

# Characteristics of a Successful Farmers' Market Location based on Two Study Areas within Mason City, Iowa

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## 1. Introduction

- Farmers' Markets promote agricultural, economic, and environmental development, but also serve as social development opportunities for people to network with others in their communities.
- This research was done for Mason City to determine attributes that make one farmers' market location better than the other based on the Old and New Farmers' Market locations.
- Both locations were used to determine which had the most attributes that attract consumers and are also beneficial to vendors.

## 2. Research Questions

This study sought to examine:

- If the characteristics differ between both the old and new farmers' market locations, and the population per square mile.
- The spatial patterns of both farmers' market locations and customers' accessibility.

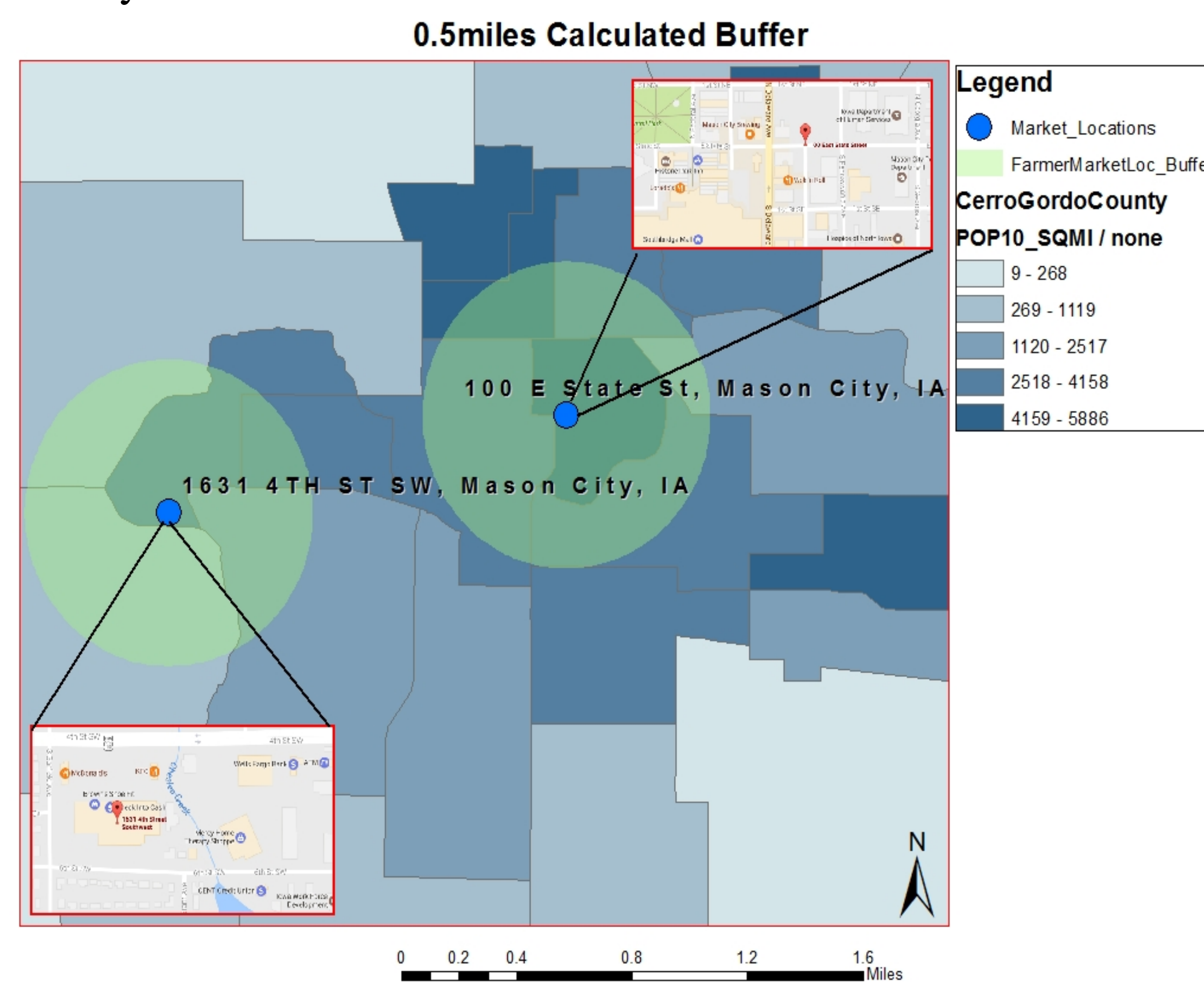


Figure 1: Calculated buffer of 0.5 miles at both study locations (old and new) within Mason City. Old location (left) and New location (right). Darker colors represent areas with high populations per square miles, and lighter colors represent areas with low populations per square miles.

