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SHAPING TRANSIT SERVICE THAT MOVES WITH OUR COMMUNITY

Capital Area Transportation Authority

COMPREHENSIVE OPERATIONAL ANALYSIS

EXISTING CONDITIONS ASSESSMENT

February 2026

DRIVING MOBILITY SOLUTIONS

AECOM

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Introduction

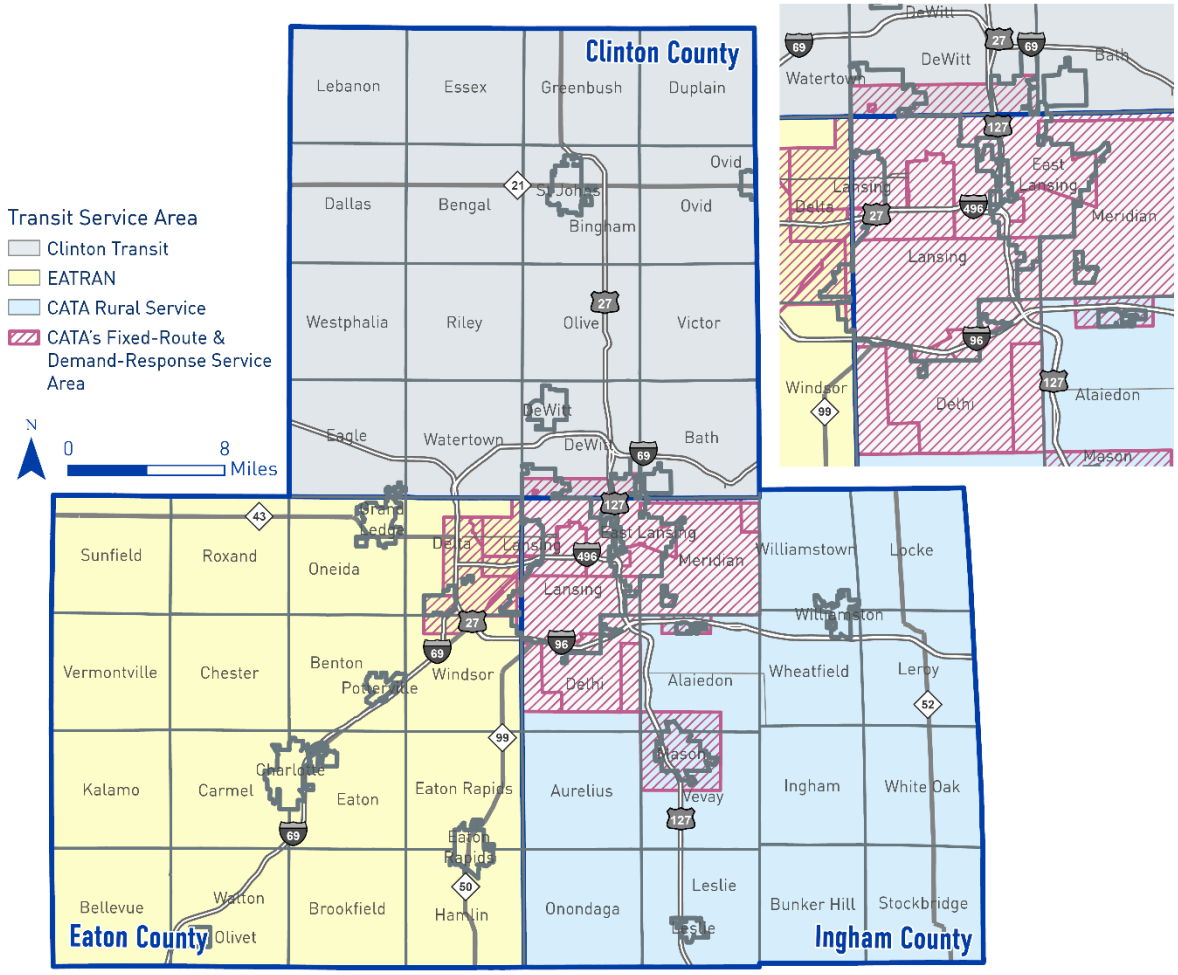
A Comprehensive Operational Analysis (COA) is a strategic planning process used by public transit agencies to periodically evaluate existing services, identify opportunities for improvement, and guide future service investments. As travel behavior, land use patterns, development trends, and community needs evolve over time, regular assessment of transit services is necessary to ensure that service design, resource allocation, and operating strategies remain responsive to current and emerging conditions. A COA provides a data-driven framework for evaluating how well transit services align with travel demand, rider needs, and available resources, and supports informed decision-making.

The Capital Area Transportation Authority (CATA) is the urban public transit provider serving Ingham County, with routes and services extending into portions of Eaton and Clinton Counties. CATA provides fixed-route bus service and a number of demand-response transportation services, including Americans with Disabilities Act (ADA) complementary paratransit service.

Study Area

The study area includes the Tri-County Region, comprising Ingham County, Eaton County, and Clinton County (**Figure 1**). This region contains a mix of urban, suburban, and rural communities anchored by Michigan's state capital in Lansing and MSU in East Lansing.

Figure 1: Study Area and Existing Transit Services, 2026

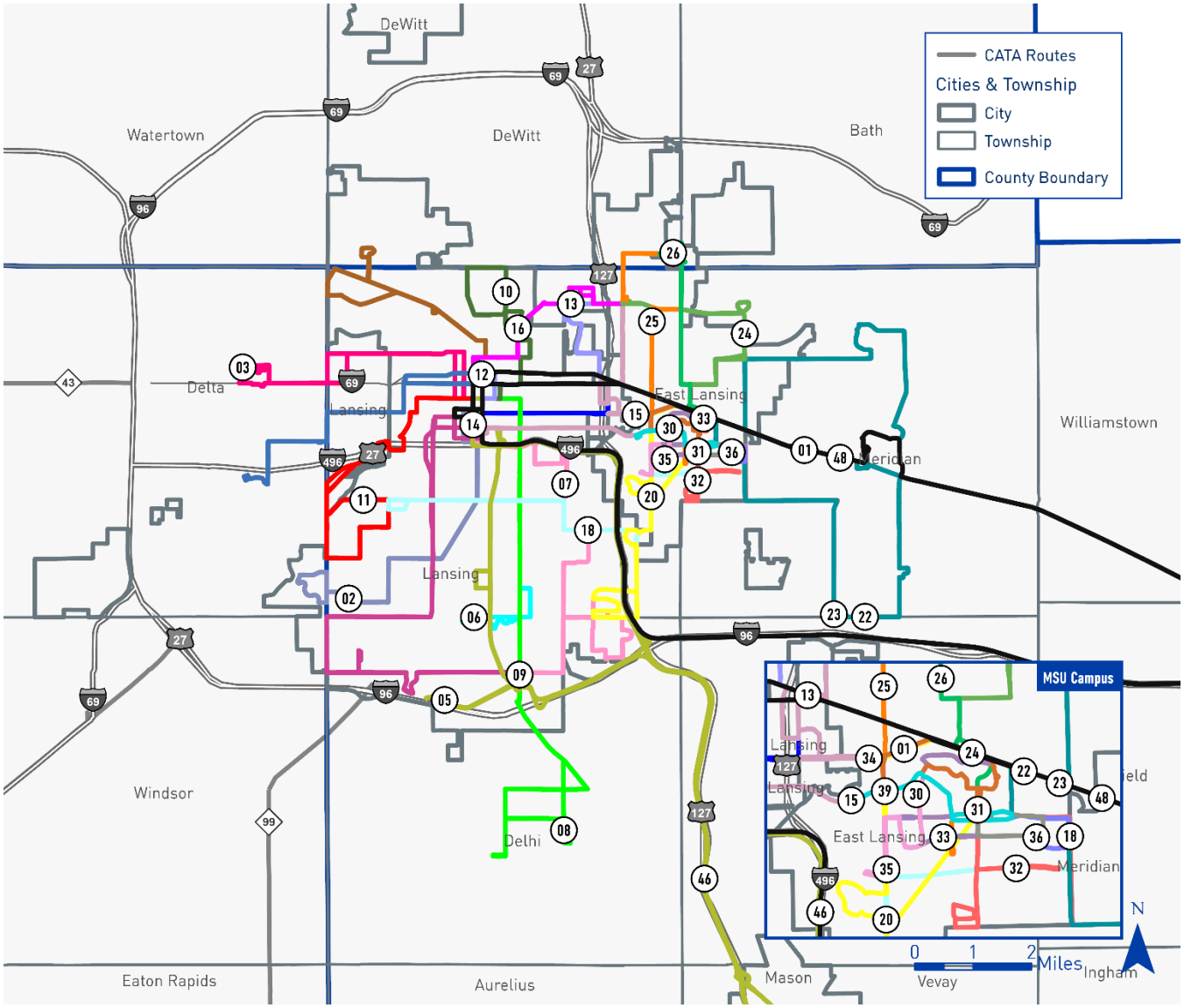


Source: CATA, October 2025.

