

Calhoun County Countywide Transit Study

EXISTING CONDITIONS REPORT

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I. EXISTING CONDITIONS

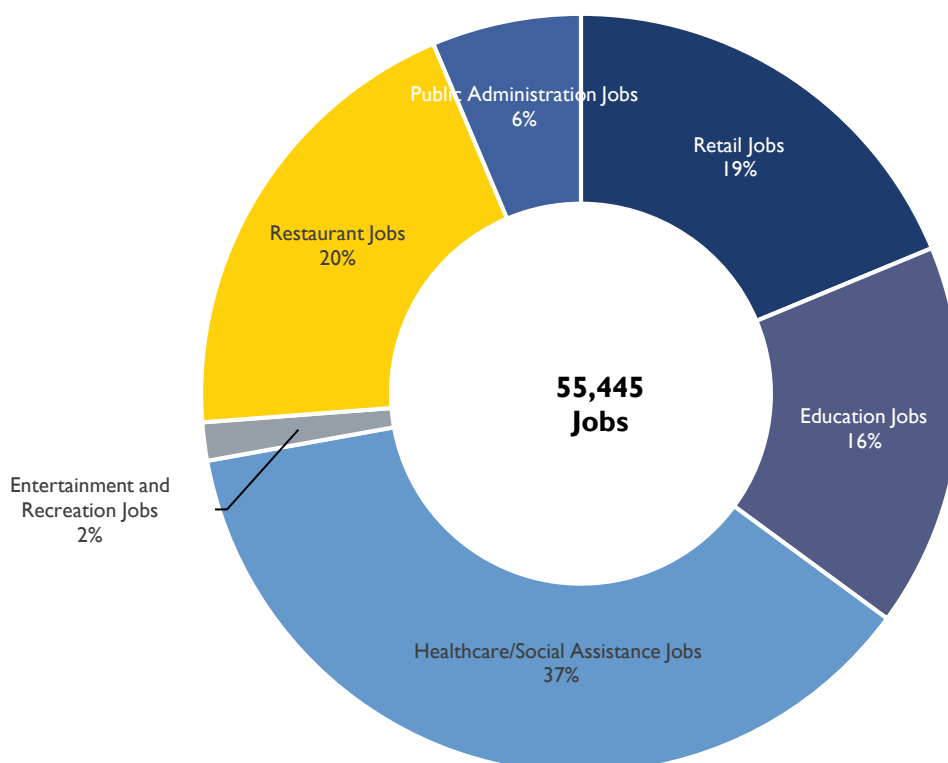
I.1. Introduction

I.1.1. Economy and Demographics

Calhoun County, located in southern Michigan, is approximately 100 miles west of Detroit. The County has nearly 135,000 residents. The three most populated cities in the county are Battle Creek, Albion, and Marshall, respectively; the majority of the areas outside these three areas are rural.

There are over 55,000 jobs in Calhoun County. The largest job sector is health care and social services (**Figure I**). Major employers include Battle Creek Public Schools, Bronson healthcare, the City of Battle Creek, Duncan Aviation, Denso Manufacturing, Il Stanley, Kellogg Company, Kellogg Community College, Meijer, Oaklawn, Post Cereals, Spartan Stores, US Department of Defense, Albion College, and other hospital systems.

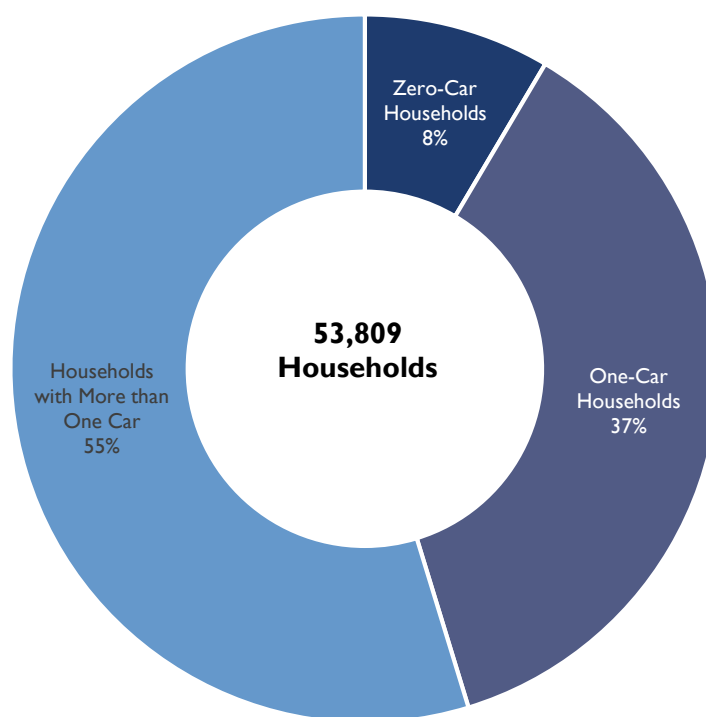
Figure I: Calhoun County Jobs by Sector



Demographics

As shown in **Figure 2**, 45 percent of the households in Calhoun County have zero or one car. The population is 79 percent Non-Hispanic White, and over two-thirds (69 percent) of households in Calhoun County have an annual household income of less than 150 percent of the national poverty line¹. The highest concentrations of low-income populations by percentage of the population are in Battle Creek and Albion (**Figure 3**). Minorities (people of all races other than non-Hispanic White) account for 21 percent of the County's population². Senior citizens and disabled residents account for 16 and 14 percent³ of the County population, respectively. The portion of the population over the age of 65 or disabled is shown by block group in **Figure 4** and **Figure 5**.

Figure 2: Car Ownership among Households in Calhoun County ⁴



¹ The ACS 2016 national average for persons under 150 percent of the poverty line is around 25 percent.

² The ACS 2016 national average of minorities is around 40 percent.

³ The ACS 2016 national average of persons over 65 is 10 percent and the national average of persons with disabilities is 12 percent.

⁴ The ACS 2016 national average for households with access to zero cars is 9 percent and access to one car is 34 percent.

Figure 4: Percentage of Population Over Age 65 by Census Block Group

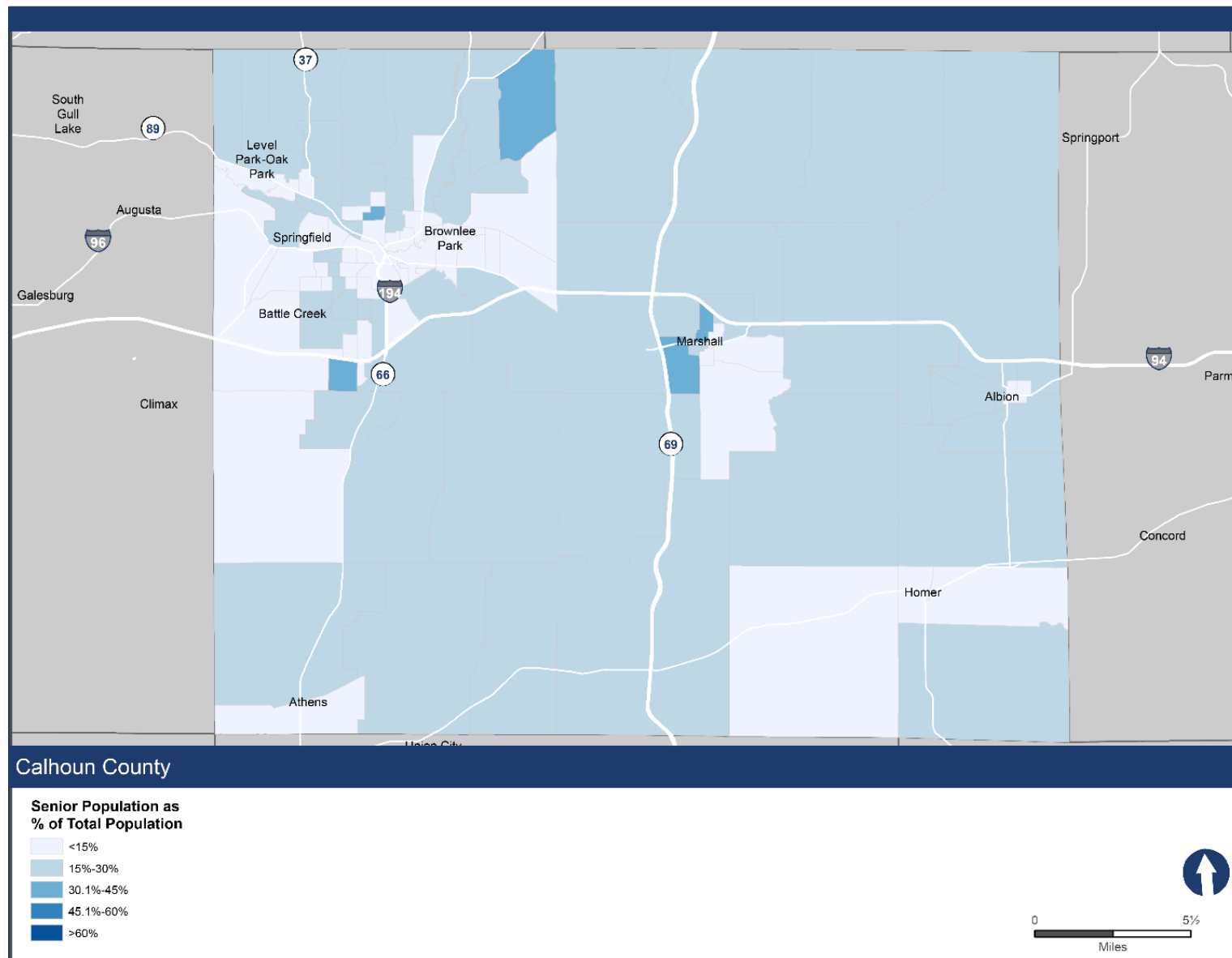
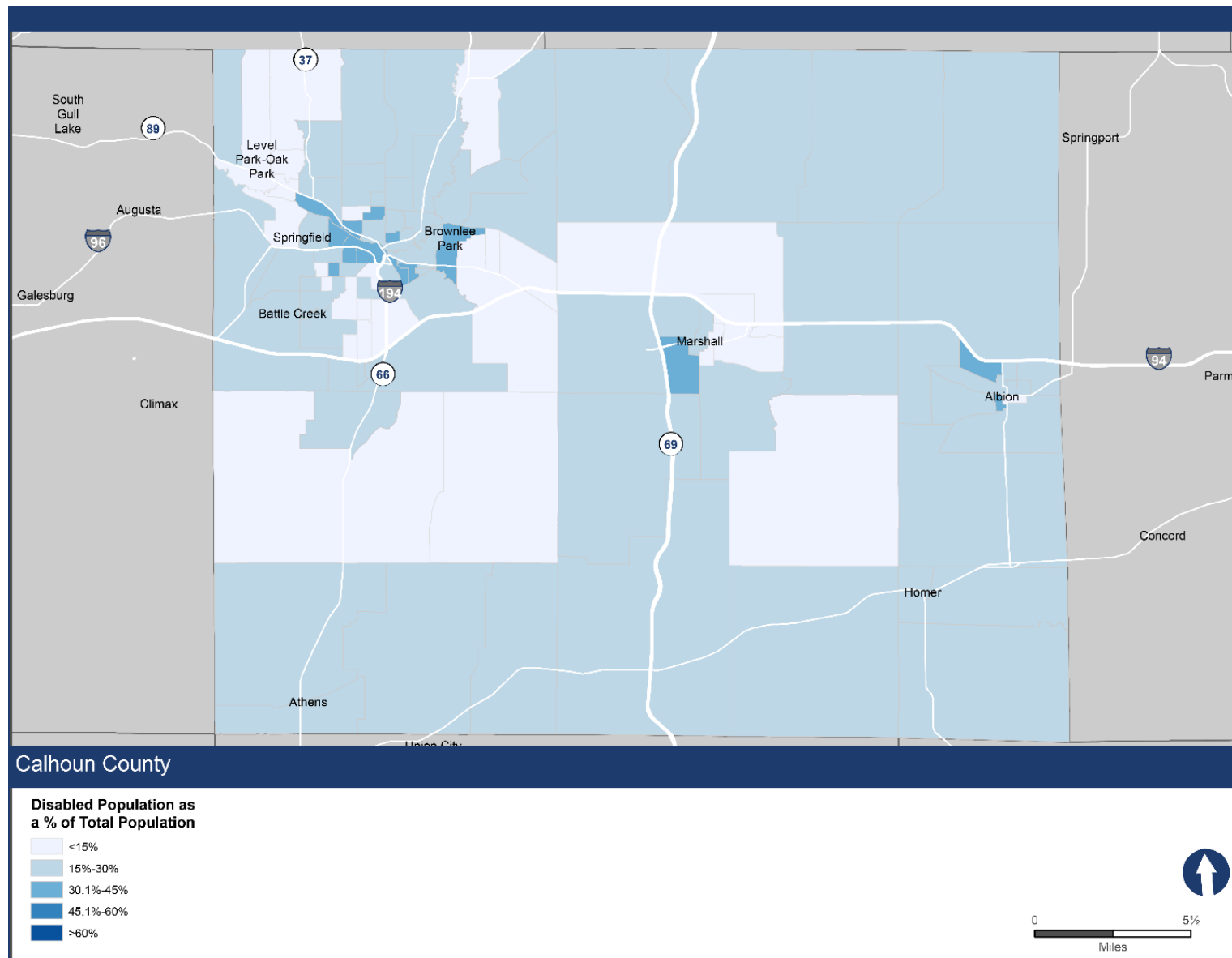


Figure 5: Percentage of Disabled Population by Census Block Group



Aging Population Trends

The senior population in Calhoun County is increasing quickly, ahead of similar national trends toward an older population. The number of older adults in Calhoun County will outnumber the population that is 18 years old or younger in the coming decade by 2027⁵; this is about eight years before the same change will occur among the US population overall (around 2035⁶). As of 2016, 68 percent of seniors in Calhoun County reported that they drove themselves where they needed to go, while five percent and four percent reported that they used senior transportation services and public transportation, respectively. When asked about daily travel barriers, 25 percent of seniors responded that public transportation did not meet their needs, they could not afford transportation, there was a general lack of ridesharing or senior transportation options, that they had no one to drive them, or that they just did not know of available services.⁷ Furthermore, from six focus groups held in 2016, each group identified transportation access as a major challenge to quality of life for senior citizens. As the report states, these challenges exist for both rural and urban populations, however, “barriers that the large rural senior population experience lead to continued fear and isolation. ‘Too difficult to find a ride, so I just stay home’ – leading to more isolation.” Safety, reliability, and after-hours services stood out in this report as a reoccurring issue for senior transportation.⁸

1.2. Regional Transportation

Air and Rail Services

The Kalamazoo/Battle Creek International Airport serves the area, and is located south of Kalamazoo, less than a 30-minute drive from the central business district of Battle Creek. There are also two city-owned public airports in Battle Creek (W.K. Kellogg Airport) and Marshall (Brooks Field Airport).⁹

Greyhound and Indian Trails both provide regional bus service in Calhoun County. Greyhound stops in both Battle Creek and Albion, and Indian Trails stops in Battle Creek only. Two Class I freight railroads cross Calhoun County: Canadian National Railway and Norfolk Southern Railway.¹⁰ The Amtrak Blue Water and Wolverine lines both serve Calhoun County. The Blue Water line, which provides connections to Port Huron, Lansing, and Chicago, only serves Battle Creek. The Wolverine line, which provides connections to Detroit and Chicago, serves both Battle Creek and Albion.

1.3. Existing Fixed-Route Transit Services

Battle Creek Transit

Battle Creek Transit (BCT) operates eight fixed routes within the City of Battle Creek, as well as limited stops in the City of Springfield, and the townships of Bedford, Emmett, and Pennfield, on weekdays from 5:15 a.m. to 6:45 p.m. and on Saturdays from 9:15 a.m. to 5:15 p.m. BCT served over 432,000 passenger trips in FY18 and provided nearly 28,000 hours of service. BCT’s fixed-route fares are shown in **Table I**.