## 3. Materials and Methods

### Data

- Mason City census data: Population per square miles, race & ethnicity, and income.
- Mason City Transit data: bus stops, transit benches, and transit routes.

### Method

- Descriptive choropleth maps
- Calculated buffer of 0.5 miles from each farmers' market point location.
- Spatially joined attributes of each study area's location amenities.
- Creation of tables to examine if community amenities differ within both farmers' market study locations.

## 4a. Results

New Farmers' Market Location		Old Farmers' Market Location	
Routes	Distance/miles	Routes	Distances/miles
East Central	0.17	East Central	0.97
North East	0.26	North East	1.98
South Central	0.28	South Central	1.15
North Central	0.30	North Central	0.98
West Central	0.41	West Central	0.25
<b>Transit</b>	<b>Sum</b>	<b>Transit</b>	<b>Sum</b>
Transit Stops	24	Transit Stops	7
Transit Benches	5	Transit Benches	3
City Parks	8	City Parks	2
Private Parks	0	Private Parks	0

Table 1: Attributes that fell within the 0.5 miles calculated buffer of the study locations.

Several features were found within the calculated buffer when spatial join was implemented, and these features were used to determine if farmers' market characteristics differ at both locations, and to analyze if spatial patterns exist. This table will also be used as a key determinant to my research question: what characteristics make one farmers' market location more successful than the other?

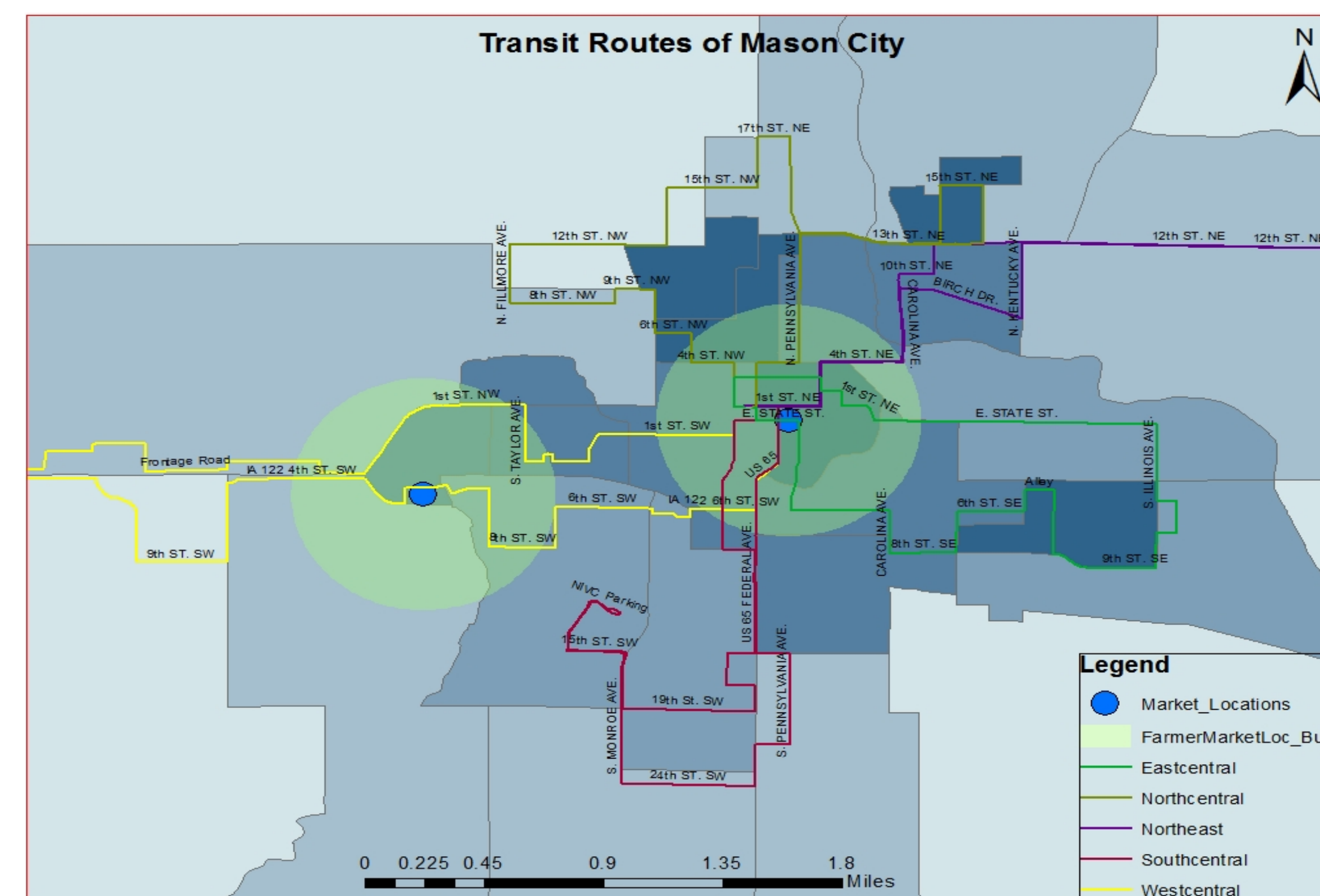


Figure 2: Transit routes at both study locations; includes the north central, north east, south central, and west central. The transit routes were projected on a population per square mile for every census block group that was closer within the 0.5 miles buffer.