Existing Transit Services

Transit service in the study area is provided by three agencies that together serve the Tri-County Region. CATA provides service in the Greater Lansing area, including the cities of Lansing and East Lansing, the MSU campus, and portions of all three counties. CATA operates fixed-route bus service, and demand-response services (**Figure 2**). EATRAN provides countywide demand-response service in Eaton County and Connector service between Delta Township and Charlotte. Prior to January 2026, EATRAN also provided Connector service between Delta Township and Grand Ledge that facilitated transfers to CATA's Route 3. Clinton Transit provides countywide demand-response service within Clinton County.

Figure 2: CATA's Fixed-Route Services, 2026



Source: CATA, January 2026.

Capital Area Transportation Authority

CATA provides fixed-route and demand-response public transit service in the Greater Lansing region. The agency's service area comprises 556 square miles in Ingham County and portions of Eaton and Clinton counties. CATA operates 32 fixed routes in the Greater Lansing area. Eight of these routes serve the MSU campus. From fiscal year (FY) 2023 to FY 2024, CATA's ridership grew from 7.6 million to over 8.8 million trips, a 16 percent increase.

There are quite a few different CATA demand-response services and specialized services. ADA complementary paratransit service is provided through **Spec-Tran**, a reservation-based, curb-to-curb program for riders with disabilities. Demand-response service is provided in Delhi Township, Mason, and Meridian Township via CATA's **Redi-Ride** services as well as in rural areas of Ingham County via CRS. The **Mason Connector and Williamston/Webberville Connector** operate scheduled service along defined corridors. Connector services provide transfers to CATA's fixed-route network and do not require reservations. **Shopping Bus** operates on weekdays and provides scheduled trips from senior housing complexes to major grocery stores and shopping centers. Reservations are not required. Destinations include Aldi, Frandor Shopping Center, Kroger stores, Meijer stores, Walmart locations, Target, and Meridian Mall.

CATA Rydz is an app-based, on-demand "microtransit" service that operates within designated service zones in Delta Township as well as Downtown Lansing and surrounding neighborhoods. The service is managed and branded by CATA, with the service and the technology platform developed and operated by Via Transportation Inc. The service also provides connections between MSU and the Capital Region International Airport and late-night connections between Delta Township and Lansing. In addition to the MSU fixed-routes, CATA operates the **Night Owl** and **Lot Link** services, which provide late-night and early-morning curb-to-curb service on the MSU campus and evening and weekend connections between campus parking lots and key campus destinations.

Governance Structure

CATA was formed in 1972 under Michigan Act 204 of 1967, the Metropolitan Transportation Authorities Act, which authorizes the creation of metropolitan transportation authorities and defines their powers and duties. Under Act 204, participating governmental units may provide financial support to the authority, including through voter-approved taxes levied for transit purposes. CATA's operating funding is supported by locally approved millages from participating jurisdictions, in addition to state and federal transit funding.

CATA's Board of Directors serves as the agency's governing body and establishes policy and strategic direction for the agency. The Board is composed of 12 members appointed by the political subdivisions that hold membership in the Authority and provide funding for CATA operations. This includes the cities of Lansing and East Lansing as well as the townships of

Delhi, Lansing, and Meridian, and representatives from Ingham County and MSU. CATA is also supported by a Local Advisory Council that advises the Board and staff on matters related to older adults, individuals with disabilities, and transit-dependent populations.

CATA's Executive Staff manages the day-to-day operations of the organization and its 430 employees. The organizational structure includes departments responsible for Operations/Customer Experience, Maintenance, Planning and Development, Finance, Marketing, Human Resources, and Information Technology (IT).

Budget and Funding

Operating Budget

CATA's operating budget over the six-year period from FY 2021 through FY 2026[1] shows the financial effects of the COVID-19 pandemic and federal pandemic relief funds. The early years show pandemic related revenue losses, followed by a recovery period that includes several years of improved revenue and expenditure alignment, with FY 2026 reflecting a change as federal pandemic relief funding was utilized (**Table 1**).

In FY 2021, operating revenues were $50.6 million, a decline from pre-pandemic levels, while operating expenditures were $53.1 million. This resulted in an operating deficit of $2.5 million. In FY 2022, operating revenues increased to $55.7 million, driven primarily by Coronavirus Aid, Relief, and Economic Security (CARES) Act funding while operating expenditures were $55.1 million. In FY 2023, revenues continued to increase to $60.4 million with the availability of funding through the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA) and the American Rescue Plan Act (ARPA). Operating expenditure increased to $62.1 million, reflecting the restoration of service levels along with rising operating costs, resulting in an operating deficit. Fiscal year 2024 showed improved alignment between revenues and expenditures. Revenues increased to $62.4 million, supported by federal funding through CRRSAA and the ARPA as well as millage and farebox revenue. Operating expenditure declined to $60.0 million, representing a decrease of $2.06 million from FY 2023 budgeted expenditures, while remaining higher than FY 2022 actual expenditures. In FY 2025, the operating revenues and expenditures both increased. Revenues were projected at $72.0 million, while operating expenditures were $69.9 million. This increase is primarily due to non-cash pension and other post-employment benefits liability adjustments, increased contracted service costs, and the implementation of microtransit service.

The FY 2026 budget reflects a shift away from a COVID-19 recovery period as revenues decline as federal relief funding runs out, while operating costs continue to increase. Operating revenues available to support operations are projected at $58.3 million, reflecting a decline from FY 2025 primarily due to reduced federal grants and a lower Michigan Department of

[1] CATA (2025), https://www.cata.org/Portals/0/Operating%20and%20Capital%20Budget%20FY%202025%20Tagged.pdf. CATA's fiscal year runs from October 1, through September 30.

Transportation (MDOT) operating reimbursement. The MDOT Local Bus Operating (LBO) Program can reimburse up to 50 percent of an urban transit agencies eligible operating expenditures, but 2021 through 2025 budgets include an average reimbursement rate of 30.6 percent.[2] In FYs 2026 and 2027, MDOT's budgeted reimbursement rates were 26.0 and 28.1, respectively, a reduction from the assumed 2025 rate of 29.2 percent.[3] This reduction occurs as operating expenses are increasing. CATA's FY 2026 operating expenditure is estimated to be $70.8 million. This represents an increase of about $0.9 million, or 1.2 percent compared to the FY 2025 budget. The increase in expenditures is primarily due to higher contracted service costs, including increased payments to Transdev to support higher Spec-Trans demand, additional contracted consulting services, and costs associated with newly launched overnight microtransit service. The State's FY 2026 budget did increase funding for this program, which is expected to result in increased reimbursement percentages.

Table 1: Operating Budget Summary, FY 2021 to FY 2026

Year	Revenues available for operations (M)	Total Operating Expenditures (M)	$ Change in Revenues (M)	% Change in Revenues	$ Change in Expenditures (M)	% Change in Expenditures	Operating Surplus/ (Deficit) (M)
2026	$58.3	$70.8	($13.6)	(19.0%)	$0.9	1.1%	($12.5)
2025	$72.0	$69.9	$9.6	15.0%	$9.9	16.0%	$2.1
2024	$62.4	$60.0	$1.9	3.3%	($2.1)	(3.3%)	$2.4
2023	$60.4	$62.1	$4.7	8.4%	$6.9	12.6%	($1.7)
2022	$55.7	$55.1	$1.3	2.3%	$0.7	1.3%	$0.6
2021	$50.6	$53.1	($0.3)	0.5%	($0.5)	(1.0%)	($2.5)

Sources: CATA, Operating and Budget Reports for FYs 2021 through 2026.

Capital Budget

The capital budgets for FY 2021 through FY 2026 support investment needed to maintain and replace transit assets to keep assets in a state of good repair. Capital funding during this period was primarily provided through federal sources, which accounted for 80 percent of total capital funding. The remaining 20 percent was supported by state and local funding. Federal funding primarily comprises Federal Transit Administration (FTA) formula funds through Section 5307 (Urbanized Area Formula Funds), Section 5339 (Bus and Bus Facilities Program), and Section 5310 (Enhanced Mobility of Seniors and Individuals with Disabilities) funding.

In FY 2021, capital spending focused primarily on bus replacements, paratransit vehicles, preventive maintenance, spare parts, and safety and security equipment. Total capital funding

[2] "Formula Distribution Percentage," MDOT, Accessed January 28, 2026, https://www.michigan.gov/mdot/travel/mobility/pub-transit/audit-and-accounting-information/formula-distribution-percentage.
[3] MDOT, "FY 2027 Application Instructions for Public Transit Programs, December 21, 2025, https://www.michigan.gov/mdot/-/media/Project/Websites/MDOT/Travel/Mobility/Public-Transportation/Applications/File/Application-Instructions-Public-Transit-Programs.pdf; MDOT, "FY 2026 Application Instructions for Public Transit Programs, December 21, 2024.

increased from $8.7 million in FY 2021 to $12.8 million in FY 2022, driven primarily by higher federal funding levels authorized in the Infrastructure Investment and Jobs Act (IIJA), which were utilized to support additional fixed-route bus and paratransit vehicle replacement, facility improvements, and IT investments. From FY 2023 through FY 2025, total capital funding remained relatively stable at approximately $11.0 million per year (**Table 2**). During these years, capital spending continued to support the replacement of large and small buses, paratransit and rural service vehicles, facility and terminal improvements, safety and security equipment, customer amenities such as shelters and pedestrian access improvements, accessibility enhancements, IT upgrades, and consulting services.

