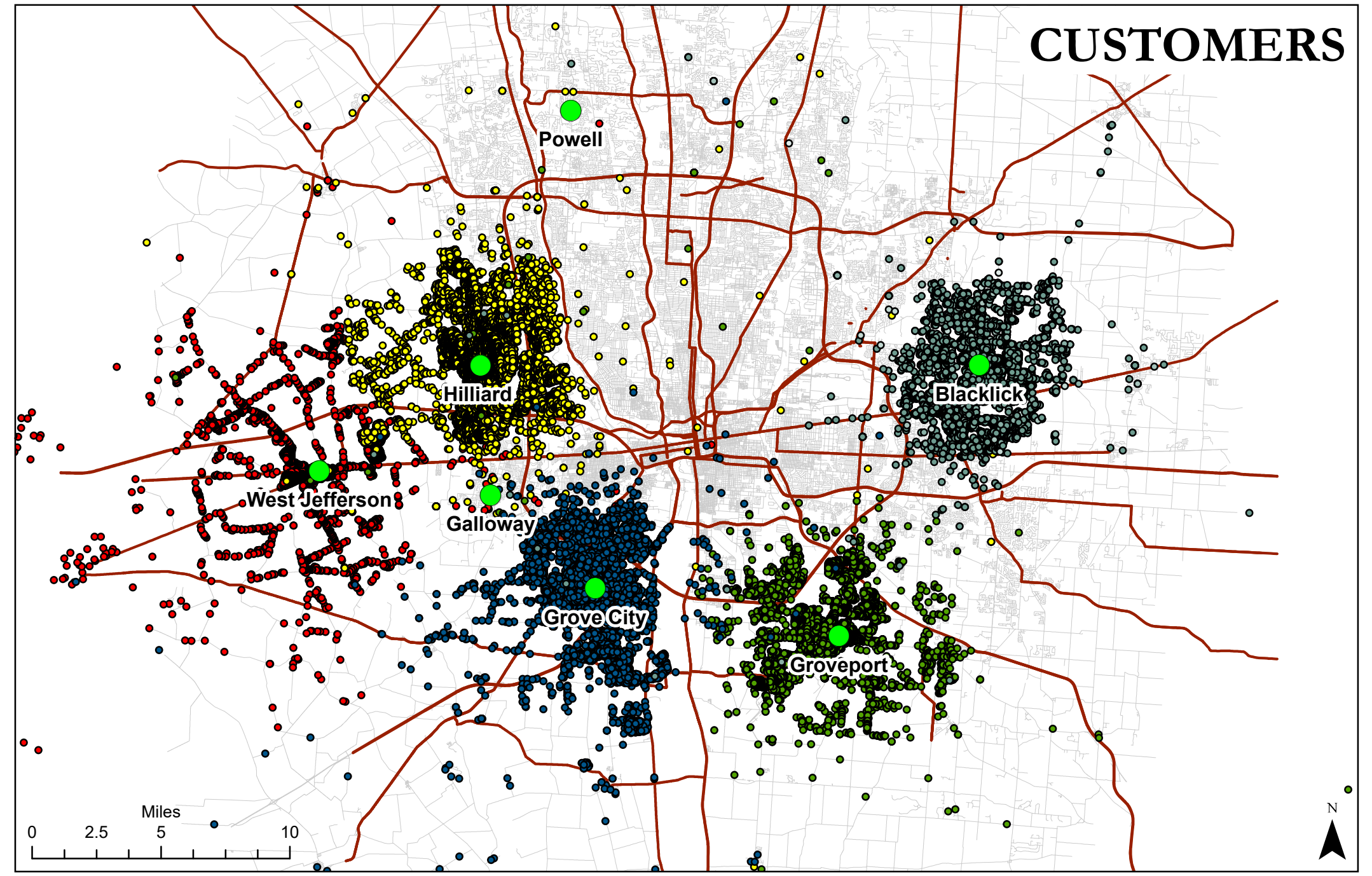
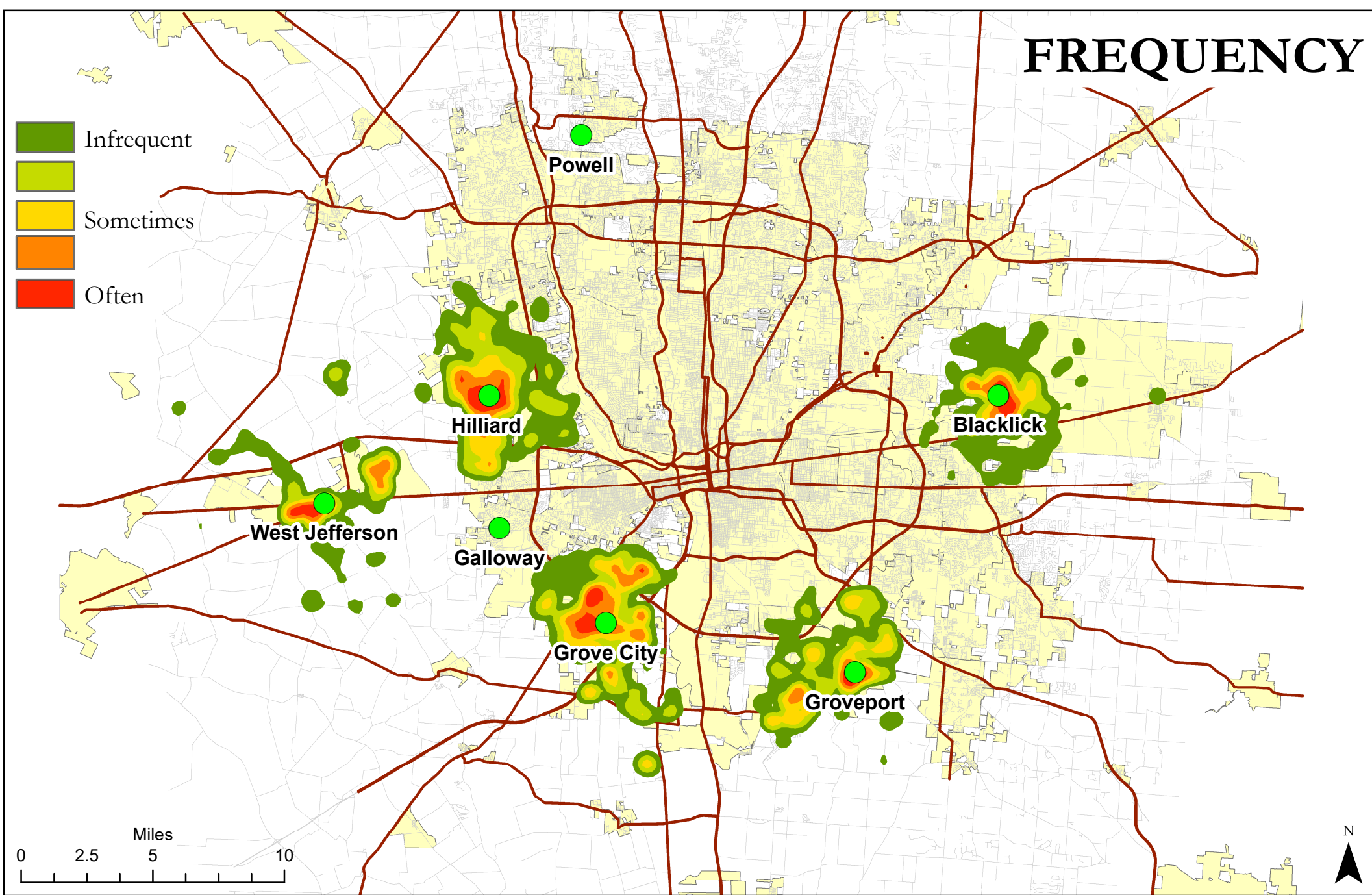


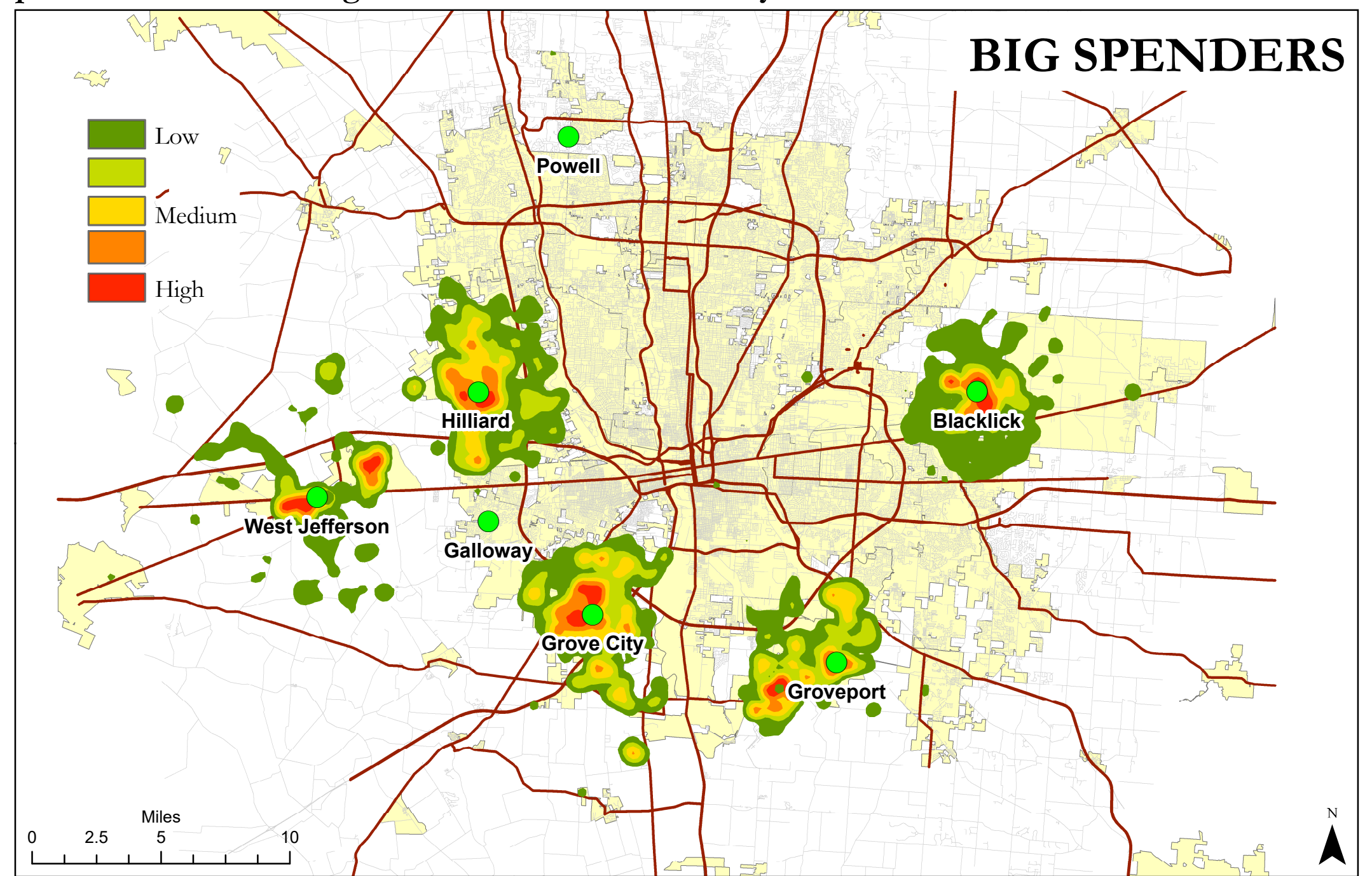
Flyers Pizza and Subs is located in Columbus, Ohio. As a final project for GIS Analysis, I would obtain customer data in order to determine the best location to open a new store. This map illustrates the distribution of their current store locations.