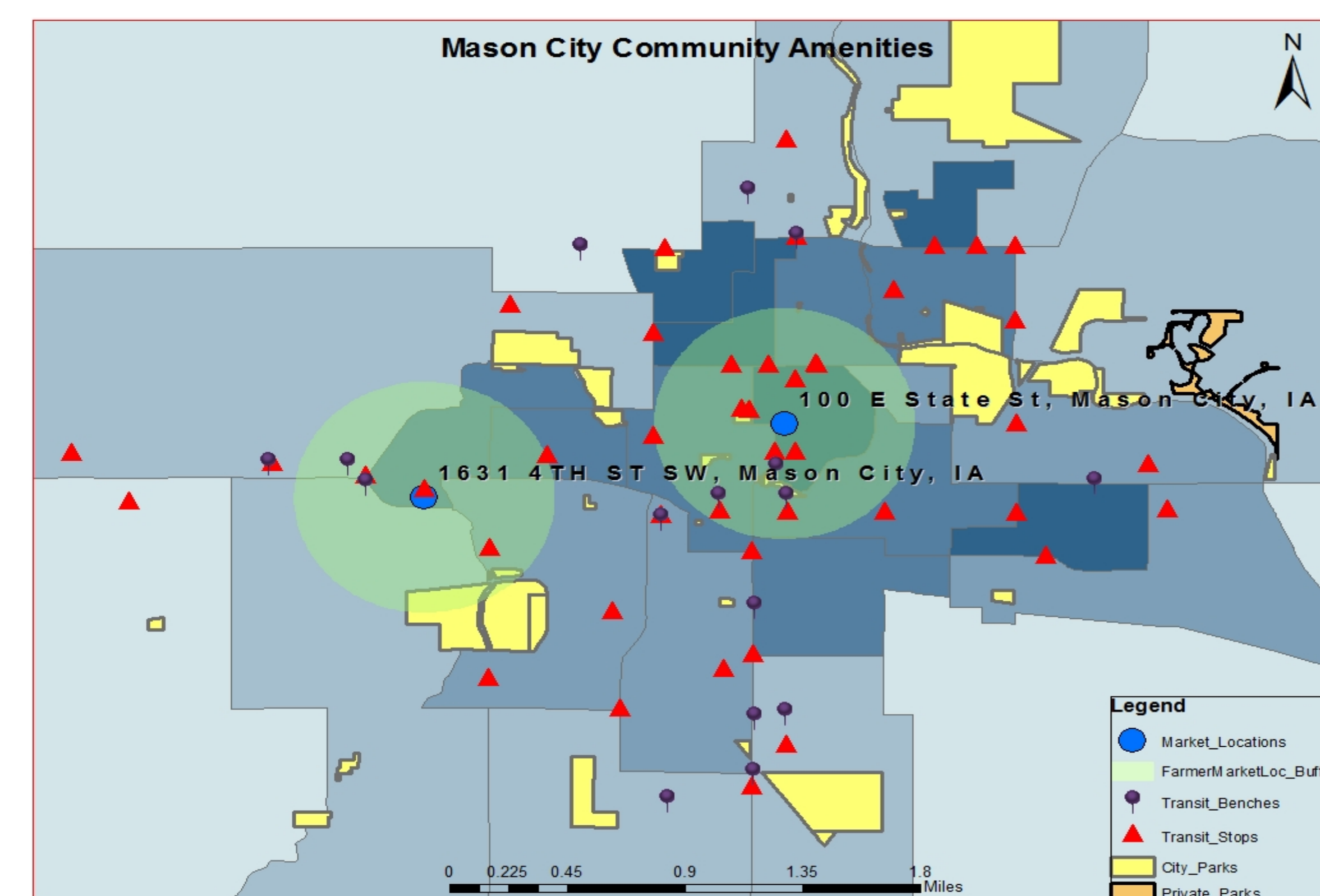


Figure 3: Community amenities at both study locations in Mason City. Shows different community amenities that fell within the calculated buffer at both locations. The amenities found were transit bus stop, labeled as red, transit benches as purple, city parks as yellow, and private parks as orange.