⁵ Independence for Older Adults. The Coordinating Council of Calhoun County, May 2017

⁶ An Aging Nation: Projected Number of Children and Older Adults,
<https://www.census.gov/library/visualizations/2018/comm/historic-first.html>.

⁷ Senior: Community Health Needs Assessment, Calhoun and Barry County. CareWell Services, 2016

⁸ Senior: Community Health Needs Assessment, Calhoun and Barry County. CareWell Services, 2016

⁹ Michigan Department of Transportation (MDOT) Aeronautics, General Aviation Airports.
https://www.michigan.gov/aero/0,4533,7-352-79155_79156_79390---,00.html

¹⁰ MDOT Office of Rail. <https://www.michigan.gov/mdot/0,4616,7-151-22444---,00.html>

Table 1: BCT Fixed-Route Fares

Ticket type	Fare price
Adults/Children taller than fare box	\$1.25
Disabled/Senior Citizens (60+)	\$0.60
Children shorter than fare box	Free
Accepted Transfers ¹¹	Free

BCT's ridership by route was estimated in 2017 through a ride check survey; these results are presented in **Table 2** and **Figure 6**. The top three routes by share of annual ridership are 3W, 4S, and 5W.

Table 2: BCT Fixed Route Characteristics

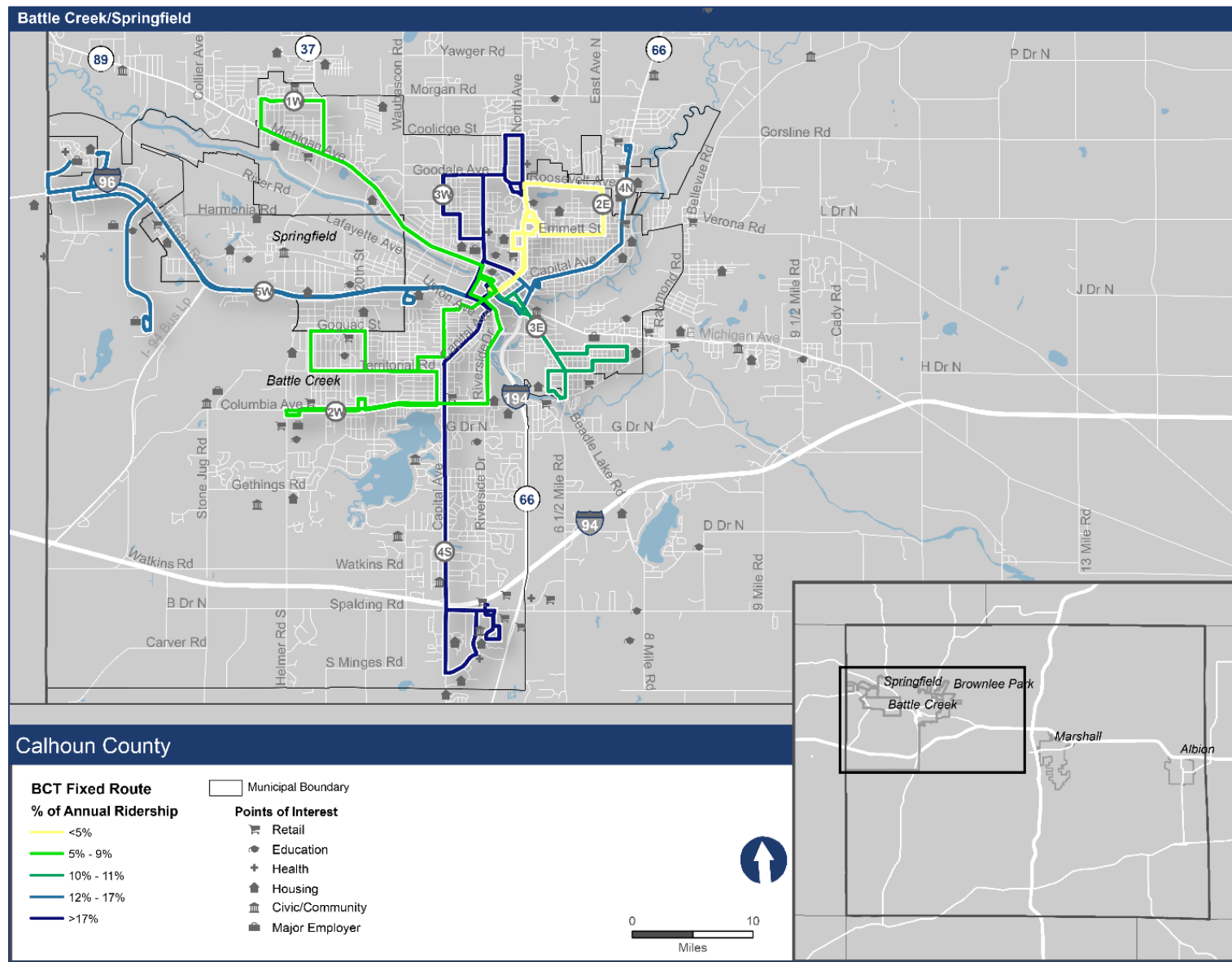
Route	Start & End Points	Span	Frequency	October 2017 Average Daily Ridership	Share of 2017 Ridership
1W	BC Transportation Center – Taylor Ave & Mason	Weekday: 5:15 a.m.-6:43 p.m. Saturday: 9:15 a.m.-5:10 p.m.	Weekday Peak: 60 Weekday Off-Peak: 60 Saturday: 60	Weekday: 107 Saturday: 50	7%
2E	BC Transportation Center – Roosevelt Ave & East	Weekday: 5:15 a.m.-6:13 p.m. Saturday: 9:15 a.m.-5:30 p.m.	Weekday Peak: 60 Weekday Off-Peak: 60 Saturday: 30	Weekday: 67 Saturday: 20	4%
2W	BC Transportation Center – Meijer West Columbia	Weekday: 5:15 a.m.-6:10 p.m. Saturday: 9:15 a.m.-5:10 p.m.	Weekday Peak: 60 Weekday Off-Peak: 60 Saturday: 60	Weekday: 159 Saturday: 53	9%
3E	BC Transportation Center – Post Foods	Weekday 5:15 a.m.-6:43 p.m. Saturday: 9:15 a.m.-5:13 p.m.	Weekday Peak: 30 Weekday Off-Peak: 30 Saturday: 30	Weekday: 184 Saturday: 62	11%
3W	BC Transportation Center – Springview Tower	Weekday: 5:15 a.m.-6:43 p.m. Saturday: 9:15a-5:13p	Weekday Peak: 30 Weekday Off-Peak: 30 Saturday: 30	Weekday: 326 Saturday: 106	19%
4N	BC Transportation Center – Family Fare Supermarket	Weekday 5:15 a.m.-6:43 p.m. Saturday: 9:15a-5:13p	Weekday Peak: 30 Weekday Off-Peak: 30 Saturday: 30	Weekday: 292 Saturday: 95	16%
4S	BC Transportation Center – Lakeview Mall	Weekday: 5:15 a.m.-6:10 p.m. Saturday: 9:15 a.m.-5:10 p.m.	Weekday Peak: 60 Weekday Off-Peak: 60 Saturday: 60	Weekday: 265 Saturday: 112	18%
5W	BC Transportation Center – VA Hospital	Weekday: 5:15 a.m.-6:10 p.m. Saturday: 9:15 a.m.-5:10 p.m.	Weekday Peak: 30 Weekday Off-Peak: 30 Saturday: 60	Weekday: 344 Saturday: 55	17%

¹¹ Accepted transfers are within the downtown boundaries and at select transfer points and stations.
<https://www.battlecreekmi.gov/330/Bus-Fares-Transfers>

In a 2017 customer survey, over 50 percent of Battle Creek fixed-route bus riders reported they held a job outside of their homes and most riders reported they were between the ages 35 and 64.¹² Over 65 percent of riders reported an annual household income of less than \$20,000, which closely aligns to the demographics of Calhoun County. A majority of riders (50 percent) reported their race as Caucasian or White, and around 45 percent reported their race as African American. Seventy percent of riders reported that they had no special needs or disabilities that require accommodations.

¹² Battle Creek Customer Service Report, Assessing Customer Satisfaction and Trip Purpose for the Battle Creek Transit, Demand Response, 2017. Research conducted by Michigan State University, with funding from Michigan Department of Transportation.

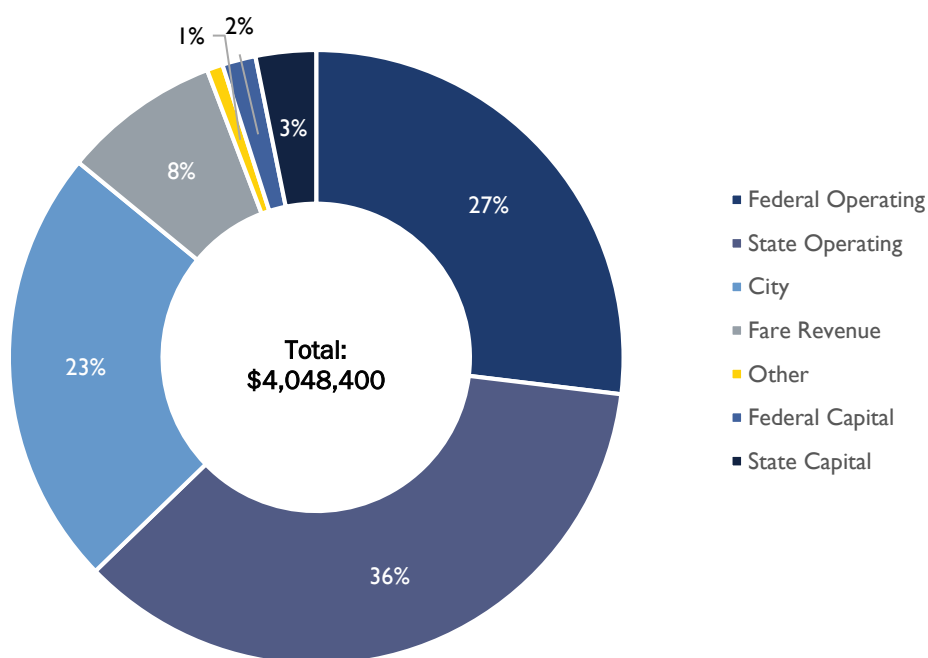
Figure 6: BCT Fixed Routes by Share of 2017 Annual Ridership



Revenues and Expenses

Battle Creek Transit combines funding information for both its fixed-route and Tele-Transit (demand response) services. Approximately, 92 percent of the budget is allocated to fixed-route service and the remaining eight percent of the budget is allocated to Tele-Transit service. The total operating budget for fixed-route service in FY2018 was \$3,108,500 and the Tele-Transit demand response service operating budget was \$1,396,600. Battle Creek Transit's FY2018 budget is broken down in **Figure 7**. Only eight percent of the agency's annual revenue comes from fares, while 63 percent of its budgeted annual revenue comes from federal and state operating funds.

Figure 7: Battle Creek FY18 Revenue by Source¹³



I.4. Demand Response Services

Tele-Transit

Tele-Transit is a door-to-door demand response service available to the general public in the BCT service area. However, rides are prioritized for Americans with Disabilities Act (ADA)-certified passengers. Trips are only provided to the general public if and when space is available. This service operates on weekdays from 5:15 a.m. to 12:00 a.m. and Saturdays from 9:15 a.m. to 5:00 p.m. The service area includes the City of Battle Creek, City of Springfield, and limited portions of Bedford, Emmett, and Pennfield Townships. Fares are discounted for qualified riders (as shown in **Table 3**) and 10- and 20-ride passes are available for all customers.

¹³ In recent years, Battle Creek Transit's actual operating expenses have exceeded its revenues. When this has occurred, the City of Battle Creek has provided additional funding to address this deficit. As such, the city's share of funding has often actually been higher than 23 percent.

Table 3: BCT Tele-Transit Fares

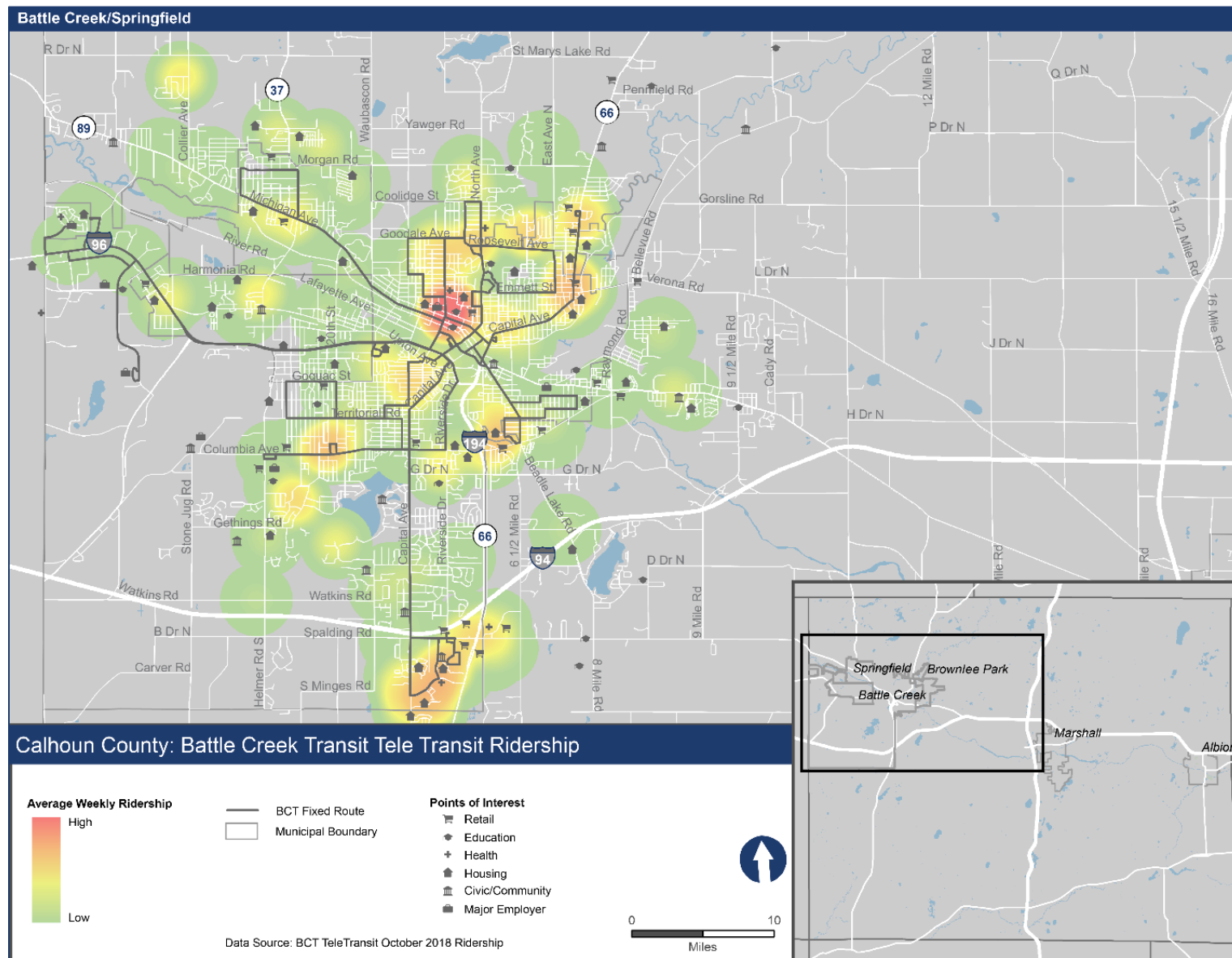
Ticket type	Tele-Transit one-way fare	Tele-Transit one-way fare after 6:45 pm	Tele-Transit Passes
ADA-certified, Seniors (60+), other qualified reduced fare, and companions. (Note: Personal Care Assistants (PCAs) ride free)	\$2.00	\$2.00	10 rides- \$20.00 20 rides- \$40.00
All other customers	\$7.00	\$5.00	10 rides- \$50.00 20 rides- \$100.00

The Tele-Transit service has a fleet of seven 10-16 passenger vans. In FY2018, Tele-Transit served over 30,500 trips and ran for more than 11,000 hours. **Figure 8** shows the concentration of pick-up locations across Battle Creek in October 2018. Most trips start downtown, other concentrations of high ridership are in the area south of I-94, around Spalding Road, and near Riverside Drive.