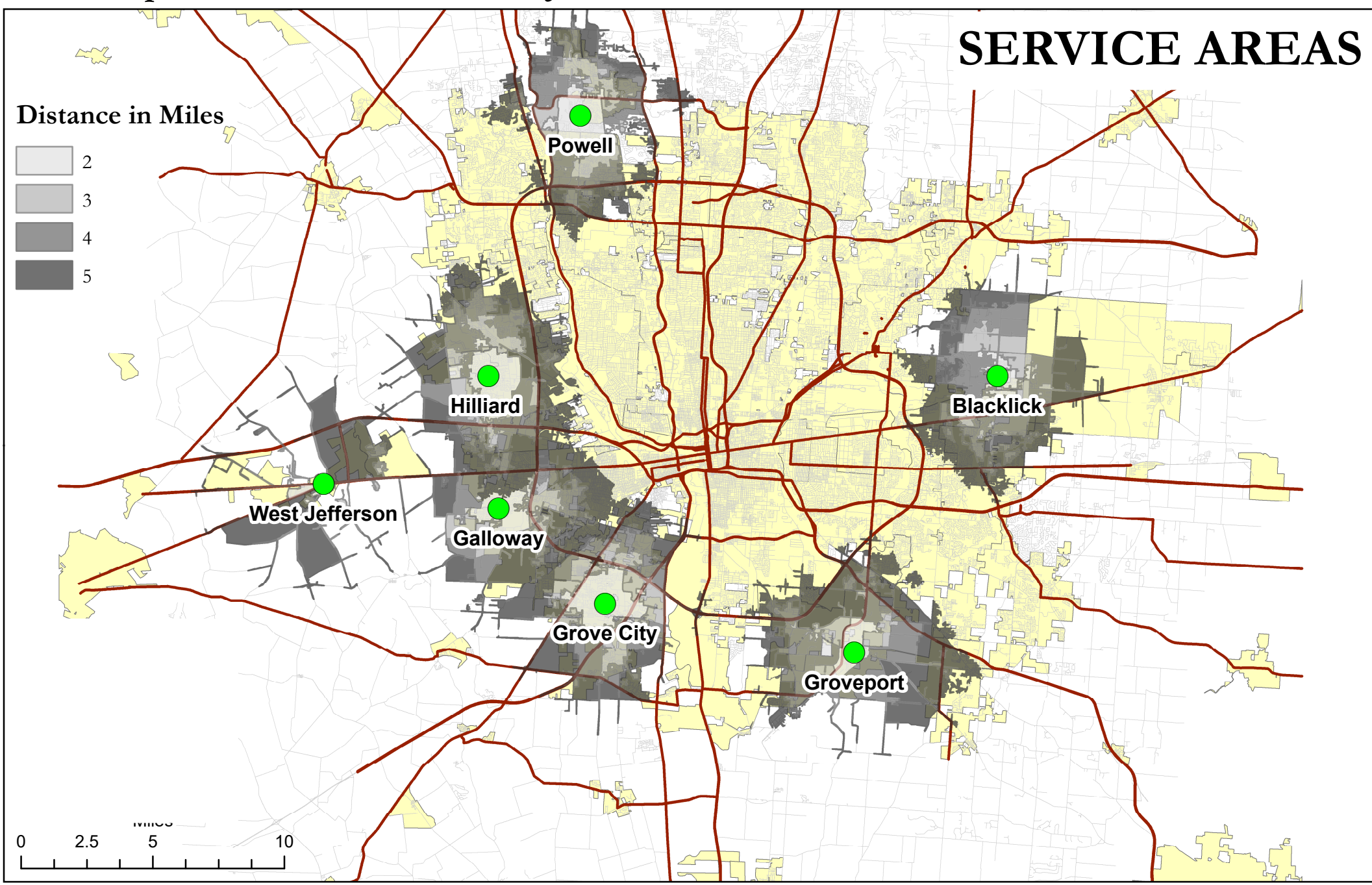
The last three years of customer data was obtained in the tabular form of .XLS files. After clean-up 72,380 customer lines of data were used to plot this map. About 50 percent of those points were geocoded with the US Census Bureau and Texas A&M Geocoder. The other 50 percent had a Lat/Long associated with it. Galloway and Powell data was not available.