The FY 2026 capital program continues these investment priorities, with funding programmed for bus and van replacements, facility improvements, and safety and security equipment. Total capital funding in FY 2026 is $12.55 million, of which about $10.4 million is provided through federal grants and $2.51 million is supported through state and local funding.

Table 2: Capital Budget Summary, FY 2021 to FY 2026

Year	Total Capital Funding (M)	$ Change from Prior Year (M)	% Change from Prior Year (M)	Federal Funding (M)	State Funding (M)
2026	$12.5	$1.2	10.3%	$10.0	$2.5
2025	$11.4	$0.2	2.0%	$9.1	$2.3
2024	$11.2	($0.0)	(0.1%)	$8.9	$2.2
2023	$11.2	($1.6)	(12.8%)	$8.8	$2.3
2022	$12.8	$4.1	47.9%	$10.2	$2.6
2021	$8.7	-	-	$7.9	$1.9

Sources: CATA's Operating and Budget Report documents for fiscal years 2021 through 2026.

Funding Sources

CATA receives funding from local, state, and federal sources. Local revenues include farebox, contractual service agreements (e.g., CATA's agreement with MSU accounts for about $4.0 million in annual funding), and voter-approved property tax millages. CATA levies a voter-approved 3.007 mill property tax in the City of Lansing, City of East Lansing, Meridian Township, Lansing Township, and Delhi Township. Additionally, Ingham County levies a 0.5988 mill property tax to support transportation services operated by CATA.

State funding is provided through capital and operating assistance programs administered by MDOT's Office of Passenger Transportation. Federal funding supports capital programs through FTA programs, including Sections 5307, 5339, and 5310 while operating funding from federal COVID-19 relief programs was fully expended by the end of FY 2025.

Fleet and Facilities

As of FY 2025, CATA operates a fleet of 219 total vehicles across all revenue-service vehicle types. Fixed-route buses account for the highest vehicle usage within CATA's fleet. The 40-foot and 60-foot buses record the highest average annual mileage. Vehicles used for demand-

response and contracted services, including urban and rural cutaway vehicles and contracted minivans, have lower average service ages, and low average annual mileage. The fleet also includes other vehicle types, including Shopping Bus and vans used for contracted transit service. Additional rolling stock includes 37 urban cutaway vehicles with an average service age of three years. **Table 3** summarizes CATA's fleet inventory for FY 2025.

Table 3: Summary of Fleet Inventory, FY 2025

Bus Type	Count of Vehicle Category	Average of Actual Service Years	Average of FY 2025 Ending Miles	Sum of FY 2025 Miles	Average of FY 2025 Miles	Average of Seating Capacity
40'	96	8.8	333,239.6	3,990,456.0	41,567.3	35
60'	13	7.5	167,077.8	308,389.0	23,722.2	40
Cutaway - Urban	37	2.6	82,818.8	1,078,398.0	29,145.9	10
Cutaway - Rural	16	4.1	124,503.8	307,910.0	19,244.4	17
Minivans - Contracted	52	3.1	95,976.5	1,147,145.0	22,942.9	5
40' Electric Bus (Ordered)	1	0	N/A*	N/A*	N/A*	30
Gillig Shopping Bus	1	5	74,186	16,541	16,541	25
Ford MobilityTRANS - Gas (1091 -1093)	3	0	N/A*	N/A*	N/A*	5

Source: CATA, Fleet Inventory and End of Year 2025 Update. 2025.
** Not in use until after start of FY2026.*

CATA owns and/or operates four facilities, including two transit centers, a multimodal station, and an administration, maintenance, and storage facility. The **CATA Transportation Center (CTC)** is located in downtown Lansing and serves as CATA's primary passenger facility. The CTC is the terminal and transfer point for nearly half of agency's fixed routes. The facility supports passenger circulation and trip coordination for a large share of daily riders, and provides a connection to intercity bus services. The facility includes indoor seating, restrooms, maps and schedules, change and vending machines, and Amazon Hub Lockers.

The **MSU-CATA Transportation Center (MSU-CTC),** also known as Ramp 1, is located on the MSU campus and serves as the primary boarding and transfer facility for CATA routes serving the campus. The facility was developed through partnership between CATA and MSU and is open 24 hours a day, seven days a week throughout the year. Amenities at the MSU-CTC include indoor seating, restrooms, maps and schedules, vending machines, and an ATM.

The **Capital Area Multimodal Gateway**, operated by CATA, is located in East Lansing and replaced the former Amtrak station with modern, multimodal transportation facility. The Gateway provides access to intercity bus service and by Amtrak's Blue Water Line which serves Chicago, Illinois, and Port Huron, Michigan. CATA serves the Gateway year-round with Routes 18 and 20 and during the MSU fall and spring semesters with Route 35. The Gateway features waiting areas that are accessible 24 hours a day and a paid parking lot with capacity of 150 vehicles.

The **CATA Administrative and Maintenance Facility** serves as the agency's headquarters, housing executive and administrative offices, as well as the primary operations center for fleet storage and maintenance. The facility has the capacity to store approximately 80 to 85 fixed-route buses, 30 to 34 cutaway buses, and 20 to 25 non-revenue vehicles inside, as well as an additional 15 fixed-route buses outside. This facility accommodates CATA's entire fixed-route bus fleet, including 30, 40, and 60-foot buses as well as directly operated 25-foot paratransit buses and support vehicles.

Fixed-Route Services

Network Overview

CATA operates 32 fixed routes serving the Greater Lansing area, connecting neighborhoods to major educational institutions, residential areas, and commercial centers. Routes primarily serve the urbanized portion of Ingham County but also serve limited locations in Clinton and Eaton Counties. The eastern portion of the service area, covering East Lansing, Okemos, Haslett, and southeast Lansing, are served by six routes that also offer direct connections to the MSU campus. During weekday morning and evening peak periods, CATA's limited-stop express routes operate between outlying communities and downtown Lansing. These routes serve Mason, Williamston, and Webberville. CATA also provides dedicated routes for community events to accommodate annual events and festivals throughout the Greater Lansing area.

Fixed-route service generally begins as early as 5:10 AM, with select routes providing late-night service as late as 3:35 AM the following day at reduced frequencies. Many routes operate seven days per week, while some operate on weekday- or weekend-only schedules. Typical service frequencies range from 15 to 70 minutes on weekdays and 30 to 80 minutes on weekends, depending on the route and time of day.

On May 8, 2023, CATA extended Route 3 service into Delta Township in Eaton County, providing fixed-route transit between Lansing Mall and the Walmart located along Saginaw Highway. The extension was a three-year pilot program funded through MDOT grants. A transit millage proposal in Delta Township was put on the ballot in 2025 to potentially provide a sustainable long-term funding source for the route extension. The millage did not pass, and on January 12, 2026, the extended Delta Township portion of Route 3 was discontinued, and the route was truncated to its pre-extension service which operates to the West Saginaw Meijer located near the Lansing Mall.

CATA's Spartan Service provides fixed-route transit service to the MSU campus during the academic year. Spartan Service operates seven days a week during the fall and spring semester, typically from August to December and January to May. Eight dedicated fare-free campus routes include Routes 30, 31, 32, 33, 39 on weekdays, and 34, 35, 36 on weekends.

Fare Structure

CATA accepts several fare payment methods, including cash and coins on board and ride passes (both multi-ride and unlimited). In January 2026, CATA introduced its Pay Your Way campaign, which emphasizes flexibility in fare payment options available to riders. Newly introduced payment methods include contactless debit or credit cards, mobile wallets such as Apple or Google Pay, and ticket and account management in the Transit app or CATA Mobile Pay app. CATA anticipates implementing reloadable prepaid fare cards that will be accepted on all services except Shopping Bus and CATA Rydz.

Regular one-way fares for fixed-route service are $1.25, with a discounted fare of $0.60 for eligible riders (**Table 4**). Veterans with valid ID ride fare-free on all CATA services, and discount fares apply to Medicare cardholders, seniors age 62 and older, persons with disabilities, and college students with valid qualifying ID cards. MSU Routes 30-39 operate fare-free. Additionally, children under 42 inches tall ride free when accompanied by an adult. CATA offers free transfers for equal or lower-fare services and requires riders to pay the difference for higher-fare transfers. Riders paying in cash may request a free transfer card valid for two hours and for up to two uses.