In a 2017 survey, nearly 60 percent of Tele-Transit riders reported being retired, and over 70 percent reported that they were over the age of 55. Over 70 percent of riders reported an annual household income of less than \$20,000, with a majority of households making less than \$10,000 annually. Just over 20 percent of riders reported that they did not have any special needs or disability that requires special accommodations.¹⁴

¹⁴ Battle Creek Customer Service Report, Assessing Customer Satisfaction and Trip Purpose for the Battle Creek Transit, Demand Response, 2017. Research conducted by Michigan State University, with funding from Michigan Department of Transportation.

Figure 8: Average Monthly BCT Tele-Transit Ridership (October 2018)



Albion-Marshall Connector

The Albion-Marshall Connector (AMC) runs Monday through Friday from 7:30 a.m. to 5:30 p.m. and connects the Albion and Marshall communities in Calhoun County. Reservations for this curb-to-curb service must be made 24 hours in advance. There are scheduled pickup locations in Marshall and in Albion for six scheduled pickup times. Riders are given a 20-minute window in which the bus will arrive at the pick-up location. In CY2018, AMC provided 2,080 hours of service, covering 38,718 miles, and over 5,000 trips. The service uses one bus, with a 16-passenger capacity, and employs two drivers (one driver in the morning and one driver in the evening). Fares for the AMC service are shown below (**Table 4**).

Table 4: Albion-Marshall Connector Fares

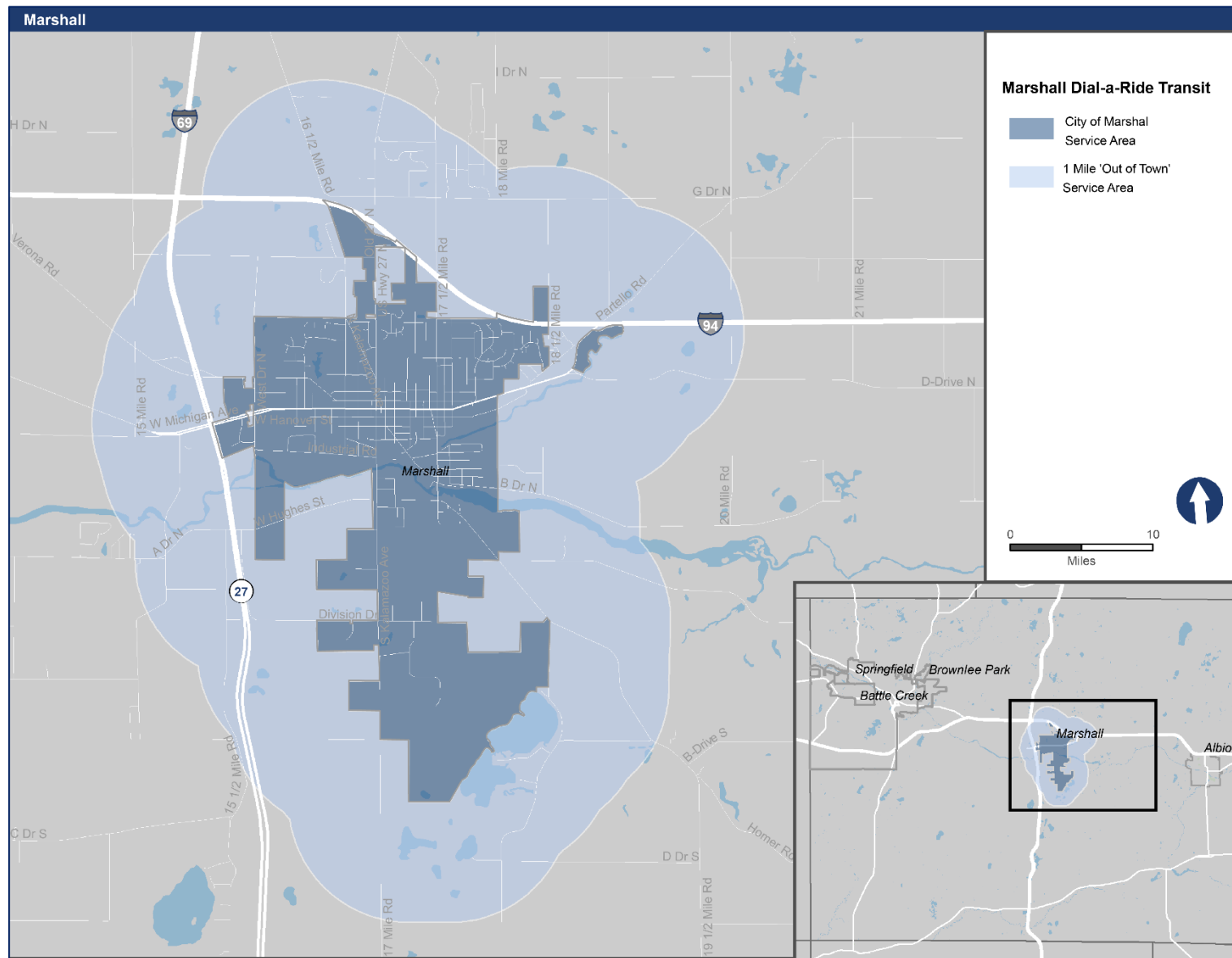
Ticket type	Fare price
Adults/Children over 13	\$2.00
Disabled/Seniors (over 60)/Children ages 5-12	\$1.00
Children under 5 (with a paid rider)/Caretakers	Free

Marshall Dial-a-Ride Transit

The Marshall Dial-a-Ride Transit (DART) demand response service operates within the entire city of Marshall and within one mile outside the city (**Figure 9**). In CY2018, DART provided 5,680 hours of service, covering 62,972 miles, and over 26,000 trips. The DART fleet consists of five 16-passenger vans. DART is funded from Marshall general funds. In the adopted FY2018 budget, DART was estimated to receive \$188,641 from a 0.9393 millage, \$205,958 in federal and state funding, and \$47,716 from fare revenue (\$590,960 total in revenue). The FY2018 expenses were estimated to be \$612,174. This included a \$140,000 expense for a new bus, which will be paid for by a capital grant from MDOT.¹⁵

¹⁵ City of Marshall Adopted FY2018 Budget, <http://www.cityofmarshall.com/uploads/File/ADOPTED%20BUDGET-FY2018.pdf>

Figure 9: Marshall DART Service Area



Community Action Transportation Services

Community Action's demand response service is available to any adult in Calhoun County who is a senior (60+) or is certified as having a disability (18+). Service areas are roughly divided into West Calhoun County, or Battle Creek area, and East Calhoun County, or Albion Area. Community Action has a fleet of twelve vans outlined in **Table 5**. In CY2018, Community Action provided over 39,000 passenger trips. Community Action operates with the support of the Michigan Departments of Transportation and Human Services, Calhoun County government (Department of Human Services and Senior Services), the Area Agency on Aging (Region 3B), and private donations. Services for seniors are funded in part through a Senior Millage Property Tax. Community Action also provides transportation services for Head Start and a variety of other community and social assistance programs.¹⁶

Table 5: Community Action Fleet

Vehicle Size	Count
With Lift, 5-7 passengers	5
5 passengers	3
7 passengers	1
9 passengers	2
15 Passengers	1

Other Providers

A variety of organizations throughout Calhoun County provide transportation services. These organizations and the types of services they provide are summarized in **Table 6**. Some additional senior care facilities provide on-request services for their residents.

Table 6: Transportation Service Providers Active in Calhoun County¹⁷

Organization	Description
Aequitas Mobility Services	Non-profit organization advocating for increased mobility for individuals and families working toward economic self-sufficiency. Aequitas recently launched on-demand transportation operation providing service between various residential areas and workplaces in and around Battle Creek. The program currently has two passenger vans and has plans to expand its fleet. ¹⁸
Albion College	BritBus is a fixed-route shuttle service between various locations on the Albion College campus and downtown Albion. https://www.albion.edu/student-life/campus-safety/transportation-services
B&W Charters Inc.	For-hire charter services in 16- to 56-passenger vehicles (vans, motorcoaches, and trolleys), handles special events, shuttles, and extended trips. https://www.bwcharters.com/

¹⁶ For more information, see: www.caascmi.org.

¹⁷ Where no information source is specified in the table, the information comes from Battle Creek Transit. See: <http://www.battlecreekmi.gov/DocumentCenter/View/2735/Transit-Application?bidId=>.

¹⁸ For more information, see: <https://shotl.com/news/shotl-launches-in-the-united-states>.

Organization	Description
CentraCare/ LifeCare Ambulance	CentraCare provides medical services to older adults in Calhoun County free of charge to Medicare and Medicaid beneficiaries. The CentraCare program, also known as PACE (Program of All-Inclusive Care for the Elderly), is a nationally recognized model to support seniors remaining safely in their place of residence. High quality transportation is provided by LifeCare Ambulance Service for participants to come to and from the day center. https://lifecareems.org/community/centracare/
City Cab	City Cab is a 24 hour/7 day per week taxi service with a fleet of 15 GPS-equipped vehicles. Partner company Greg's Car Service handles travel needs outside of Battle Creek. http://battlecreekcitycab.com/about.html
Community Inclusive Recreation	Community Inclusive Recreations provides a variety of recreational and social opportunities for people with disabilities and receives specialized services funding to provide transportation to clients to and from activities. Rides are booked in advance with a minimum three-hour notice. http://www.cirfun.com/
Concorde Transportation	Concorde Transportation provides transportation to work and home for Battle Creek residents and airport runs to Detroit, Lansing, Grand Rapids, and Kalamazoo. Fares are: Work to home – roundtrip is \$15 per day; Airport start at \$75 route trip; and specialized starting at \$35 per hour (will go where needed). Service is 24 hours per day, and clients pay directly for services. Concorde serves approximately 50 to 75 people each day.
Courtesy Limousine	Luxury charter transportation services in a variety of light-duty vehicle types. http://courtesy247.com/home/2630585
Dean Trailways of Michigan	Provides charters, tours, line runs, and sports packages for individuals, companies, universities, event organizers, professional sports teams, and corporate events. http://www.deanrailways.com/about/our-company
Greyhound Bus	Bus stations in Battle Creek and Albion, Greyhound is an intercity bus common carrier serving over 3,800 destinations across North America.
Indian Trails Inc.	Indian Trails operates fixed intercity routes throughout Michigan and other Great Lakes states. Daily runs provide connections to Amtrak and Greyhound networks. https://www.indiantrails.com/maps-and-schedules
Marian Birch Adult Daycare	An adult day care center that transports individuals to and from the center throughout Calhoun County. The service operates a morning route at 7:30 a.m., & 9:30 a.m., and an afternoon route at 3:00 p.m., and 5:30 p.m. Funding comes from various funding agencies, Area Agency on Aging, Region 3B & waiver, Veteran's Administration, private pay, and senior millage.
Salvation Army	Provides in-town triptiks or 12-ride bus passes as available at no charge to recipient for those with a new job who live on the bus route and has not received first paycheck. TripTiks are used to aid patrons to get home during inclement weather. The service is available while local buses are running and only within the Battle Creek public transit service area. State funding may have been reduced recently.

2. MARKET ANALYSIS

The effectiveness and efficiency of public transportation is often determined by density. Where there are higher concentrations of people and/or jobs, transit tends to be supported by higher ridership. At the same time, most transit agencies have a mandate and mission to provide comprehensive service in their communities, and to provide mobility for vulnerable residents with no other means of transportation. The purpose of this market analysis is to both highlight areas with relatively high transit need and identify areas throughout the county that could support a certain level of transit service. This market analysis consists of three key components: Transit-Oriented Population, Commuter Origin, and Transit Potential.

2.1. Transit-Oriented Population

The Transit-Oriented Population Origin Index identifies areas with higher numbers and concentrations of customers more likely to need or use transit. The index is constructed from demographic statistics in six categories: population (including race and ethnicity), age (youth or senior), number of households, income (low), vehicle ownership (zero- and one-car households), and disability status. After each sub-area is scored in these categories, the scores are weighted and combined to create an overall Transit-Oriented Population Origin Index. The index is shown in the following section from low to high propensity.

Transit-Oriented Population Propensity is shown for the Battle Creek area in **Figure 10**. In this part of the County, the areas with the highest concentration of transit-oriented populations are located in tightly packed residential neighborhoods. The high transit-oriented population area south of I-94 is home to the Minges Brook Mall, and multiple apartment and condo complexes near Capital Avenue. Other areas of high concentration are located near central Battle Creek and at the border of Springfield and Battle Creek, just south of Upton Avenue. These areas are all served by bus routes that operate every 30-60 minutes and that have a high share of annual system ridership.

In the Marshall area (**Figure 11**), the highest propensity is south of Michigan Avenue to just south of the North Branch Kalamazoo River. This neighborhood is home to the middle school and Marshall House apartments.

As shown in **Figure 12**, most of the Albion area has moderate to high transit-oriented population propensity. The area of highest propensity in Albion is located south of the North Branch Kalamazoo River between Albion Street and Superior Street.