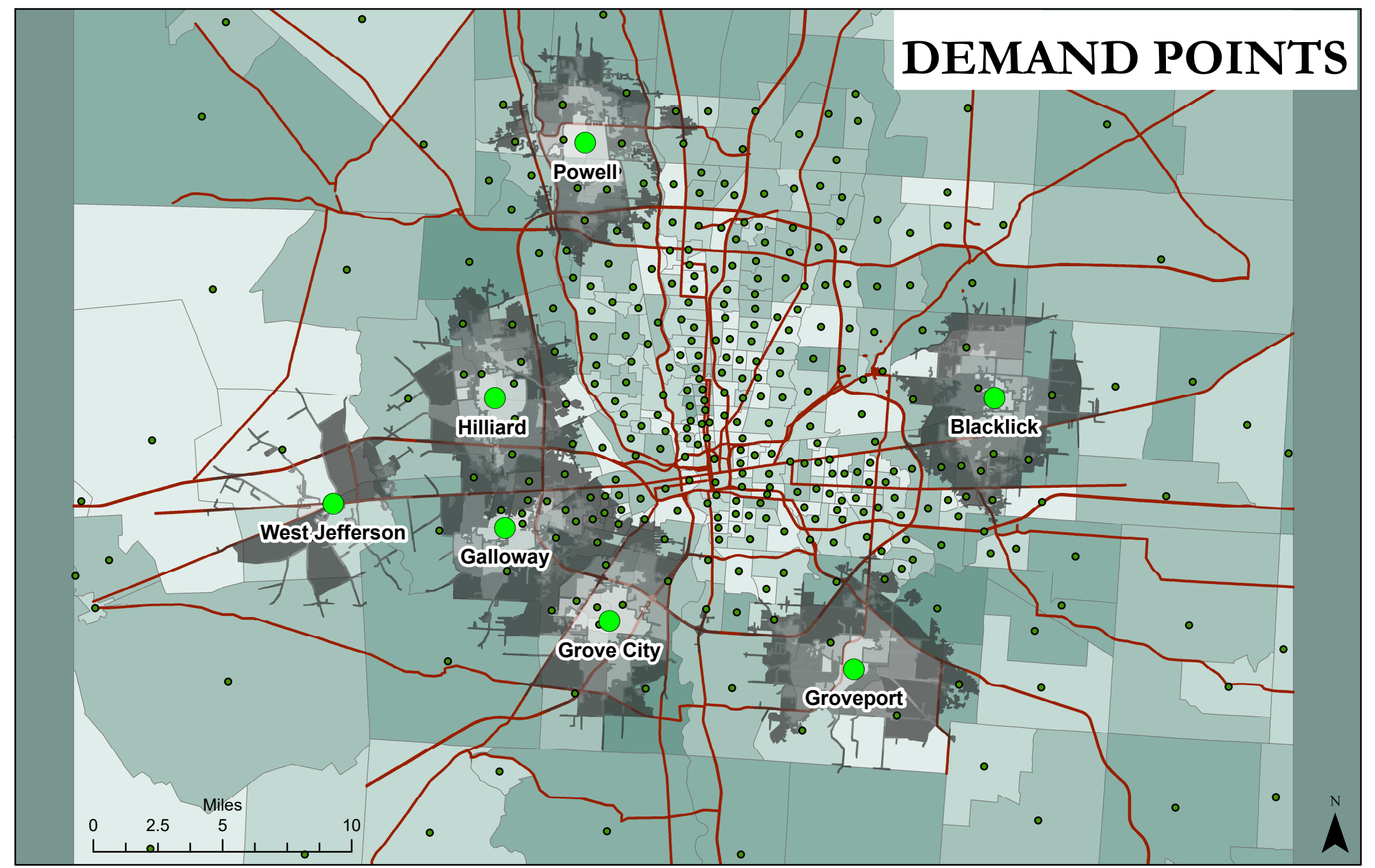
Heat maps were created using the Kernel Density tool to find out where the frequent users and big spenders are located in the point density cloud of map 2. This heat map is measuring the number of orders per customer in the last three years. It appears that the closer you live to Flyers the more you frequent their restaurant. There is an interesting anomaly to this west of the Groveport store and east of West Jefferson.