Table 4: Summary of Fare Prices, 2026

Service Type	Regular one-way fare	Discounted one-way fare[†]
Fixed Route*	$1.25	$0.60 Free MSU Routes 30-39

** Children under 42 inches tall ride free when accompanied by an adult.*

[†] Discounted fares apply to Medicare cardholders, seniors age 62 and older, persons with disabilities, and college students with valid qualifying ID cards.

System-Level Performance

Key indicators for the performance of CATA's fixed-route system as a whole are shown in **Table 5**. The fixed-route system operates more cost-effectively during the in-school time period, as shown in by operating cost per passenger, and also operates more cost-effectively on weekends than on weekdays, likely due to the vast difference in service levels between these different time periods. In terms of service efficiency, which is measured by operating cost per revenue hour, fixed-route operations are consistent across all time periods. The fixed-route system's service effectiveness, measured by passengers per revenue hour, is greatest on weekdays during the in-school time period—about double the service-effectiveness on out-of-school weekdays. Finally, market penetration, which is measured by the total number of passengers divided by the population living within a half mile of a bus stop, is greatest on in-school weekdays—at least three times the market penetration of any other time period.

Table 5: Fixed-Route System-Level Performance Indicators, 2025

Day of the Week	Operating Cost per Passenger	Operating Cost per Revenue Hour	Passengers per Revenue Hour	Passengers per 1,000 Population*
June 2025				
Weekday	$17.49	$125.21	15.5	48
Saturday	$9.80	$125.56	18.2	32
Sunday	$10.14	$125.14	18.2	18
October 2025				
Weekday	$14.74	$125.35	31.8	144
Saturday	$9.64	$125.37	22.2	41
Sunday	$9.00	$124.13	24.2	26

Source: CATA Planning Department.
**Based on population living within a half mile of a bus stop.*

Demand-Response Services

Network Overview

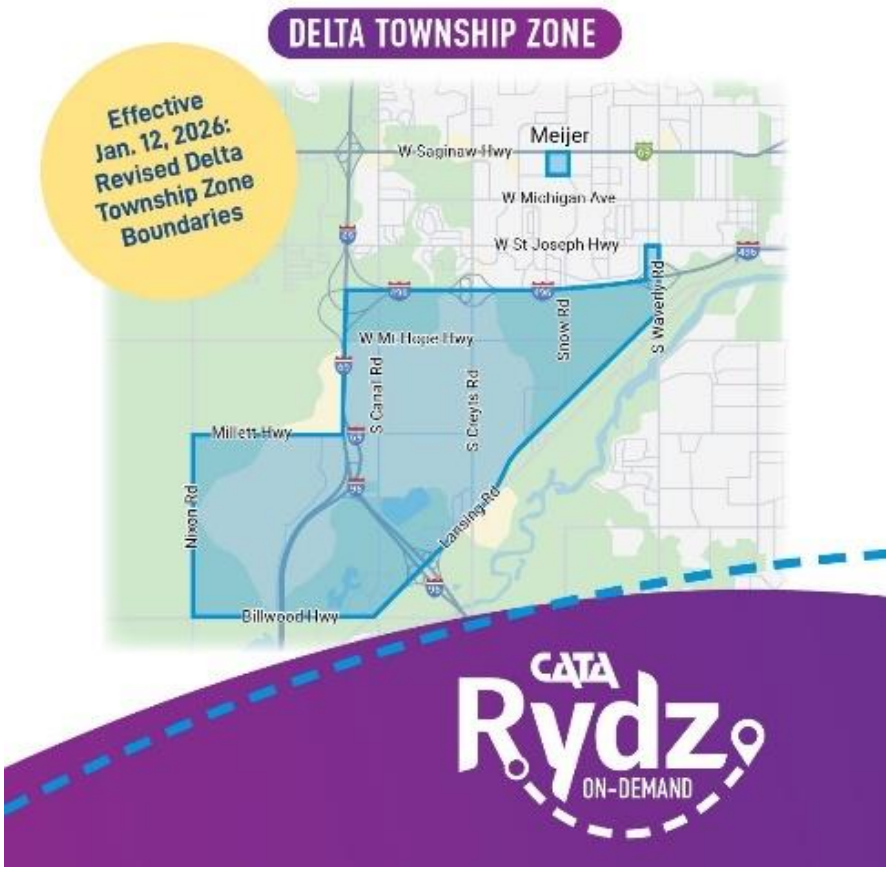
CATA operates a range of demand-response services including the Spec-Tran, Redi-Ride, Shopping Bus, Connector, CRS, CATA Rydz Microtransit, MSU Lot Link, and MSU Night Owl (**Table 6**). These services are generally provided using small buses or vans operating scheduled or reservation-based service.

CATA demand-response services in Delta Township are facing changes due to the previously mentioned retraction of Route 3 fixed-route service in the area. Effective January 12, 2026, Spec-Tran paratransit service no longer operates between Creyts Road and Nixon road, and service now extends as far west as Kroger on West Saginaw. The CATA Rydz service zone in Delta Township north of I-496 and west of I-69 between Millet Highway and Willow Highway was eliminated beginning January 12, 2026, as shown in **Figure 3**. Lastly, Connector service operated by EATRAN between Marketplace Boulevard and downtown Grand Ledge was also discontinued in January 2026. EATRAN does provide demand-response service to Delta Township.

Table 6: Demand-Response Services

Demand-Response Service	Service Model	Operated By
CATA Rural Service	Contracted	Transdev
CATA Rydz		
CATA Rydz Airport/MSU Prebook	Contracted	Via
CATA Rydz Delta Township On-Demand	Contracted	Via
CATA Rydz Lansing On-Demand	Contracted	Via
CATA Rydz Late-Night Prebook	Contracted	Via
Connector Service	Contracted	Transdev
MSU Night Owl	Contracted	Transdev
MSU Lot Link	Contracted	Transdev
Redi-Ride		
Delhi Redi-Ride	Directly operated	CATA
Mason Redi-Ride	Contracted	Transdev
Meridian Redi-Ride	Directly operated	CATA
Shopping Bus	Contracted	Transdev
Spec-Tran	Partially directly operated, partially contracted	CATA and Transdev

Figure 3: CATA Rydz New Delta Township Service Area

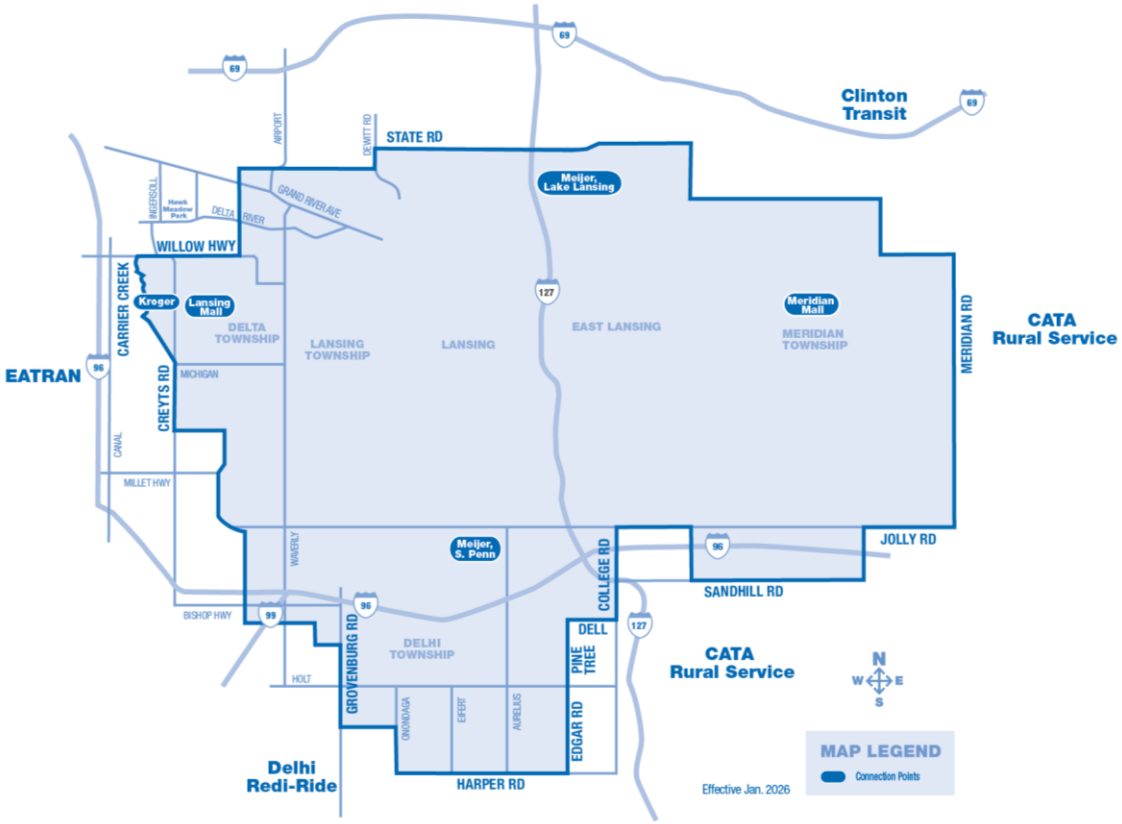


Source: CATA.