Figure 10: Transit-Oriented Population Origin Index, Battle Creek/Springfield

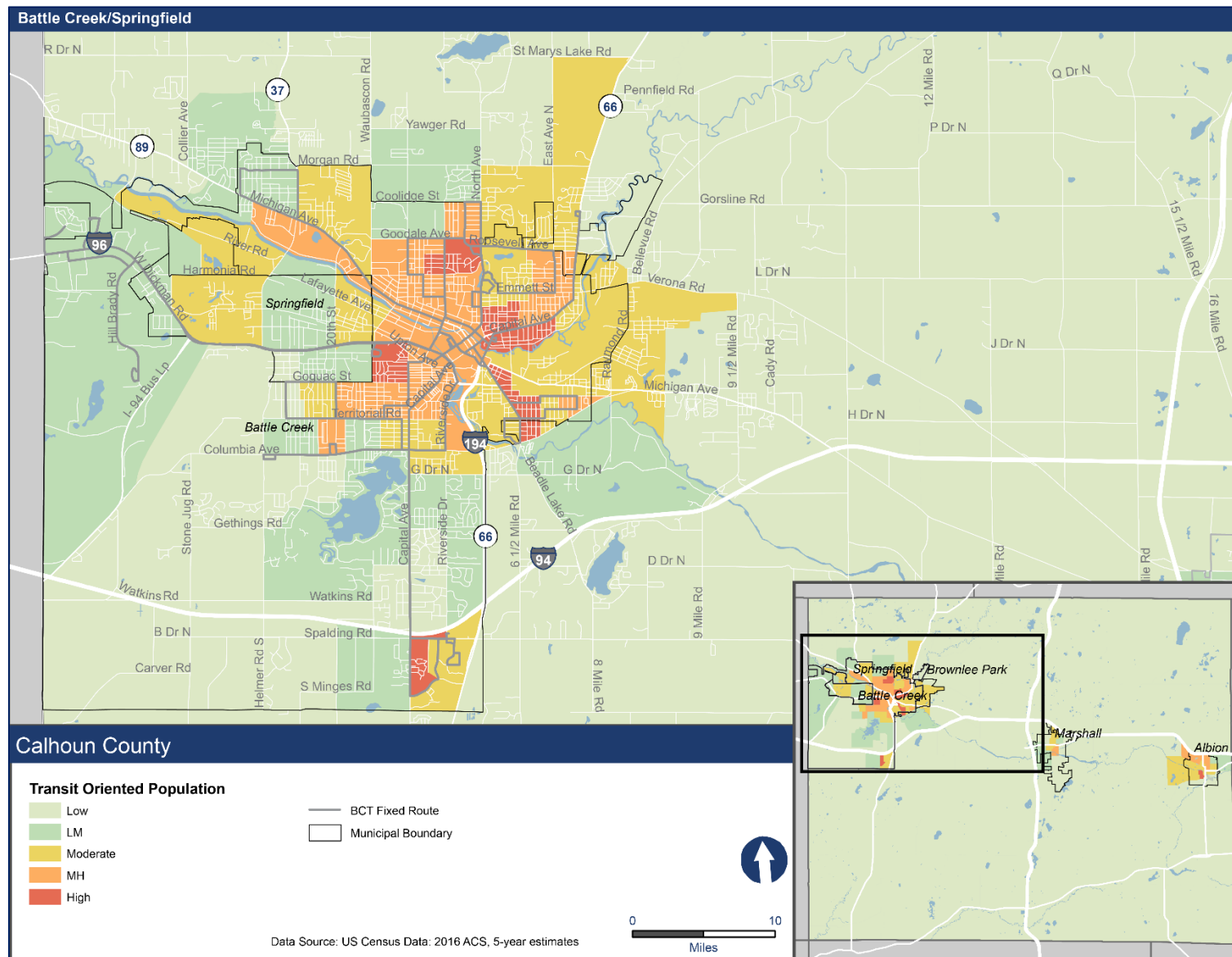


Figure 11: Transit-Oriented Population Origin Index, Marshall

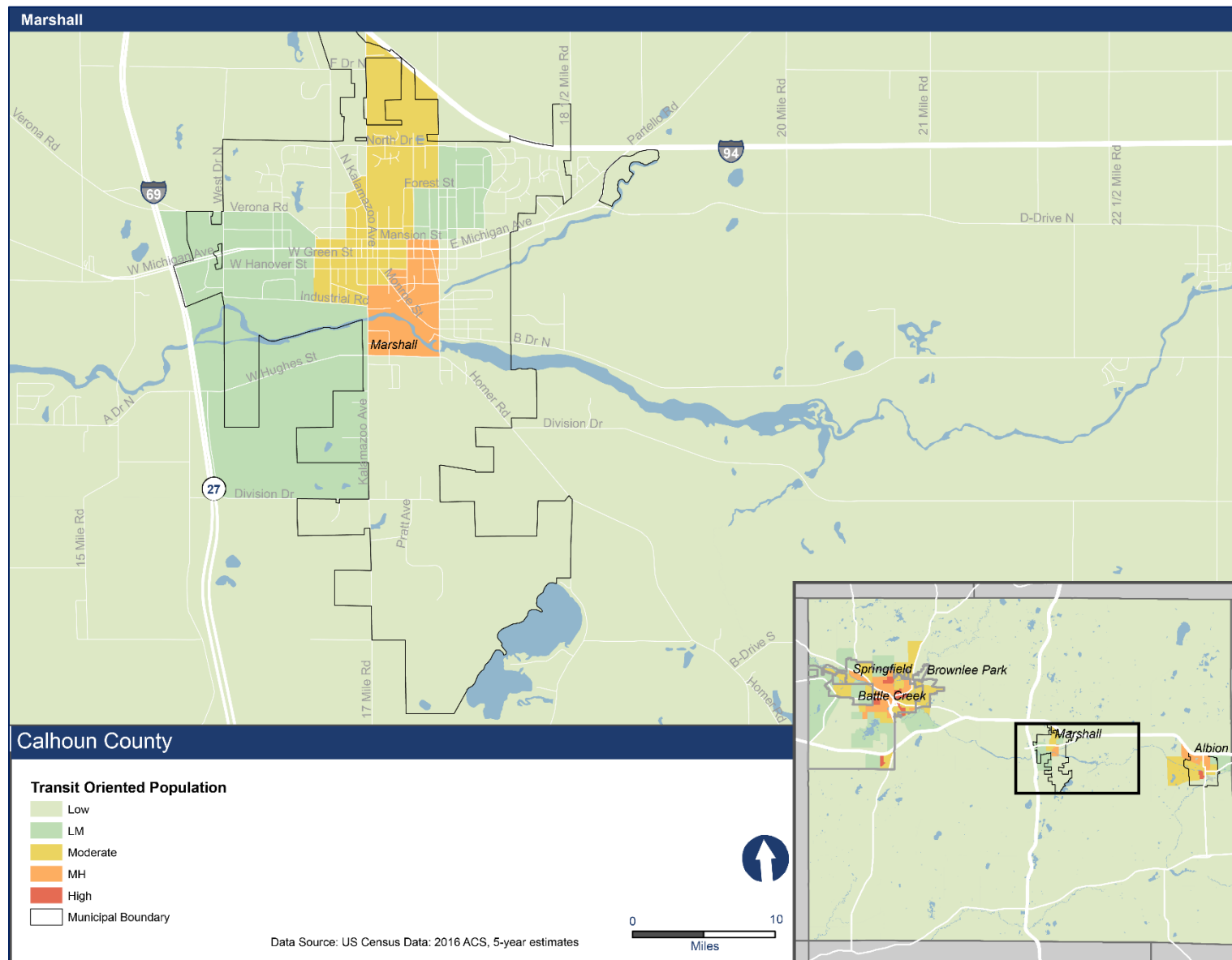
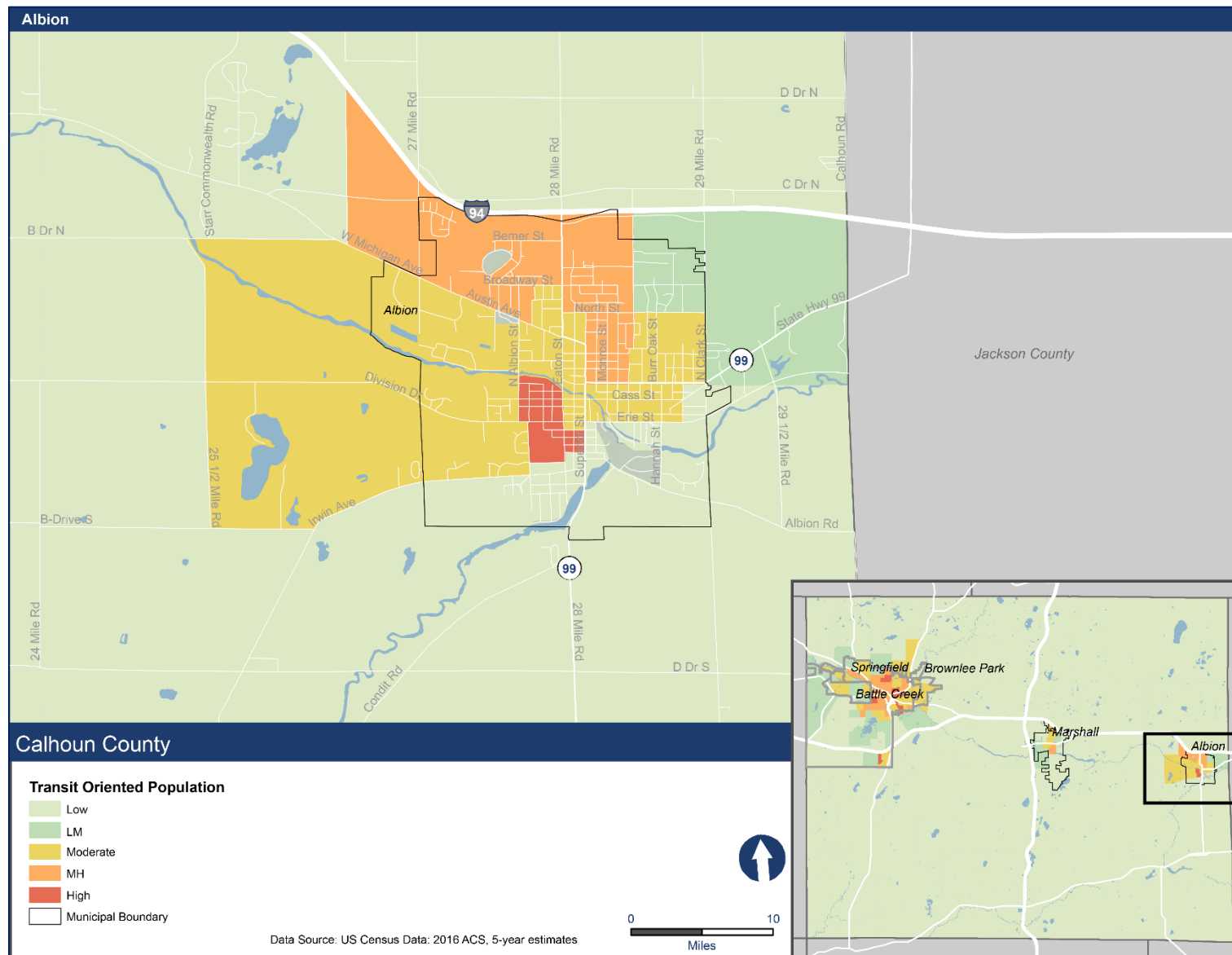


Figure 12: Transit-Oriented Population Origin Index, Albion



2.2. Commuter Origin Propensity

The Commuter Origin Index identifies areas with higher numbers and concentrations of customers more likely to need or use transit to commute. The index is constructed from demographic statistics in two categories: commuters in general (population over 16, workers over the age of 16, workers over the age of 16 who commute), and non-single occupancy vehicle (SOV) commuters. After each sub-area is scored in these categories, the scores are weighted and combined to create an overall Commuter Origin Index. The index is shown in the following section from low to high propensity.

The areas of highest commuter origin propensity are located in the three urban areas, Battle Creek, Marshall, and Albion. As shown in **Figure 13**, the areas that align with current Battle Creek Transit bus routes have the highest propensity.

In Marshall, the highest propensity is seen in the urban center, anchored around Mansion Street (**Figure 14**). These are also areas of more dense residential neighborhoods.

The propensity in Albion is highest in the area where Albion College is located (**Figure 15**). The areas north and west of state route 99 also have higher commuter origin propensity.