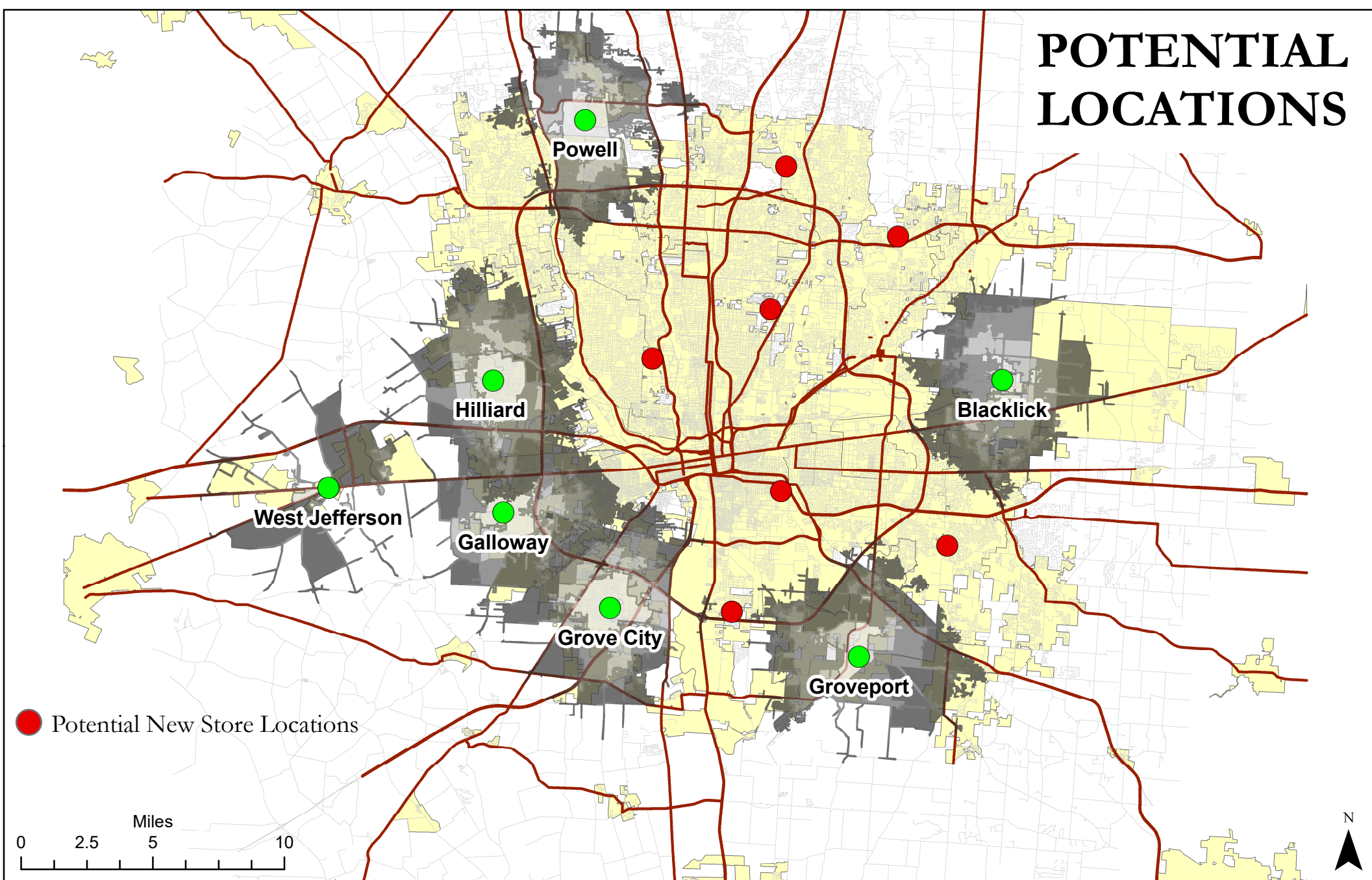
This heat map is based upon the average order price paid by the customers. It appears that the closer you are to a store the more you spend per order. One theory is that nearby businesses use the restaurant to treat employees for lunch or work parties which is naturally a bigger tab.