Services

Spec-Tran is CATA's ADA complementary paratransit service for individuals who are unable to use the fixed-route system, providing service to areas within three-quarters of a mile of a fixed route during the same hours as fixed-route service. Spec-Tran is available throughout Lansing and East Lansing and in Delhi, Delta, Lansing, and Meridian Townships (**Figure 4**). Spec-Tran operates as an advance-reservation, curb-to-curb service using lift-equipped vehicles and low-floor vans. Service is available seven days a week during the same hours as fixed-route service. Some Spec-Tran service is operated directly by CATA, while some service is contracted through Transdev.

Figure 4: Spec-Tran Service Area



Source: CATA.

Redi-Ride is an advance-reservation, curb-to-curb service operating Monday through Saturday in Meridian Township, Delhi Township, and the City of Mason with different operating hours across the different municipalities. The Meridian and Delhi Township Redi-Ride services are operated directly by CATA while the Mason Redi-Ride service is contracted through Transdev. The services provide local mobility within these communities and connections to fixed-route service and select destinations outside township boundaries (**Figure 5**, **Figure 6**, and **Figure 7**). While there are no eligibility requirements to use Redi-Ride, service is not provided to schools where school bus transportation is available to students.

Figure 5: Meridian Redi-Ride Service Area

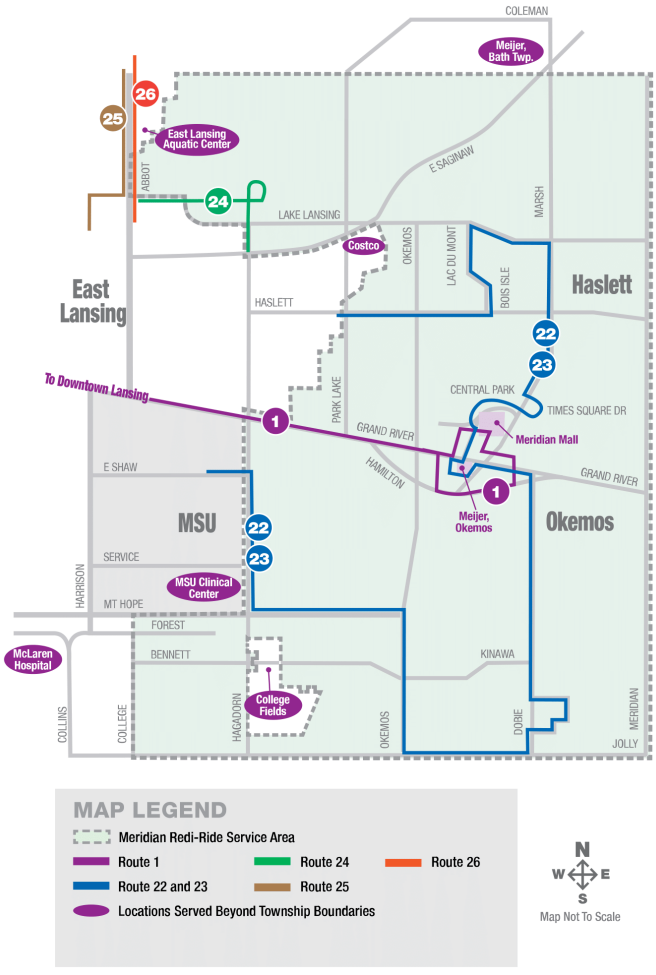


Figure 6: Delhi Redi-Ride Service Area

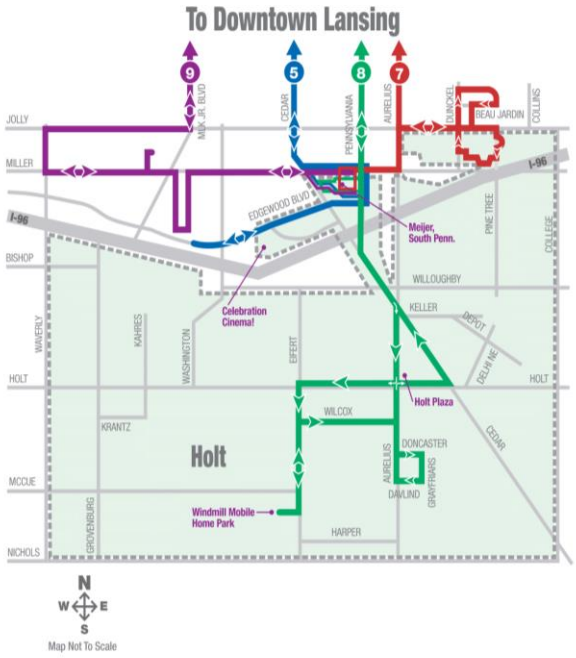
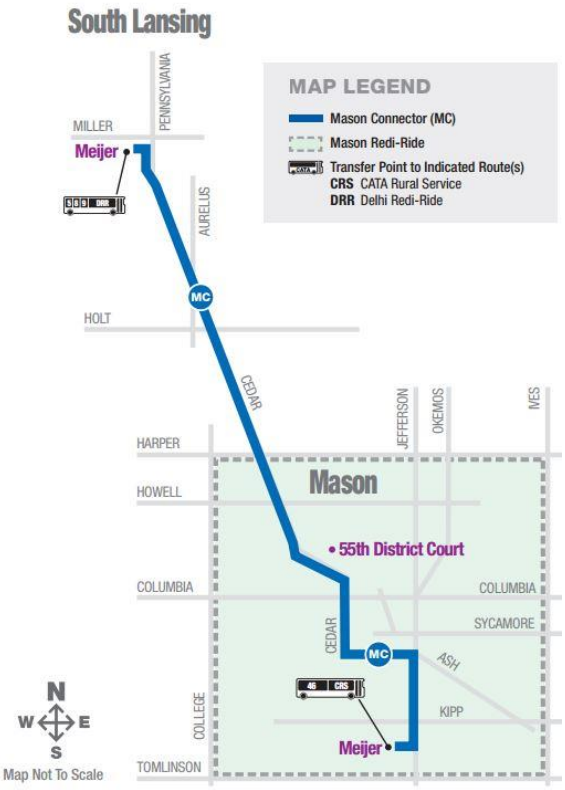


Figure 7: Mason Redi-Ride Service Area

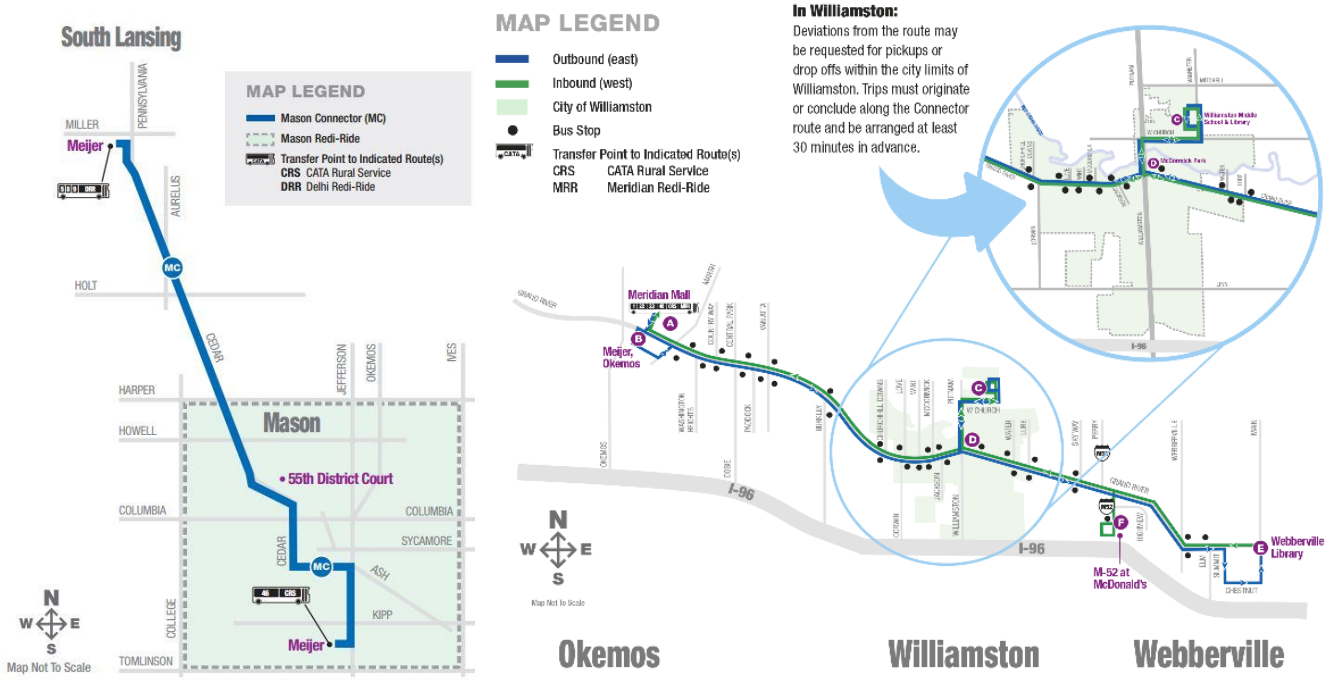


Source: CATA.