Figure 13: Commuter Origin Index, Battle Creek/Springfield

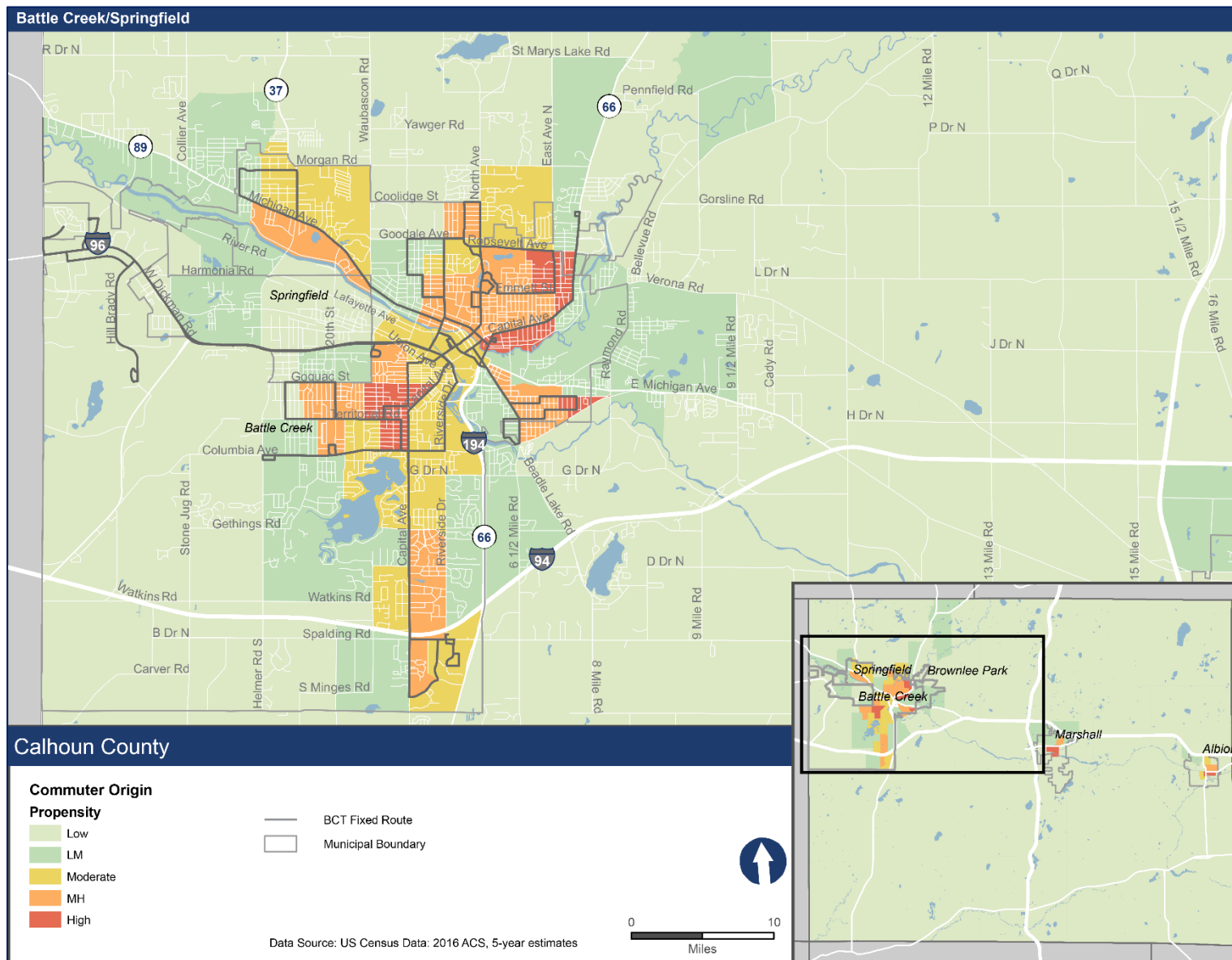


Figure 14: Commuter Origin Index, Marshall

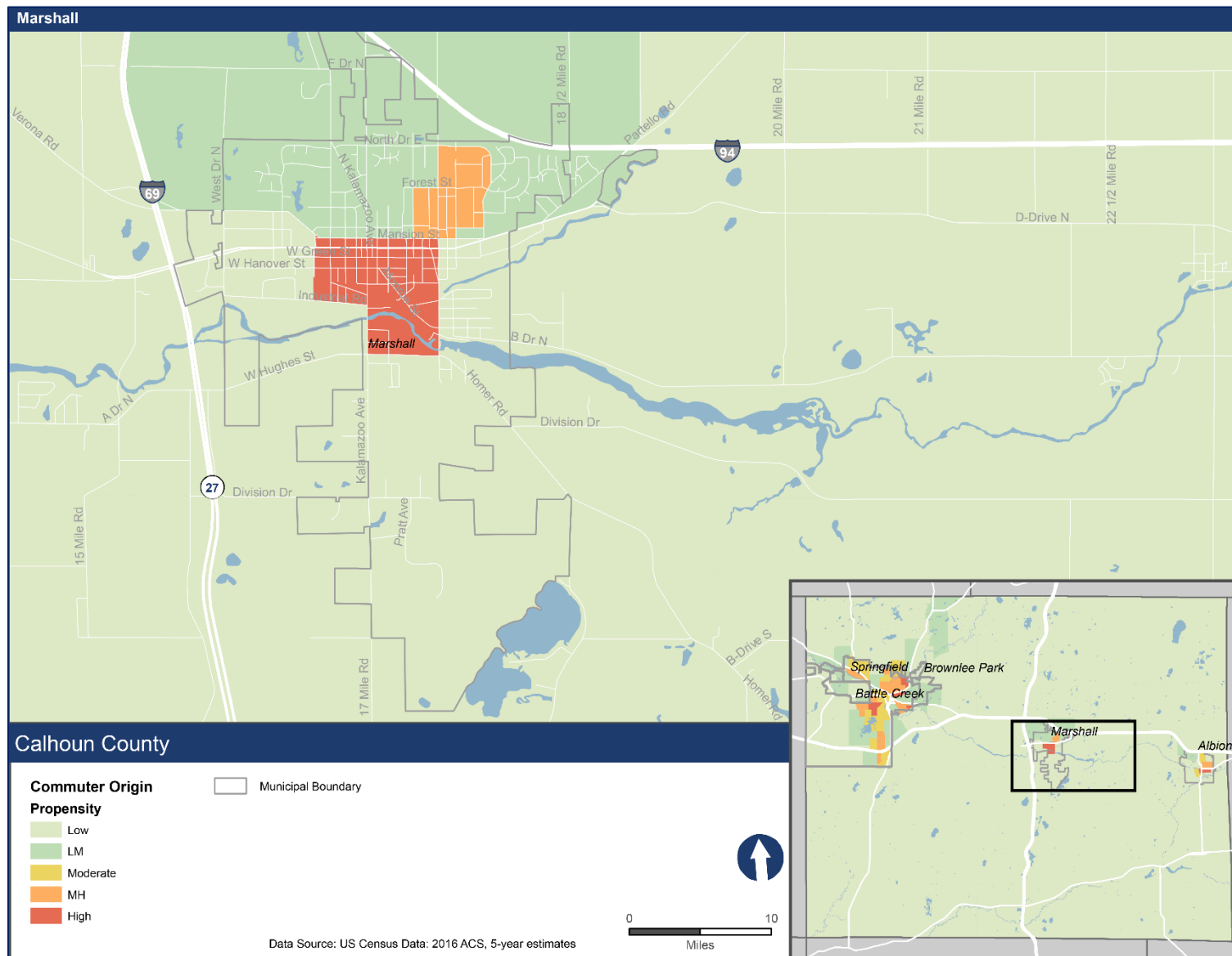
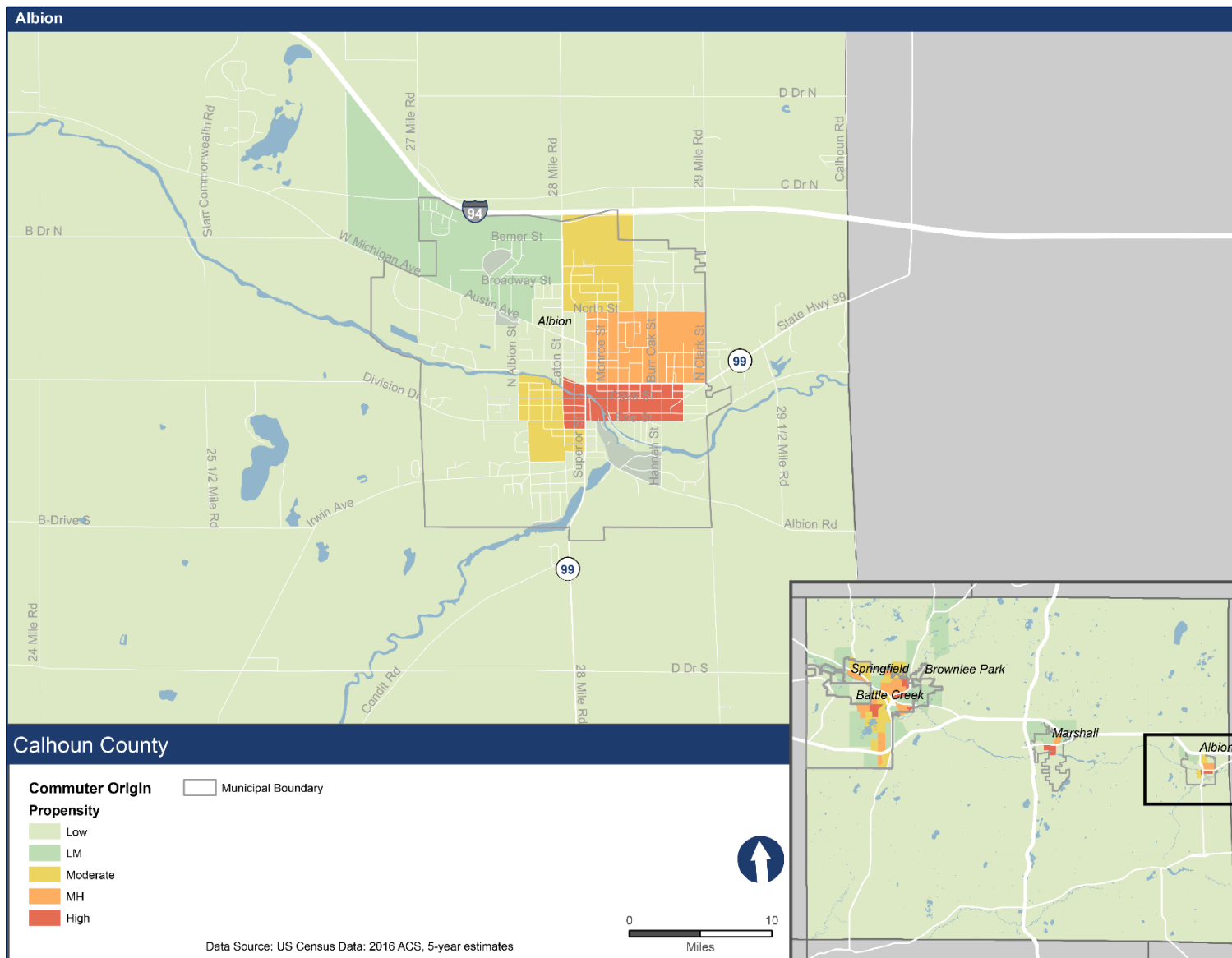


Figure 15: Commuter Origin Index, Albion



2.3. Transit Potential

Transit potential is an analysis of population and employment density. As transit service is generally most effective in areas with higher concentrations of activity, combining both population and employment densities show the locations with the highest potential to support transit service. The existing transit potential is based on current population and job data from the 2016 American Community Survey (ACS) five-year estimates, and 2016 Longitudinal Employer House Dynamic (LEHD) data. These indicators are shown per acre by Census Block in the following section. Local bus service is supported when there are at least 5 jobs and/or people per acre. Areas with less than five jobs and/or people per acre may benefit from a more flexible or demand response service.

As seen in **Figure 16**, the highest density (more than 60 jobs and people per acre) areas in Battle Creek are located where there are major employers: Bronson Battle Creek Hospital, Kellogg Community College, and Post Cereals. A large portion of the urbanized area of Battle Creek and Springfield has between 6 and 15 jobs and people per acre.

The transit potential in Marshall is generally moderate, with less than five jobs and people per acre across about half of the city (**Figure 17**). The higher potential areas are centered around the city center along Michigan Avenue. This area includes a major employer, Oaklawn Hospital. Other areas of high transit potential are along Industrial Road where Tenneco and Michigan Kitchen Distributors are located. South of the river, Marshall averages less than one person or job per acre.

Similar to Marshall, Albion also has a moderate transit potential with fewer than five jobs or people per acre in many locations (**Figure 18**). The highest concentration of activity is east of Eaton Street and north of Erie Street, where Albion College is located. Albion College is a liberal arts college that enrolls around 1,300 students annually.

Figure 16: Transit Potential, Battle Creek/Springfield

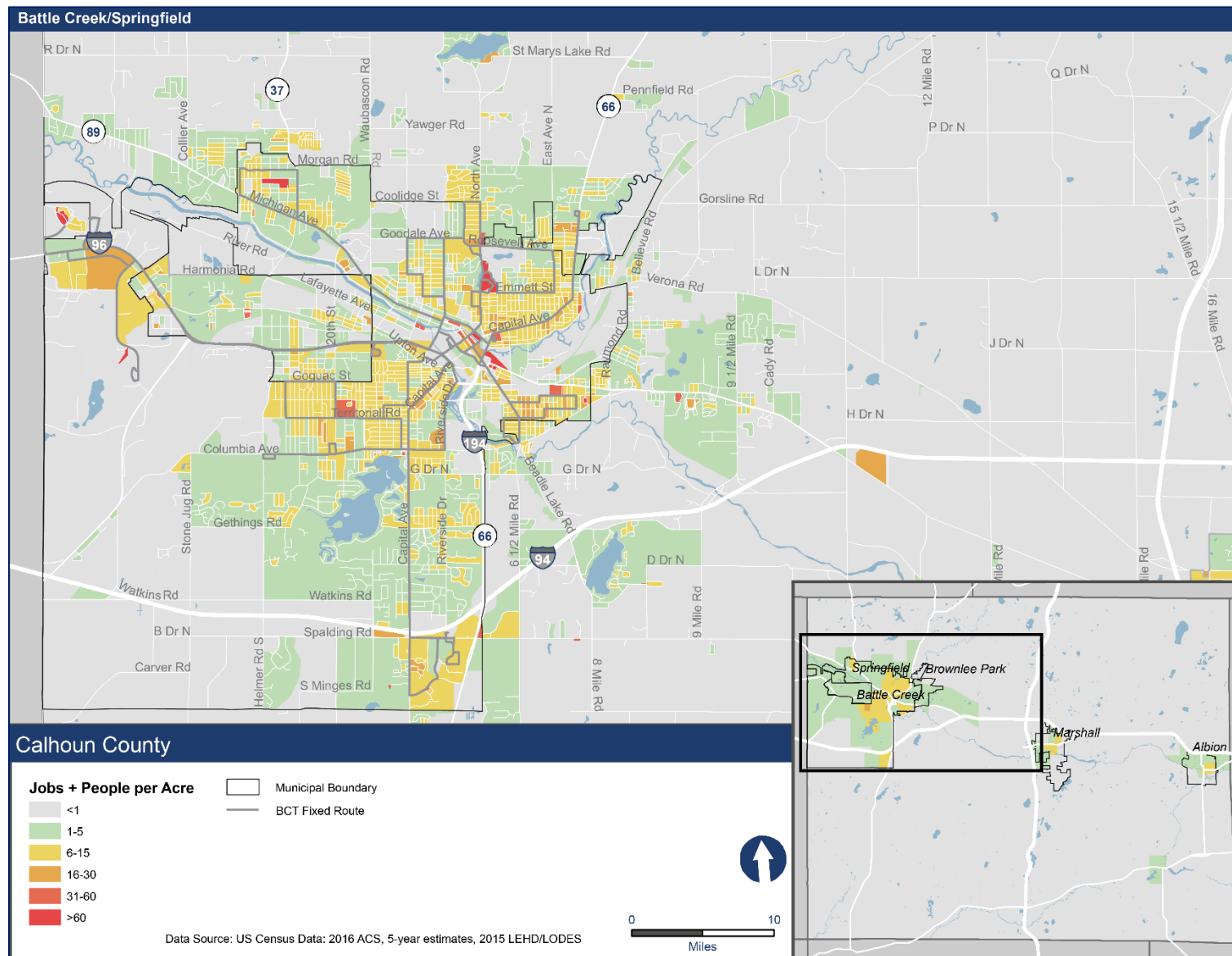


Figure 17: Transit Potential, Marshall

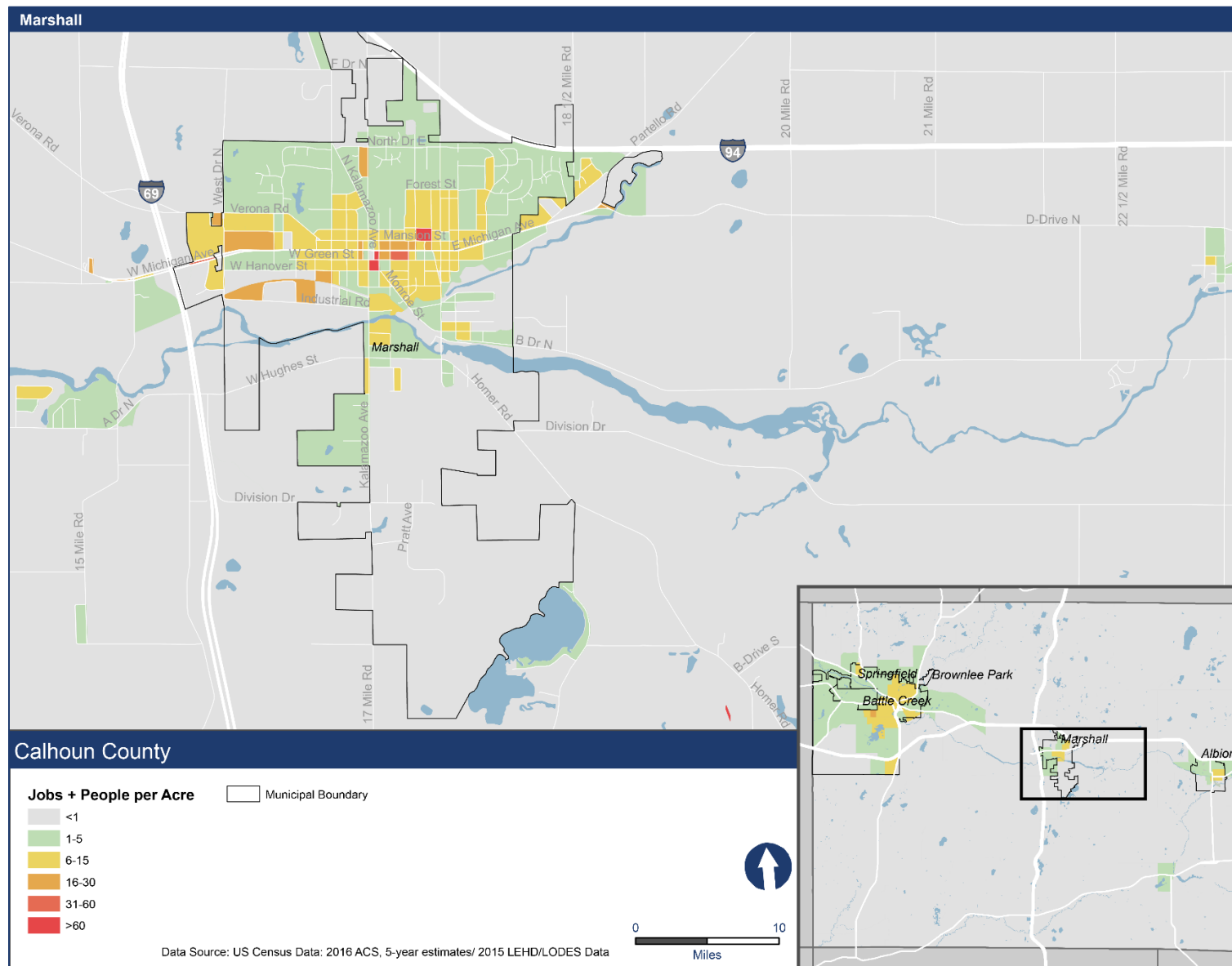
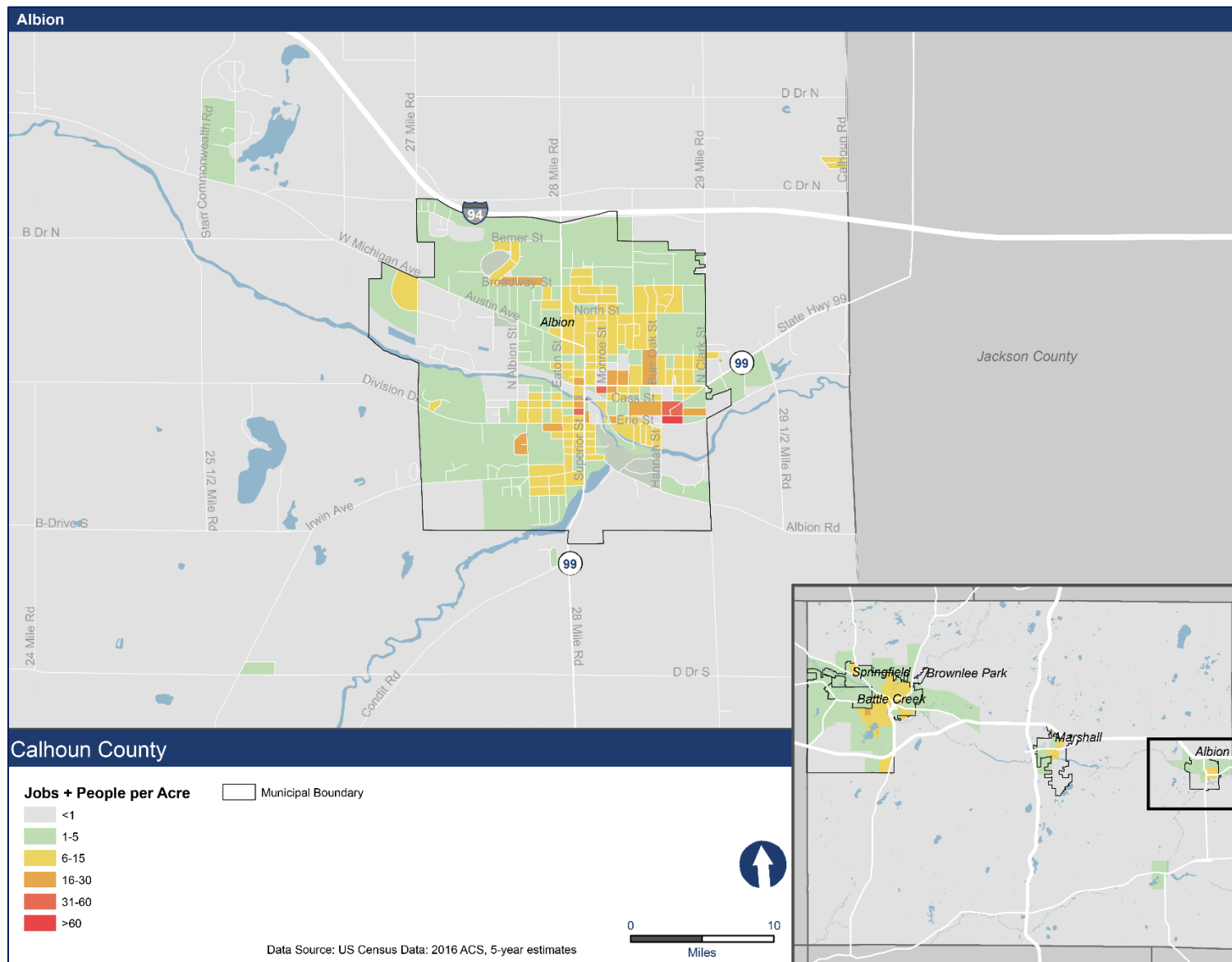