## 4b. Results

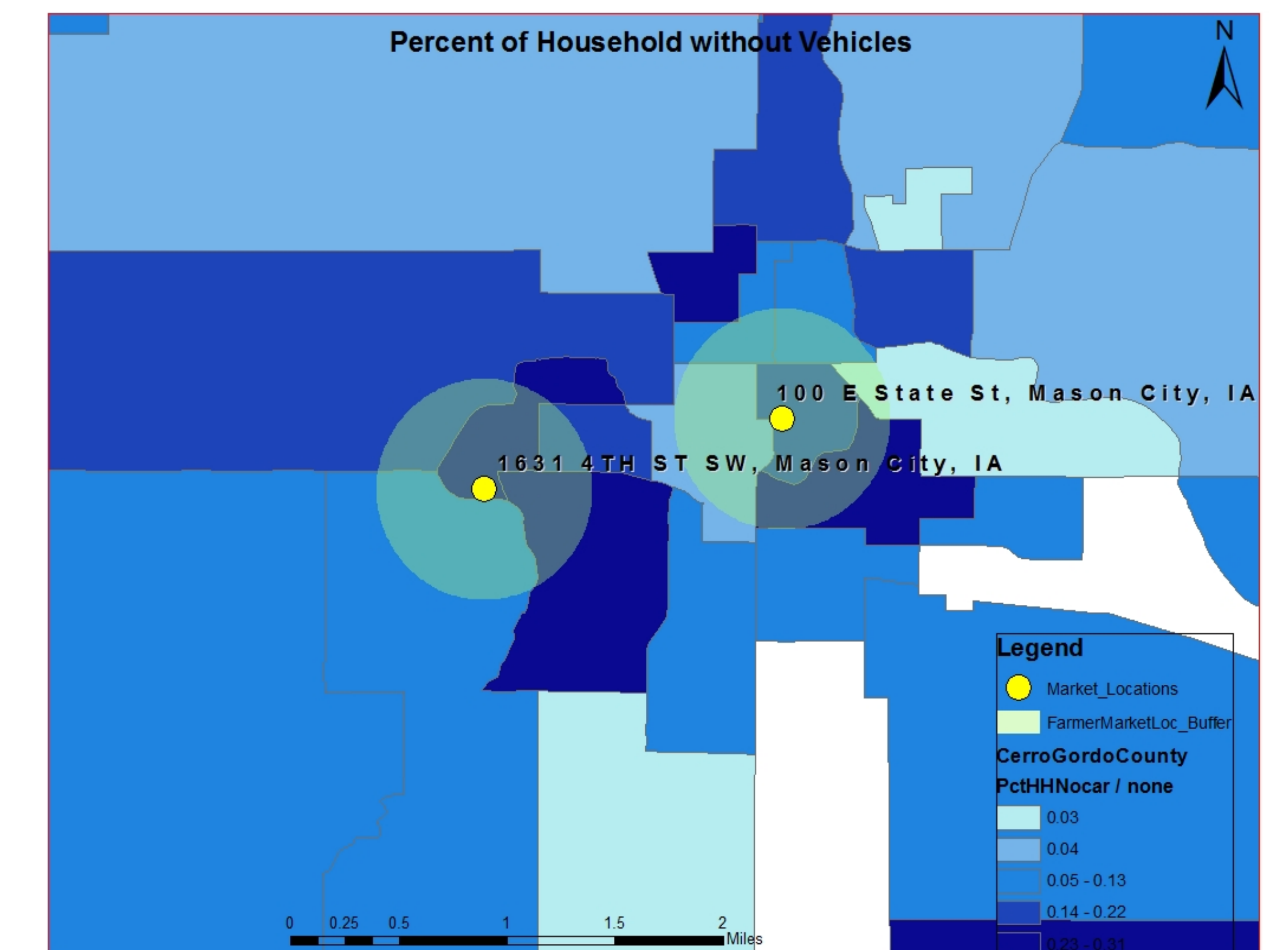


Figure 4: Calculated percentages of household without vehicles. Shows that there are more people per census block group without vehicles at the old location as compared to the new locations. Darker colors mean high percentages and lighter colors mean low percentages. White areas contain null values.

## 5. Conclusion

- The old location contains one route within 0.5 miles.
  - Seven transit stops, three transit benches, and two city parks.
- The new location contains five different routes within 0.5 miles.
  - Twenty-four transit stops, five transit benches, and eight city parks.
- Characteristics differ between both locations based on different community amenities, percentage of people per census block group without vehicles, and population per square mile.
- Much of the success of a farmers' market location depends on management to provide an area that contains better visibility, good weather and shade protection, better parking, high density population, high/median income, more accessibility.
- Some success of the market's location depends on vendors.
- More in-depth studies need to be conducted to evaluate the vendors and consumers preferences.

## 6. Acknowledgements

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