The Shopping Bus is a regularly scheduled weekday service that connects senior housing complexes to grocery stores and shopping centers with specific departure times from each location served. Service is contracted through Transdev and provided on designated days for specific housing complexes, with shopping destinations varying by location. Reservations are not required.

Connector service provides regularly scheduled, small bus transit linking outlying communities to CATA's fixed-route network. CATA contracts with Transdev to operate Connector routes serving Mason and Williamston/Webberville (**Figure 8**). The Mason Connector operates Monday through Friday from 7:15 AM to 6:50 PM and Saturday from 7:45 AM to 4:30 PM, while the Williamston/Webberville Connector operates Monday through Friday from 7:15 AM to 6:15 PM and Saturday from 7:20 AM to 5:00 PM. Prior to January 12, 2026, EATRAN operated Grand Ledge and Charlotte Connector services with connections between EATRAN and CATA services at Walmart on West Saginaw Highway. As of January 12, the Grand Ledge Connector was discontinued, and the Charlotte Connector service was reduced to a limited number of trips per day on weekdays.

Figure 8: Mason and Williamston/Webberville Connector Service Areas

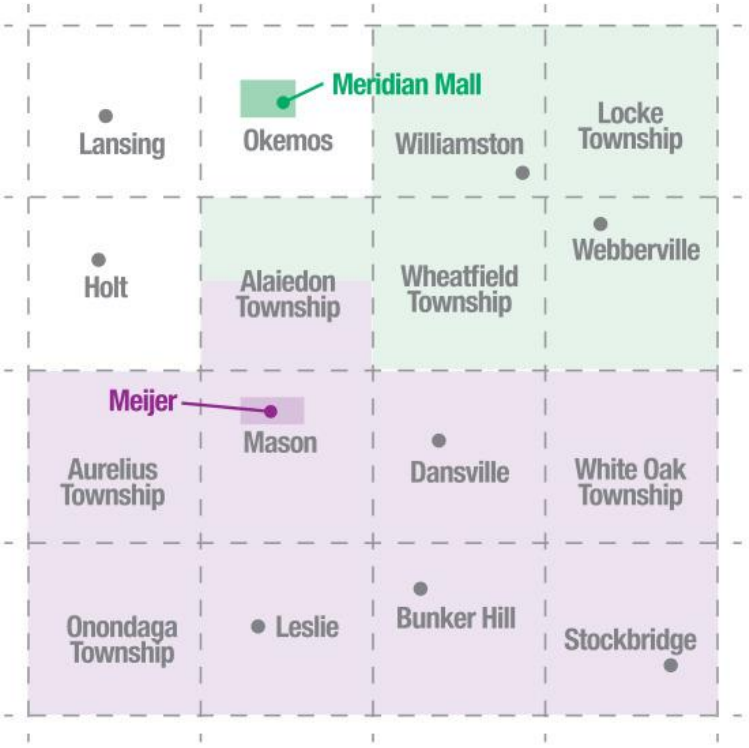


Source: CATA.

CATA Rural Service (CRS) is a demand-response service for residents in rural areas of Ingham County. Service operates on weekdays between 7:00 AM and 6:00 PM and requires advance scheduling at a minimum of one day prior to the trip. Ingham County contracts with CATA to provide this service, and CATA contracts with Transdev to operate the service. CRS also connects riders to fixed-route bus services. Generally, the service connects riders in the

southern portion of the county to Meijer in Mason and riders in the northern portion to Meridian Mall in Okemos, where transfers to other CATA services are available (**Figure 9**).

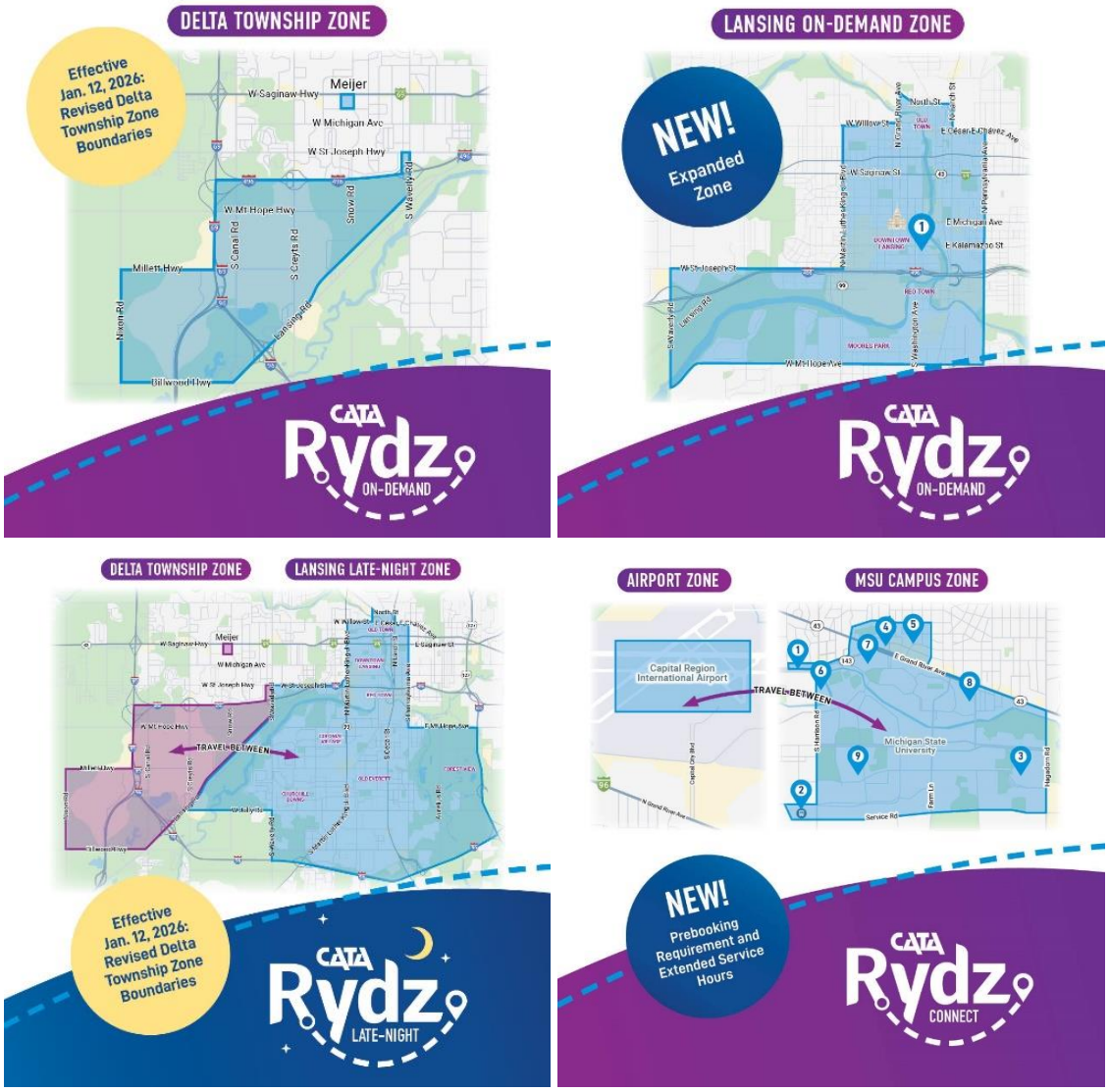
Figure 9: CATA Rural Service Area



Source: CATA.

CATA Rydz is a shared-ride microtransit service that provides curb-to-curb transportation within three zones: a Delta Township Zone, Lansing Zone, and an MSU/Airport service that provides rides between an MSU Zone and an Airport Zone. All three zones are contracted services operated by Via. There is also a late-night CATA Rydz service that provides rides between an expanded Lansing Zone and the Delta Township Zone (**Figure 10**). Rides can be booked via the CATA Rydz smartphone app or through Transit app. Service in the Delta Township and Lansing Zones are available on weekdays from 5:30 AM to 8:00 PM and on weekends between 9:00 AM and 8:00 PM. MSU/Airport service is available daily from 4:00 AM to 1:00 AM, and Late-Night service is available daily from 8:00 PM to 11:30 PM, with additional service on weekday mornings from 5:30 AM to 9:00 AM. The CATA Rydz service is funded through an MDOT Service Initiatives grant and through MDOT's Equitable Mobility Challenge. Similarly to other services in Delta Township, in January 2026, the Delta Township Zone was reduced in size due to a lack in sustainable funding.