Figure 18: Transit Potential, Albion



2.4. Travel Flows

Daily travel flows in the county provide important information about travel and commute patterns. Daily travel flow data analyzed in this section comes from the Battle Creek Area Transportation Study (BCATS) regional travel model. The following figures break down daily travel flows, estimated in 2010, by Transportation Analysis Zone (TAZ) for all trip origins, destinations, and internal travel. All travel lines are drawn from the center (or centroid) of each TAZ, and are not representative of the exact location of trip origins and destinations.

Figure 20 thru **Figure 22** show daily travel flows (by number of trips) between TAZ pairs that have more than 200 daily trips for Battle Creek, Marshall and Albion. The highest origin and destination pairs in the county are between two areas in Battle Creek, which appear to be primarily residential, and Emmett Charter Township, southeast of Battle Creek. Many manufacturers and businesses are located in this part of the county, but the activity density in this TAZ is very low and is likely not supportive enough for a local bus route; there is no fixed route service from the city center to this area currently. Most of the travel to and from the Battle Creek area happens within close proximity, suggesting that most people live relatively close to where they work. The same is true for travel near Marshall and Albion. There are, however, still areas where interjurisdictional travel, to and from Battle Creek, is over 1,200 person trips a day. These areas include Bedford Charter Township, the area near East Leroy, and Marshall.

Figure 23 shows the potential travel flows around the region based on the employment location for Calhoun County Residents. Most residents work within Calhoun County, with high concentrations of jobs held in the north west region of the county, near Battle Creek. Outside of the county, the highest concentrations of jobs are held in Barry and Kalamazoo Counties. Areas in gray have less than 75 residents employed there and are considered insignificant. Overall, more jobs are held by Calhoun County residents within the county (30,372) than people outside of the county (25,073) (**Figure 19**). Even less residents are employed outside the county (24,542).