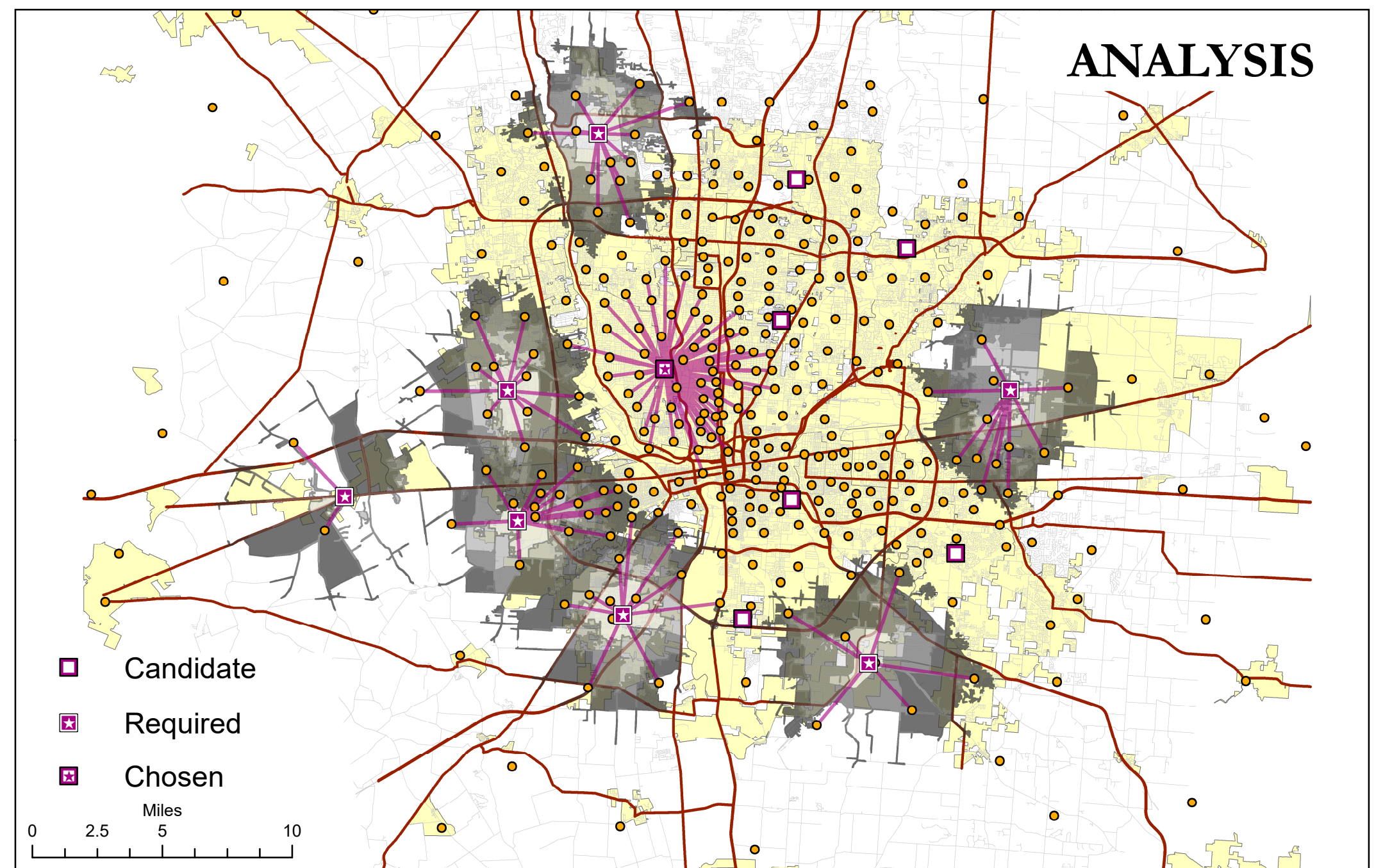
The City of Columbus did have a street shapefile and a new network dataset was created for further analysis. The shapefile had basic data so only distance could be used to define the service areas; no other impedances could be applied. Service area was calculated for 2, 3, 4 and 5 miles from each store. The 5 mile service area is remarkably similar to heat maps.



U.S. Census Bureau census tracts shapefile and population density tabular data were obtained and spatially joined. From that layer a conversion from polygon to point was done to create demand points for the final analysis.



7 potential store locations were digitized on the map in a distribution similar to the current stores spacing. Zoning data was available for the City of Columbus, but not for the surrounding cities that make up the metropolitan area. If there was consistent data, locations would have been selectively chosen based on commercial zoning and nearby high density residential.



Ran Network Analysis Location Allocation with the following settings: Impedance set to feet with a cutoff at 26,400 (5 miles), demand to facility, maximize attendance, u-turns allowed, one-way restriction, applied "restricted" to the existing 7 stores, set the 7 potential stores to "candidate" status, facilities to choose set to 8. Best site chosen is coincidentally adjacent to Ohio State University.