Figure 10: CATA Rydz Service Areas



Source: CATA.

In addition to fixed-route service on the MSU campus, CATA contracts with Transdev to operate two demand-response services: MSU Lot Link and MSU Night Owl. MSU Lot Link offers curb-to-curb campus service between designated parking lots and other campus locations during the evenings and weekends, while MSU Night Owl provides late night and early morning curb-to-curb campus trips.

Fare Structure

Fares for CATA's demand-response services vary by service type, geography, and trip length, as summarized in **Table 7**. Discounted fares are available for all services except Shopping Bus and Spec-Tran. Shopping Bus and Spec-Tran operate as flat-fare services, with Shopping Bus charging a $2.00 round trip fare, and Spec-Tran $2.50 one-way. CRS fares are distance-based,

with a higher fare of $3.25 applying to trips over ten miles and $2.25 for trips up to 10 miles. Redi-Ride fares differ by service region, with service in Delhi Township and Mason costing $1.25 and in Meridian Township, $2.50. Connector services are also zone-based, with Mason and Williamston/Webberville services costing $2.25. EATRAN's Charlotte Connector is $2.00.

Table 7: Summary of Fare Prices

Service Type	Regular One-way Fare	Discounted One-way Fare‡
MSU Lot Link	$1.25	$0.60
MSU Night Owl	$1.25	$0.60
Shopping Bus*†	N/A	N/A
CATA Rural Service*	$2.25 up to 10 miles $3.25 over 10 miles	$1.00 up to 10 miles $1.50 over 10 miles
Redi-Ride*	$1.25 Delhi Township and Mason $2.50 Meridian Township	$0.60 Delhi Township and Mason $1.25 Meridian Township
Connector*	$2.25 Mason and Williamston/Webberville $2.00 Grand Ledge and Charlotte	$1.00 Mason and Williamston/Webberville $1.00 Charlotte
Spec-Tran*	$2.50 $2.50 Token (blue)	N/A

** Children under 42 inches tall ride free when accompanied by an adult.*
† Shopping Bus regular two-way fare is $2.00.
‡ Discounted fares apply to Medicare cardholders, seniors age 62 and older, people with disabilities, and college students with valid qualifying ID cards.

System-Level Performance

Key indicators for the performance of CATA's demand-response system as a whole are shown in **Table 8**. During the in-school time period, the demand-response system operates significantly more cost-effectively (operating costs per passenger) on weekdays than on weekends. In contrast, the demand-response system operates most cost-effectively on Saturdays during the out-of-school time period. In terms of service efficiency, which is measured by operating cost per revenue hour, demand-response operations are most efficient on Sundays during the in-school time period followed closely by weekdays also during the in-school time period. Conversely, service efficiency is lowest on Saturdays during the out-of-school time period.

The demand-response system's service effectiveness, measured by passengers per revenue hour, is greatest on Saturdays during both the in-school and out-of-school time periods. Market penetration, measured by the total number of passengers divided by the population living within a demand-response service area (excluding the Williamston and Mason Connectors), is greatest on in-school Saturdays. Market penetration is much lower on both in-school and out-of-school Sundays—less than one-third of the market penetration on weekdays.

In general, demand-response service transports many fewer people per amount of service provided than fixed-route service and has a much lower market penetration, leading to much higher operating costs per passenger, as shown in comparison between **Table 5** and **Table 8**.

However, demand-response service often meets the mobility needs of those who are unable to use the fixed-route system.

Table 8: Demand Response System-Level Performance Indicators, 2025

Day of the Week	Operating Cost per Passenger	Operating Cost per Revenue Hour	Passengers per Revenue Hour	Passengers per 1,000 Population*
June 2025 (Out of School Period)				
Weekday	$101.61	$87.26	1.7	5.5
Saturday	$93.69	$103.15	2.4	2.8
Sunday	$121.59	$82.13	2.1	1.8
October 2025 (In School Period)				
Weekday	$75.73	$69.11	1.9	6.2
Saturday	$159.88	$73.38	2.1	7.2
Sunday	$114.26	$62.53	1.8	1.9

Source: CATA Planning Department.
**Based on population living within a demand-response service area (excludes the Williamston and Mason Connectors).*

Other Regional Services

Eaton Area Transportation Authority (EATRAN)

EATRAN is the public transit provider in Eaton County and operates countywide demand-response service. Service is provided on a door-to-door basis and is available to everyone, including seniors and individuals with disabilities. Service is available for local travel within the county. Demand-response service operates on weekdays, with service hours varying by location and trip purpose, and all trips must be scheduled in advance. In FY 2024, EATRAN provided 82,156 rides.[4]

EATRAN previously operated fixed-route Connector service linking Eaton County communities to CATA Route 3 in Delta Township. The Grand Ledge Connector (Route 81) was discontinued in January 2026. The Charlotte Connector (Route 80) continues to operate, providing service between Delta Township and Charlotte, allowing riders to transfer to CATA fixed-route service in Delta Township. The Connector operates Monday through Friday from 8:00 AM to 6:50 PM with no prior reservations required. There is a flat fare of $2.00, with reduced fares for seniors and people with disabilities, and free for veterans.

Clinton Transit

Clinton Transit provides scheduled, curb-to-curb demand-response service for all Clinton County residents and does not operate fixed routes. In FY 2024, Clinton Transit provided 66,138

[4] U.S. Department of Transportation Federal Transit Administration National Transit Database. "2024 Annual Agency Profile - Eaton County Transportation Authority." https://www.transit.dot.gov/sites/fta.dot.gov/files/transit_agency_profile_doc/2024/50260.pdf.

rides.[5] Clinton Transit operates from Monday to Friday from 6:00 AM to 9:00 PM., and Saturday, 8:00 AM to 6:00 PM. Dispatch hours for scheduling are Monday to Friday, 7:00 AM to 6:00 PM, and Saturday 8:30 AM to 12:30 PM. Riders can schedule a pickup with a minimum of two hours advance notice. Rides can be scheduled with a dispatcher available by phone, as well as through a mobile app. The fare structure includes different rates based on pick-up and drop-off zones with regular and discounted fares for seniors, veterans, youth, and riders with disabilities. Clinton Transit offers a Community Connections program that allows riders to schedule trips outside standard hours or extended geographic areas such as neighboring counties, by contacting dispatch.

Review of Previous Plans

Understanding what has been recommended for CATA's services in the past informs why service operates the way it does today and what future recommendations may or may not be feasible or effective. Therefore, recommendations from CATA's previous service plans are provided in this section.

Previous COA (2008)

CATA last completed a COA in 2008 and implemented or partially implemented the majority of the recommendations from that plan (**Figure 9**). Recommendations that CATA implemented include adding additional Sunday evening service span to multiple routes, realigning multiple routes to serve Lansing Community College's (LCC) main campus downtown, creating new express services between downtown Lansing and the south and east side, and expanding service to Delta Township. Recommendations that were not implemented include adjustments to the Route 1 schedule that would have added limited-stop service during peak hours, adding route connections to Forest Road, adding out-of-school evening service to Route 26, and adding route connections to Eastwood Towne Center.

[5] U.S. Department of Transportation Federal Transit Administration National Transit Database. "2024 Annual Agency Profile - Clinton Area Transit System." https://www.transit.dot.gov/sites/fta.dot.gov/files/transit_agency_profile_doc/2024/50314.pdf.

Table 9: Status of 2008 COA Recommendations, 2025

Implementation Year	Route	Route Name	Recommendation	December 2025 Status
2008	1	Downtown Lansing - Meridian Mall	Add 5 minutes of run time between 11:00 AM and 2:00 PM.	Implemented
2008	1	Downtown Lansing - Meridian Mall	Add 10 minutes of recovery time at the CTC.	Not implemented
2008	1	Downtown Lansing - Meridian Mall	Go to 9-minute frequency from 2:00 PM to 5:00 PM to address loads.	Not implemented
2008	1	Downtown Lansing - Meridian Mall	Add 2 hours of Sunday evening span.	Partially implemented
2008	2	South Washington - Pleasant Grove	Add 2 hours of Sunday evening span.	Partially implemented
2008	3	Willow - Lansing Mall	Add 2 hours of Sunday evening span.	Partially implemented
2008	3	Willow - Lansing Mall	Realign to serve LCC in eastbound trip.	Implemented
2008	3	Willow - Lansing Mall	Add 20-minute service between 2:10 PM and 6:10 PM.	Implemented
2008	5	South Cedar - Edgewood	Add 2 hours of Sunday evening span.	Partially implemented
2008	8	Pennsylvania - Holt	Add 2 hours of Sunday evening span.	Partially implemented
2008	9	South Martin Luther King Jr Blvd - Miller	Add 2 hours of Sunday evening span.	Partially implemented
2008	7	Aurelius	Adjust routing to serve Forest Road.	Not implemented
2008	11	Waverly - Colonial Village	Realign to serve LCC in eastbound trip.	Implemented
2008	12	West Michigan - Waverly	Realign to serve LCC in eastbound trip.	Implemented
2008	12	West Michigan - Waverly	Shift weekday 9:55 PM departure to 10:15 PM to meet last pulse.	Implemented