Figure 19: Inflow, Outflow, and Intercounty flow of Workers in Calhoun County

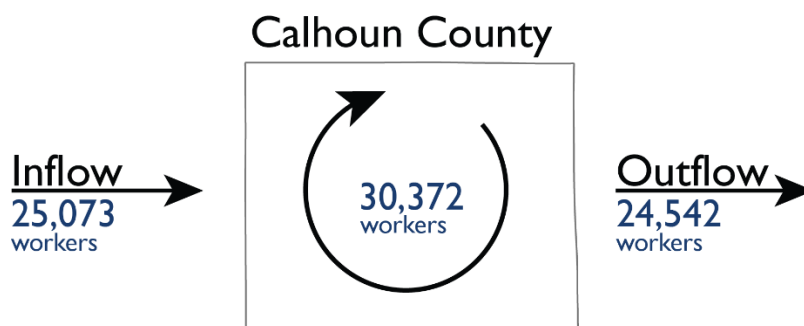


Figure 20: Daily Travel Flows between TAZs, Battle Creek

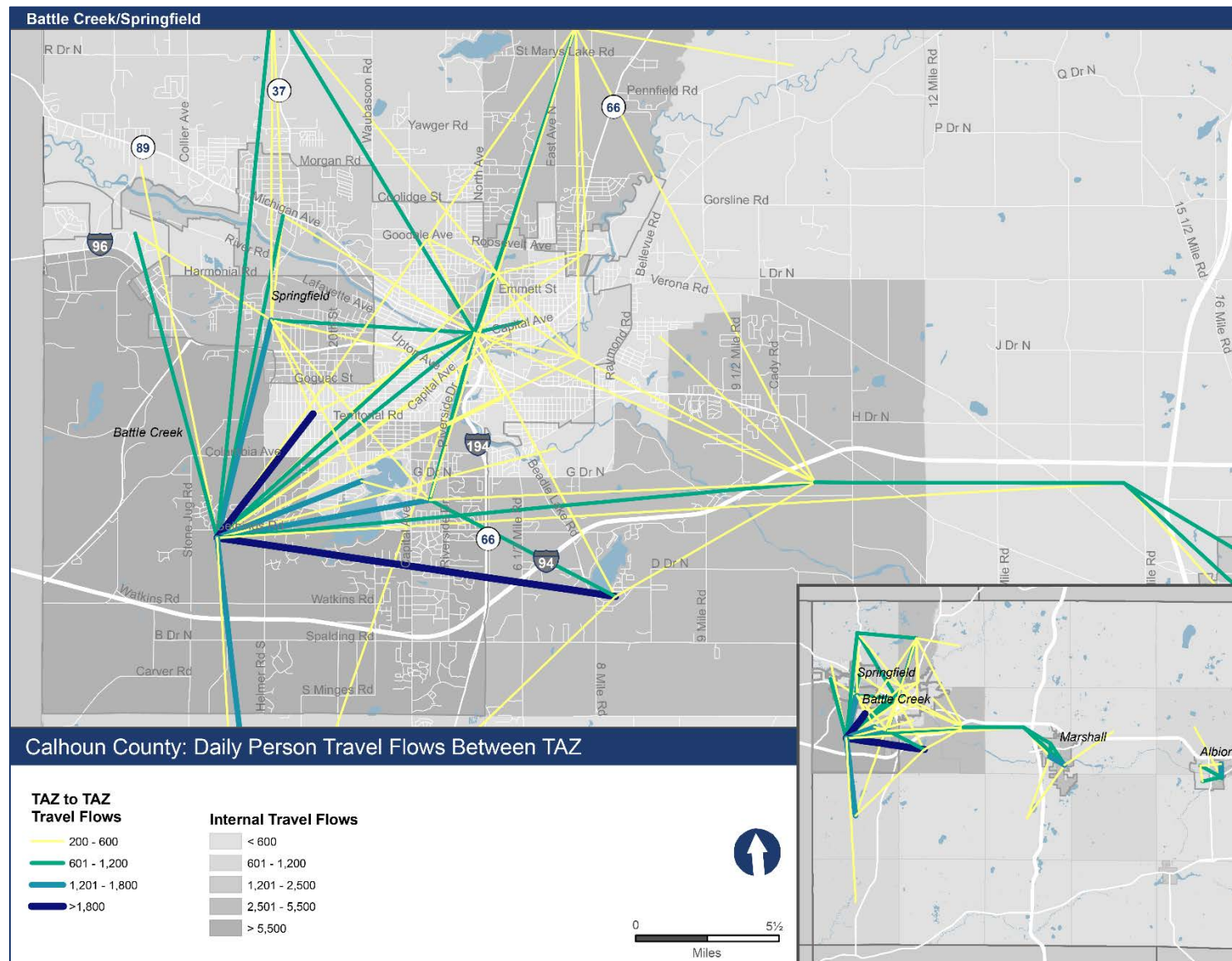


Figure 21: Daily Travel Flows between TAZs, Marshall

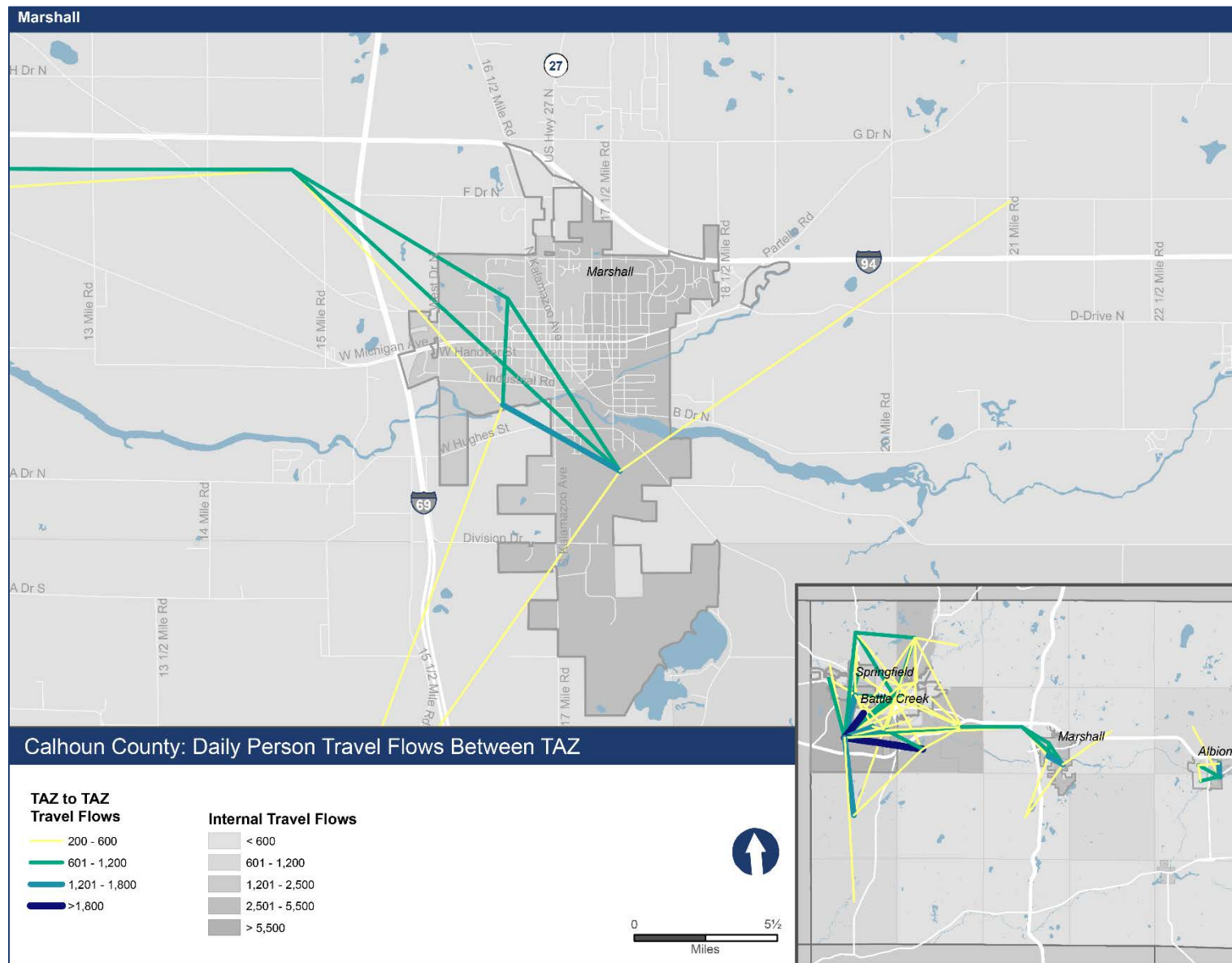


Figure 22 : Daily Travel Flows between TAZs, Albion

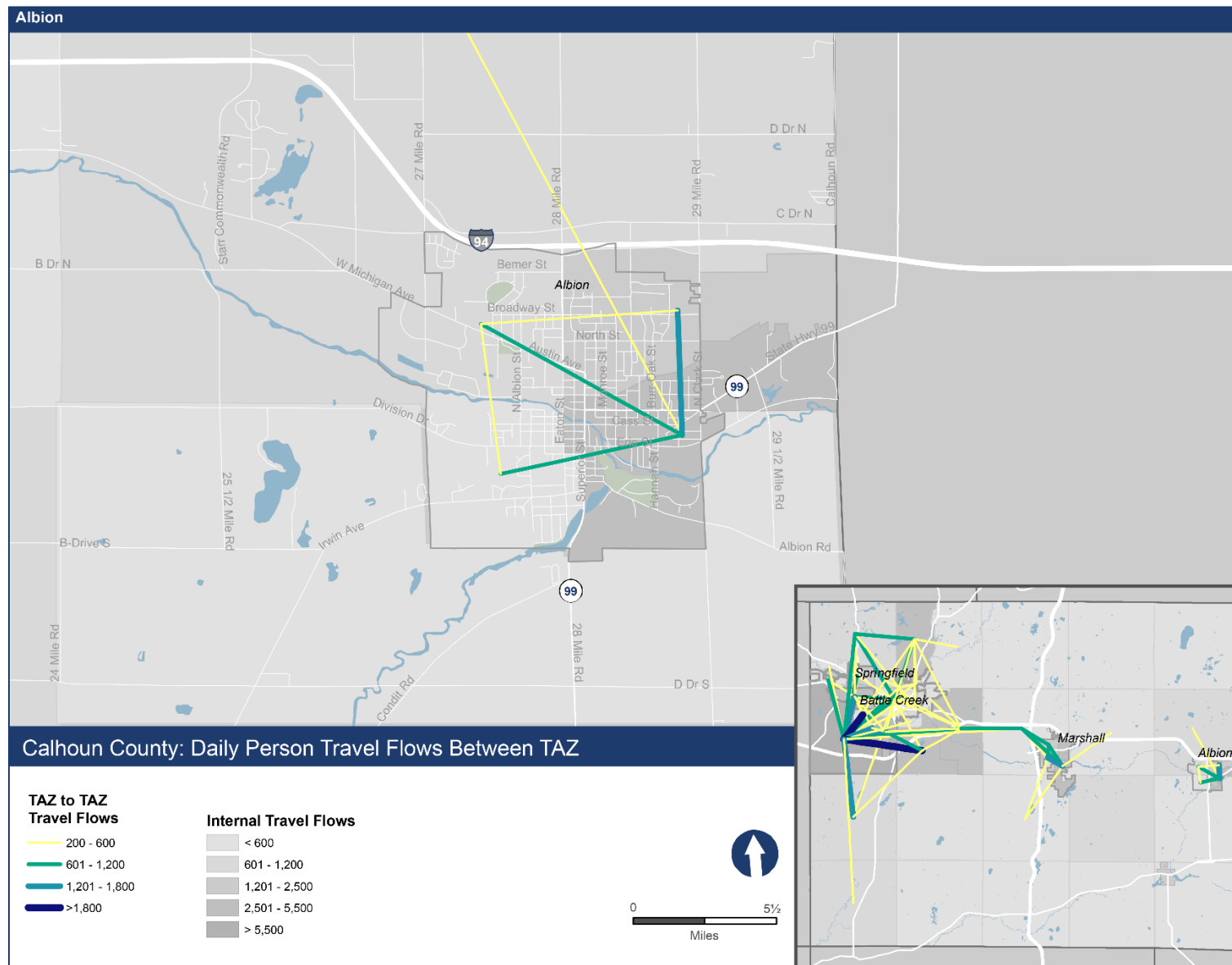
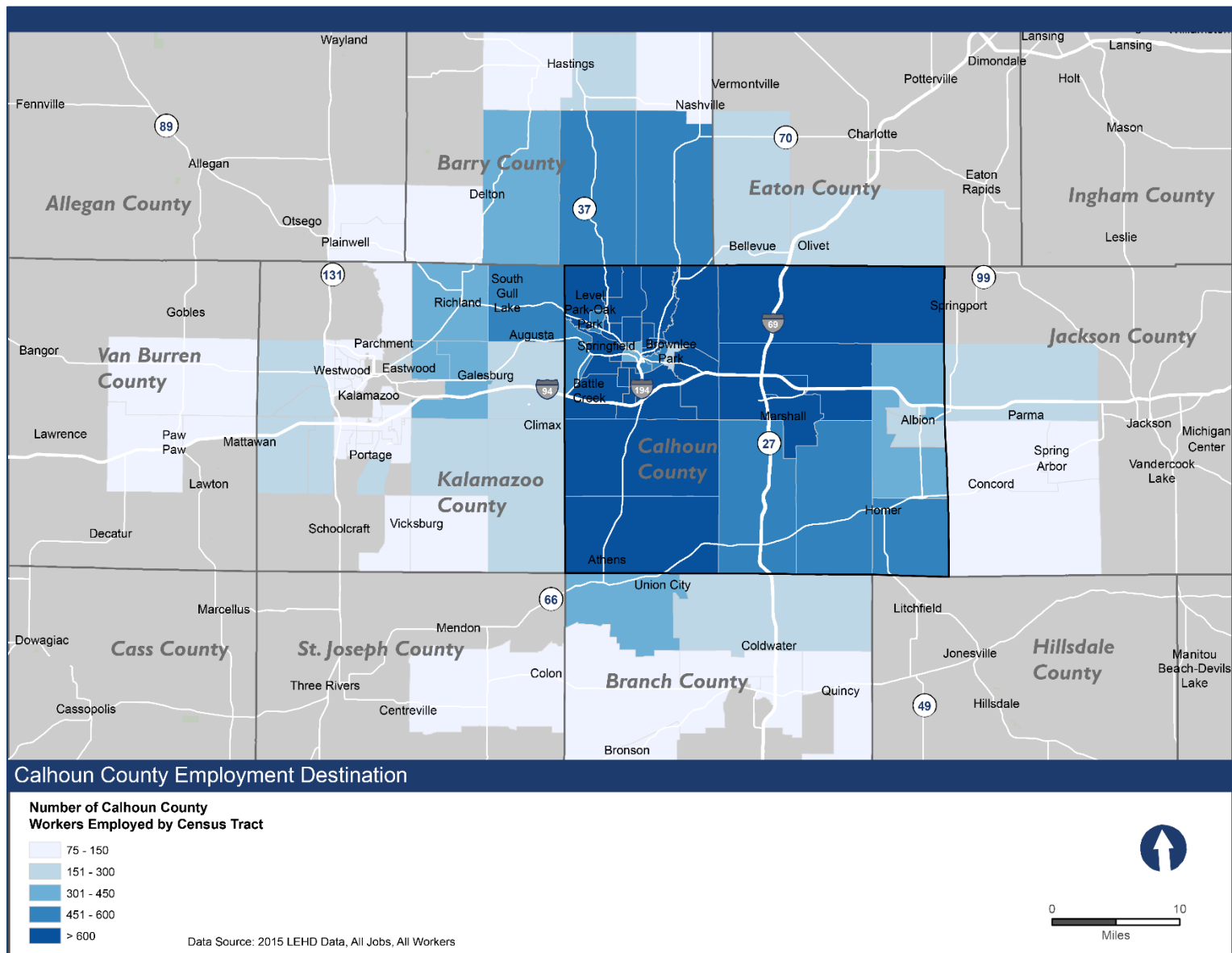


Figure 23: Calhoun County Residents Employment Location by Census Tract



3. GAP ANALYSIS

3.1. Coverage Gaps

Outside of Battle Creek, Marshall, and Albion, Calhoun County residents have minimal to no access to basic amenities such as health care and grocery stores. For example, Homer has access to one commercial grocery store, Family Dollar, which provides a limited selection of produce items. Health care facilities and specialists can also only be found within the three cities. There are amenities outside the county, in Jackson County for example, that Albion residents could access with a shorter trip, but these are unreachable by transit due to the service area boundaries.

There are multiple areas outside of these three cities that have concentrations of more than five percent of the population having no access to a household car. There are very high concentrations of seniors outside of these cities. In fact, the lower concentrations of seniors are found near the city centers. Transportation options outside the cities are widely unavailable to everyone. Furthermore, transportation options outside of the county are unavailable. Demand response service areas can be seen in relation to amenities and concentration of senior and zero-car households in **Figure 24** thru **Figure 29**.

3.2. Level of Service Gaps

There is also a gap in the availability of service throughout the day. Many of the demand response riders are seniors or disabled who do not use the service to commute during peak weekday periods.

Community Action provides service countywide, as the service gets further out from Battle Creek, the service hours become shorter due to the fact that driver shifts are fixed, and it takes longer to get from the bus depot in Battle Creek further out in the service area. The only area in Calhoun County that has service in the evening is Battle Creek, and this service is not always available to residents who are not seniors and do not have a disability. Weekend service is limited to Battle Creek as well, apart from seniors and disabled in Albion who have service for 3.5 hours on Saturday. Complete span and day of service information is shown in **Table 7**. Homer has no transit services that are not privately run for specific customers.

Table 7: Span of Service for Demand Response Services in Calhoun County

Provider	Service Area		Days of Service	Start Time	End Time
BCT TeleTransit (ADA gets priority)	Battle Creek		Monday- Friday	5:15 a.m.	12:00 a.m.
			Saturday	9:15 a.m.	5:00 p.m.
Marshall DART	Marshall		Monday – Friday	7:00 a.m.	6:00 p.m.
Community Action (60+ and/or ADA)	Countywide	Albion	Monday – Friday	8:00 a.m.	4:00 p.m.
		Albion	Saturday	8:00 a.m.	11:30 a.m.
		Battle Creek	Monday - Friday	8:00 a.m.	4:30 p.m.
Albion-Marshall Connector	Marshall and Albion		Monday – Friday	7:30 a.m.	5:30 p.m.

Figure 24: Senior Population Access to Amenities, Battle Creek

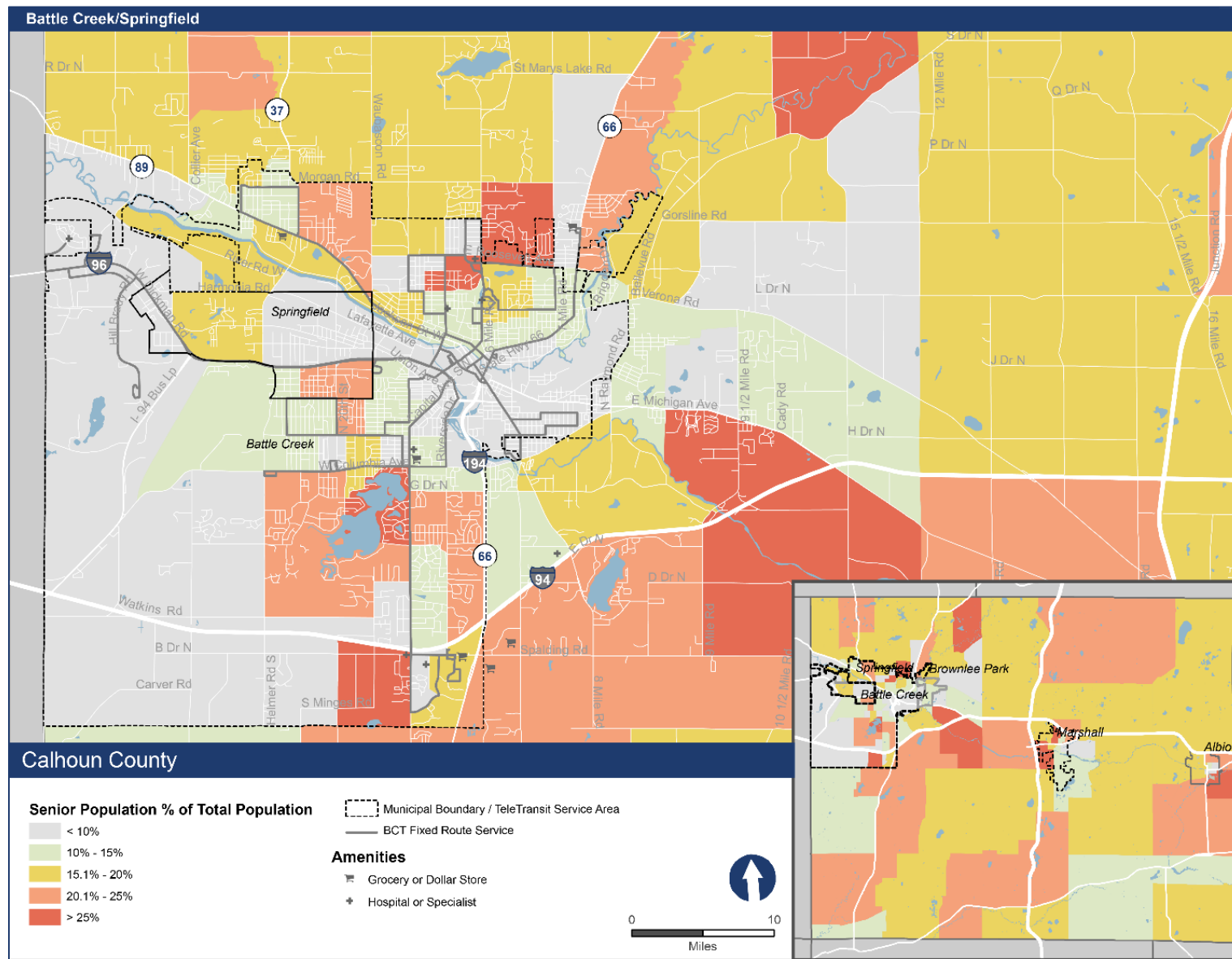


Figure 25: Senior Population Access to Amenities, Marshall

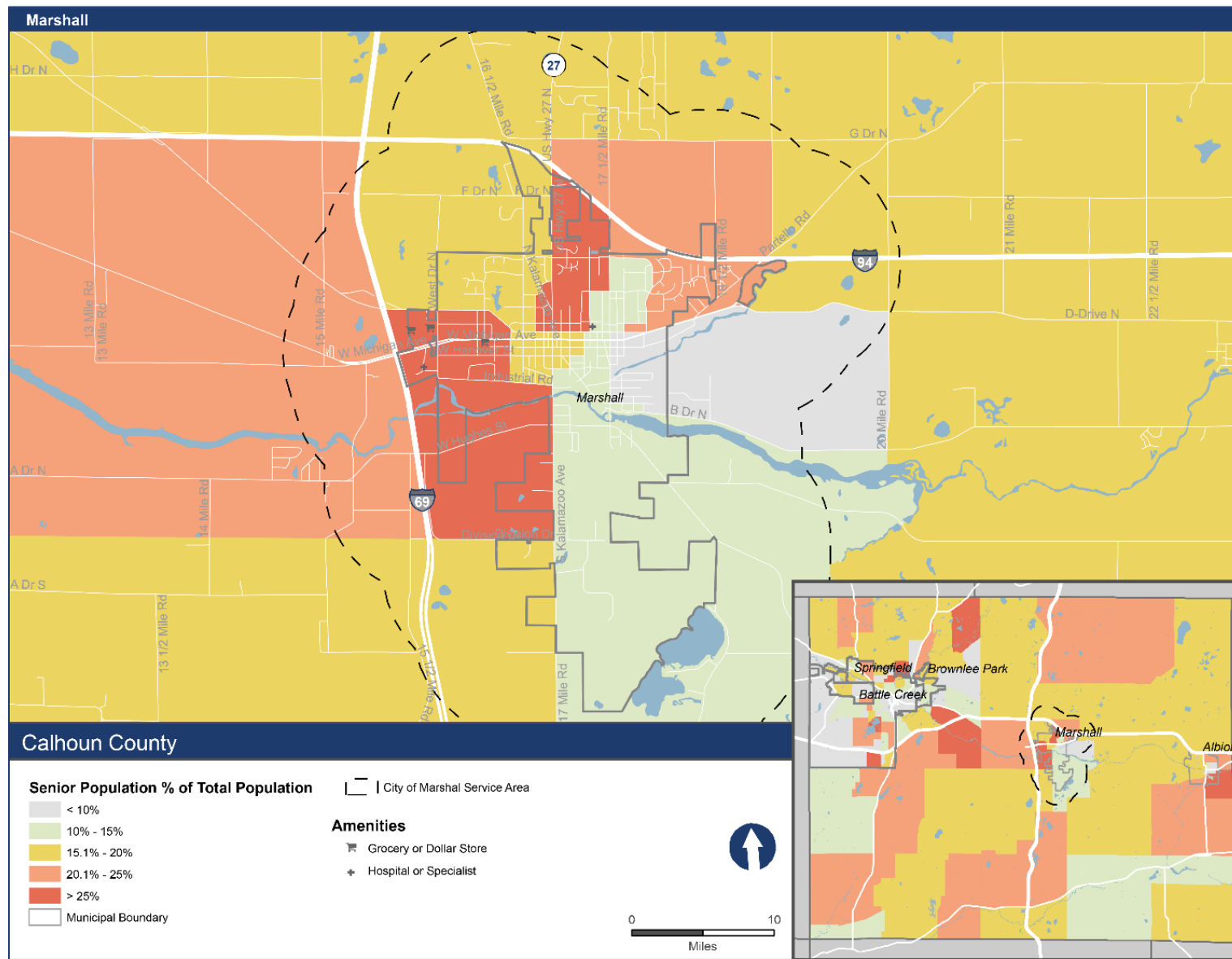


Figure 26: Senior Population Access to Amenities, Albion

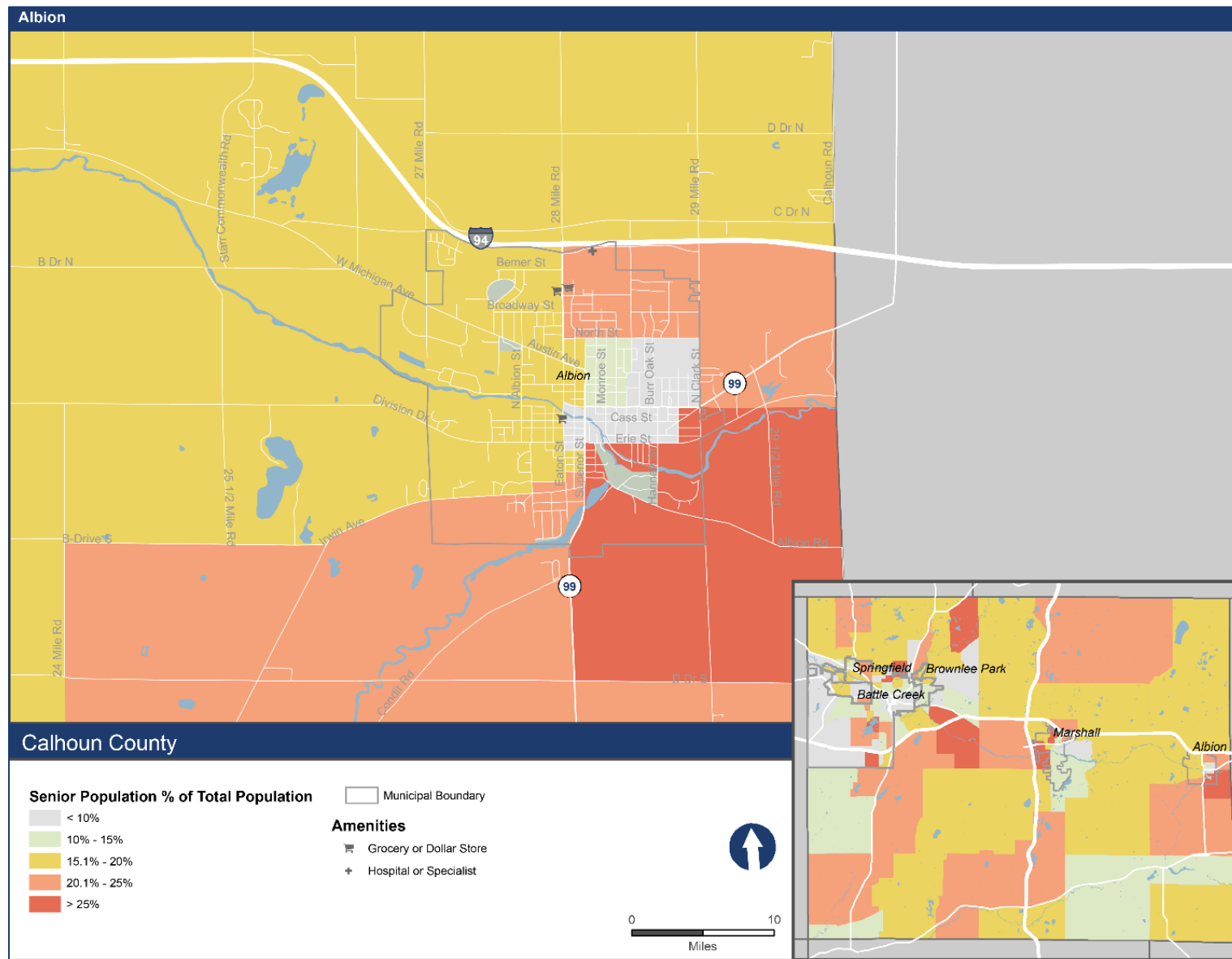


Figure 27: Zero-car Households Access to Amenities, Battle Creek

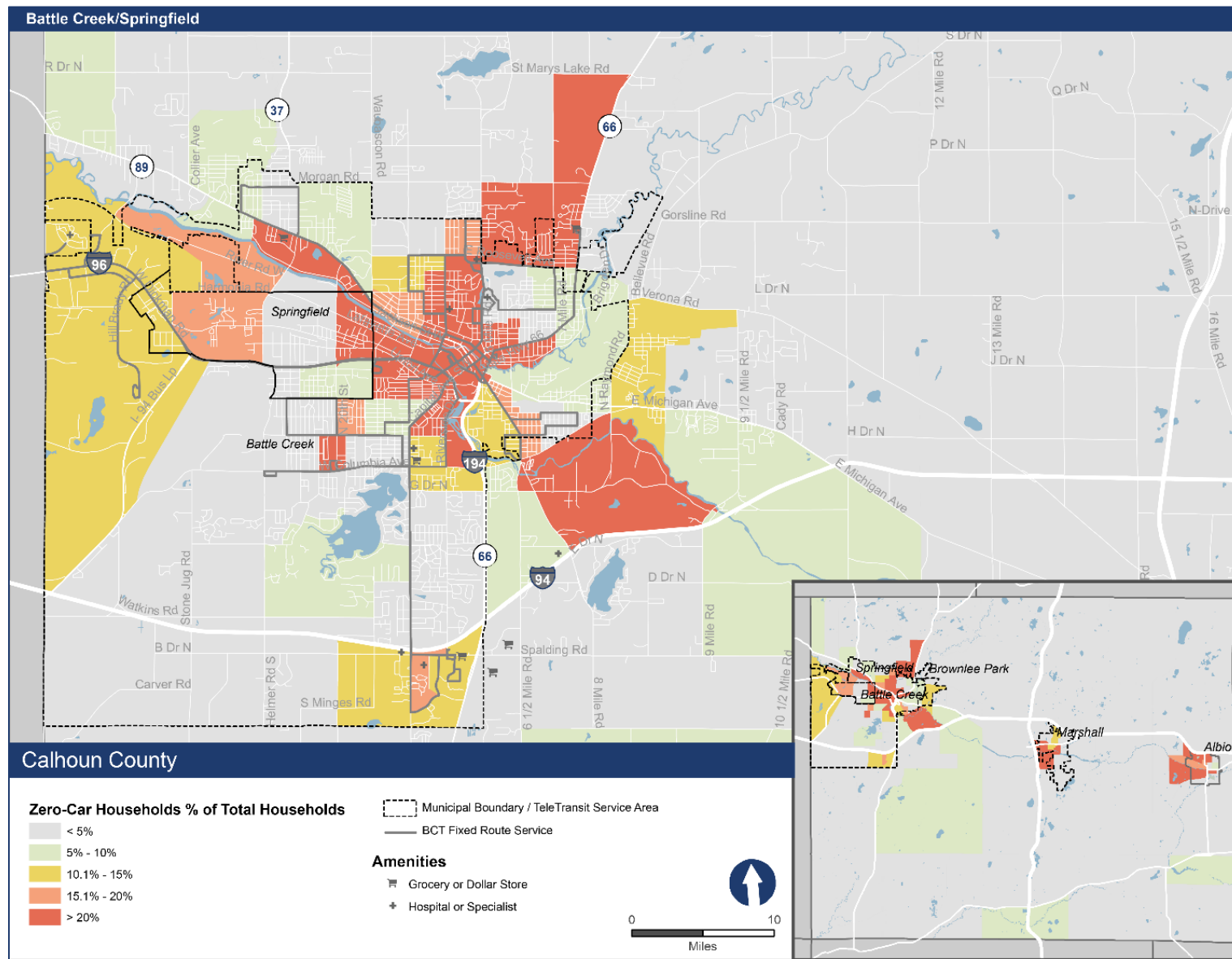


Figure 28: Zero-car Households Access to Amenities, Marshall

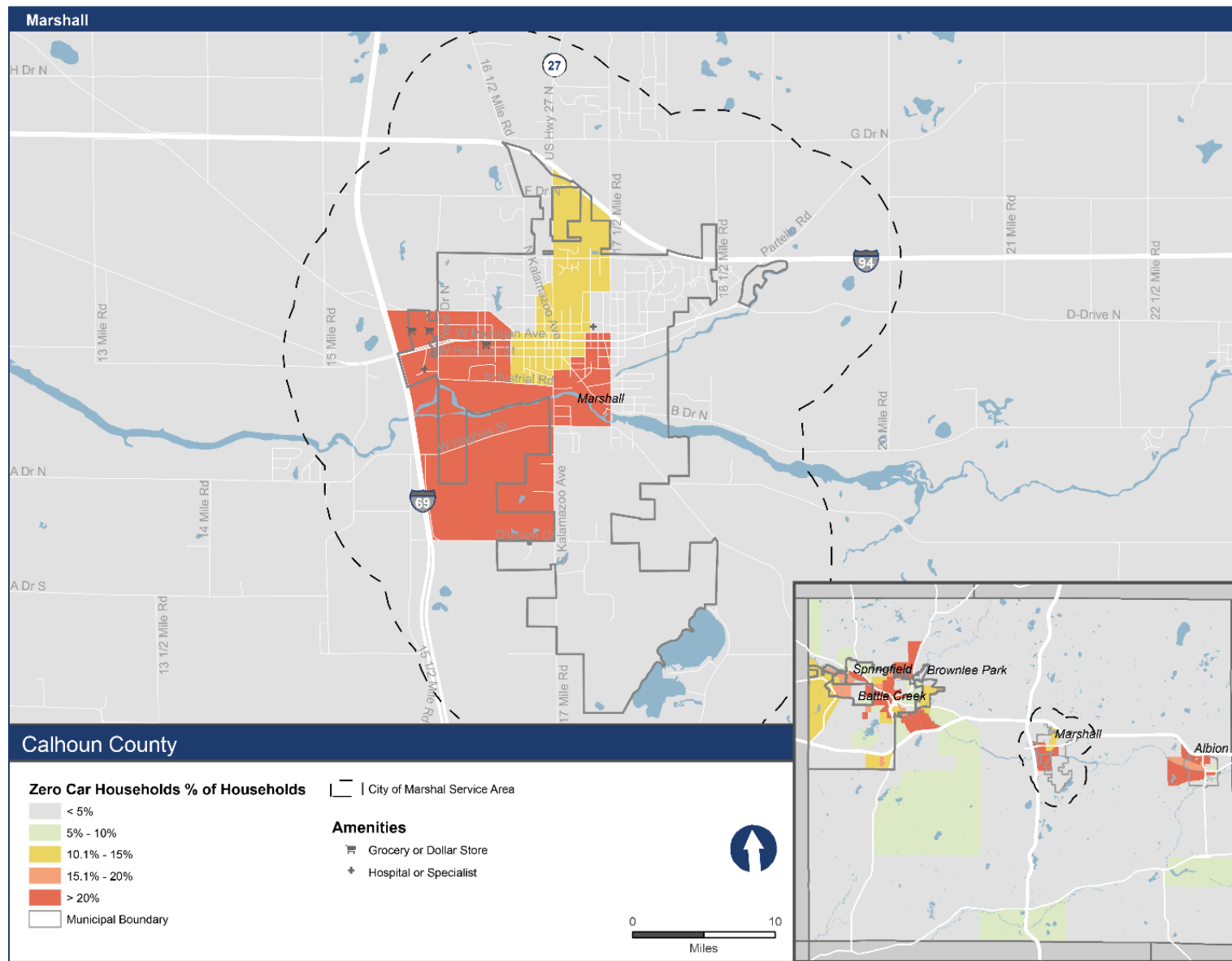
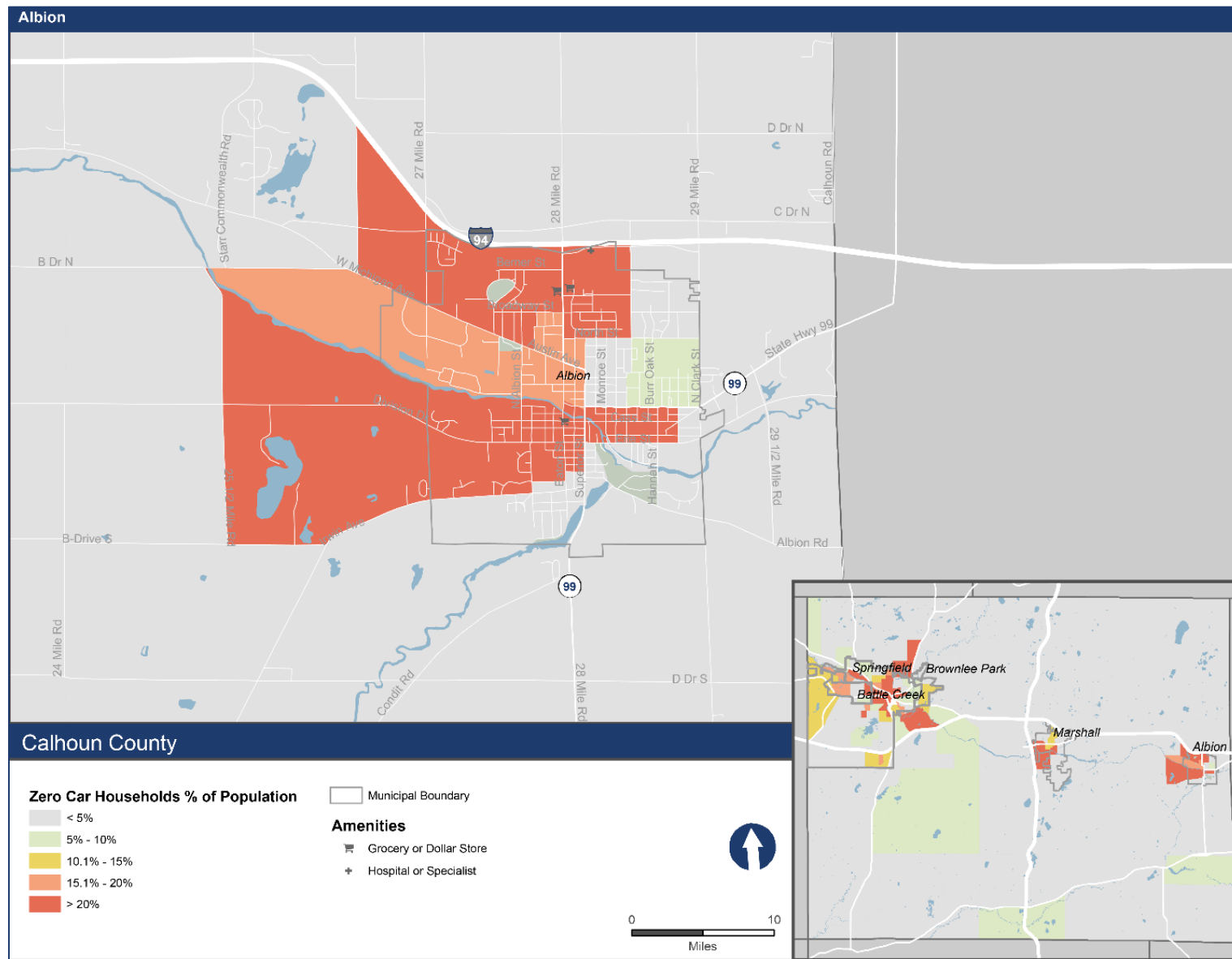


Figure 29: Zero-car Households Access to Amenities, Albion



4. CONCLUSIONS

The purpose of the existing conditions analysis is to identify the strengths, weaknesses, limitations, and opportunities that face the county in considering appropriate strategies for public transportation. The market analysis identifies areas for transit opportunities and areas where services could be optimized to better serve the population. The following are some key take-aways from this analysis.

- **There are many transit providers** filling in gaps for vulnerable populations across the county. There are over 17 providers for a population of just 134,000, including at least six that serve higher need populations (low-income, seniors, and the disabled). The amount of transportation support is a great feature of the community. There may be untapped opportunities yet to achieve efficiencies by working together to ensure clear roles in meeting County residents' public transportation needs.
- **Interjurisdictional trips are low but important** for the County. The County has most of its services and opportunities clustered in the three urban areas of Battle Creek, Marshall, and Albion, and many residents of these three communities both live and work there. However, residents living outside of these three areas often need to travel farther distances to have their needs met. There may be opportunities to offer scheduled services (for example, potential runs operating once or a few times per week) for residents in smaller towns to access shopping or other destinations in Battle Creek, Marshall, and/or Albion.
- **There are high volumes of vulnerable populations** including low-income, seniors and disabled persons, and people living in zero- and one-car households.¹⁹ These populations require more service and, in some cases, door-to-door service. Concentrations of these populations can be seen in the **Economy** section.
- **There are some areas of moderate and high transit potential outside of Battle Creek**, suggesting more scheduled transit services could thrive in places like Albion and Marshall. There are also areas around Battle Creek with high daily travel that do not have any bus routes.

¹⁹ There are around six percent more senior citizens in Calhoun county than the national average, and two percent more disabled persons. Sixty-nine percent of the population is under 150 percent of the poverty line in Calhoun County, while the national average is only 25 percent. Calhoun County has two percent fewer households with more than one car than the national average.