Implementation Year	Route	Route Name	Recommendation	December 2025 Status
2008	26	Abbott - Chandler	Add additional evening service Monday to Saturday to base schedule.	Not implemented
2008	Spec-Tran		Add 2 hours of Spec-Tran service (3 vehicles) on Sundays.	Implemented
2009	25	North Harrison	Interline Routes 20 and 25 and extend to S Penn Meijer/ Eastwood.	Not implemented
2009	21	University Village - Spartan Village - Forest Road	New Route - Forest, Spartan Village, E Lan, CTC Route.	Not implemented
2009	31	Brody - Hubbard	Delete University Village Segment (no cost implications).	Not implemented
2010	1	Downtown Lansing - Meridian Mall	Peak limited stop Route 1 in AM/PM peak.	Not implemented
2011	16	W. Lake Lansing Rd - Eastwood Towne Center	30-minute weekday day service on Route 16.	Implemented
2011	S Lan Exp	South Lansing Express	Create 3 peak directional trips between Lansing & S Penn Meijer.	Implemented as Route 46: Mason, Limited
2011	N Lan Exp	North Lansing Express	Create 3 peak directional trips between Lansing & Eastwood TC.	Not implemented
2011	E Lan Exp	East Lansing Express	Create 2 peak directional trips between Lansing & Meridian Mall.	Implemented as Route 48: Williamston - Webberville, Limited
2012 (Delta Twp)	3	Willow - Lansing Mall	Extend to Wal-Mart on Saginaw.	Implemented*
2012 (Delta Twp)	12	West Michigan - Waverly	Extend to LCC West and Lansing Mall.	Partially implemented

Implementation Year	Route	Route Name	Recommendation	December 2025 Status
2012 (Delta Twp)	Redi-Ride		Create Delta Township Redi-Ride from 9:00 AM to 5:00 PM.	Initially implemented as a Redi-Ride service, discontinued prior to the COVID-19 pandemic, then re-implemented as a CATA Rydz zone*
2012 (Delta Twp)	10/14	North Lansing - Turner/North Grand River - Airport	Stop 12 interline. 30-minute weekday/45-minute evening and weekend headways.	Interlining not implemented, headways implemented
2012 (Delta Twp)	Spec-Tran		Add one vehicle to cover the areas served by Routes 3 and 12.	Implemented

**These service changes were implemented as of December 2025 but were discontinued or reduced in January 2026.*

Return-to-Service Framework (2020)

In 2020, CATA explored a "Return-to-Service Framework" in the wake of the COVID-19 pandemic. The framework identified four scenarios that would reduce CATA's operations budget by 25 percent to meet financial constraints while maintaining service for core riders:

- **Scenario A – Maximize Productivity and Social Distancing:** This scenario would reduce the level of service on routes with the lowest post-pandemic productivity. The result would be maintaining a higher level of service on routes that were more likely to experience crowding and reducing service primarily in East Lansing (where MSU was not holding any in-person classes or activities).
- **Scenario B – Reduce Equitably by Geography/Category:** This scenario would reduce the level of service by route category (core routes, secondary routes, MSU routes, and special/coverage routes), scaling back the lowest productivity routes within each category the furthest, with the result of preserving more service in East Lansing and on special or coverage routes.
- **Scenario C – Maximize Coverage:** This scenario would reduce service on all routes to a base level of service, resulting in service reductions mostly during weekdays and in Lansing.
- **Scenario D – Reduce/Eliminate Weekend Service:** This scenario would reduce or eliminate weekend service on all routes, then make further cuts to the lowest productivity weekday routes, resulting in reduced service primarily in East Lansing (where MSU has not holding any in-person classes or activities).

The framework also provided strategies for:

- COVID-19 safety policies and communications.
- Expanding demand-response service options, including fleet sharing between paratransit and microtransit services, services catered to essential healthcare workers, vaccination transportation, and expanding the Shopping Bus service.
- Increasing regional access to work, including extending routes to key employers and/or providing flexible microtransit service, especially to portions of Delta Township.
- Establishing service standards (**Table 10** and **Table 11**).

Ultimately, CATA worked to maintain as much service as possible while right-sizing for the post-pandemic workforce by implementing a reduction of one to two buses per day on MSU's campus and a reduction of one bus on Routes 3, 5, 8, and 9 for portions of the service day.

Table 10: Sample Service Standards for Pandemic and Service Restoration Scenarios

Scenario 1: Avg. Trip Loads > 20 or Ridership at 75% of Pre-Pandemic

Route Type	Frequency (minutes)	Span
Core System Routes	15 or better	Same as pre-pandemic
Key Lansing Routes	30 or better	Same as pre-pandemic
Key E. Lansing Routes	30 or better	Same as pre-pandemic
MSU Routes	30 or better	Same as pre-pandemic
Coverage/Limited Routes	Same as pre-pandemic with additional trips as needed	Same as pre-pandemic with additional trips as needed

Scenario 2: All Trip Loads < 20 and Avg Wkdy Ridership < 40% of Pre-Pandemic

Route Type	Frequency (minutes)	Span
Core System Routes	30 or better	Same as Saturday/restart service
Key Lansing Routes	45 or better	Same as Saturday/restart service
Key E. Lansing Routes	45 or better	Same as Saturday/restart service
MSU Routes	30 or better	Same as Saturday/restart service
Coverage/Limited Routes	Maintain baseline/remove trips with < 25% pre-pandemic ridership	Maintain baseline/remove trips with < 25% pre-pandemic ridership

Scenario 3: All Trip Loads < 20 and Avg Wkdy Ridership < 20% of Pre-Pandemic

Route Type	Frequency (minutes)	Span
Core System Routes	30 or better	Same as Saturday
Key Lansing Routes	Maintain baseline/remove trips with < 25% pre-pandemic ridership	Maintain baseline/remove trips with < 25% pre-pandemic ridership
Key E. Lansing Routes	Maintain baseline/remove trips with < 25% pre-pandemic ridership	Maintain baseline/remove trips with < 25% pre-pandemic ridership
MSU Routes	Hourly/replace with demand response	Hourly/replace with demand response
Coverage/Limited Routes	Hourly/replace with demand response	Hourly/replace with demand response

Source: System Reconfiguration Scenarios and Options (slide deck), February 2021.

Table 11: Sample Service Standards for Full Demand Scenario

Route Type	Weekday Productivity	Frequency (minutes)	Span
Core Routes	>30 riders / hour	20 or better (peak) 30 or better (off-peak)	18-20 hours per day
Secondary Routes – Lansing	>20 riders per hour	30 or better (peak) 45 or better (off-peak)	14-18 hours per day
Secondary Routes – East Lansing	>20 riders per hour	30 or better (peak) 45 or better (off-peak)	14-18 hours per day
MSU Routes	No standard (set by University)	30 or better	No standard (set by University)
Special / Coverage Routes	No standard	60 or better	No standard

Source: System Reconfiguration Scenarios and Options, (slide deck), February 2021.

Transit Market Assessment

A transit market assessment identifies where different fixed-route transit modes are most likely to be supported based on fundamental land-use and demographic conditions. It evaluates how people and jobs are distributed across the region and highlights areas where transit can operate efficiently and attract ridership. By analyzing population density, employment density, and forecasted long-term growth patterns, the assessment guides decisions about service restructuring, corridor prioritization, and investment in markets that better support or rely on transit services.

Transit Potential

Transit potential represents the relative ability of an area to support fixed-route transit service based on the concentration of residents and jobs. Areas with higher densities of people and employment typically generate stronger, sustained ridership, allow shorter headways, and improve productivity (passengers per revenue hour). The measure does not prescribe specific service levels but identifies markets where fixed-route transit investment is most viable.

Methodology

This analysis uses a Block-Group-level, Geographic Information System-based (GIS) scoring approach to quantify transit potential across Clinton, Eaton, and Ingham Counties. For this phase of the assessment, three core indicators, based on US Census Bureau data, were evaluated:

- Population Density (population per acre)
- Employment Density (jobs per acre)
- Composite Transit Potential (population plus jobs per acre)

Each indicator was mapped and classified into density ranges (0–5, 6–15, 16–30, and >30 units per acre). These thresholds were set based on the observation that at around five people and/or jobs per acre, fixed-route transit service becomes viable. The composite transit potential layer was created by summing population and employment densities, producing a single measure reflecting both residential and job-related transit markets. This method aligns with common industry practice for early-phase transit planning and provides a clear, data-driven baseline for identifying high-potential corridors.

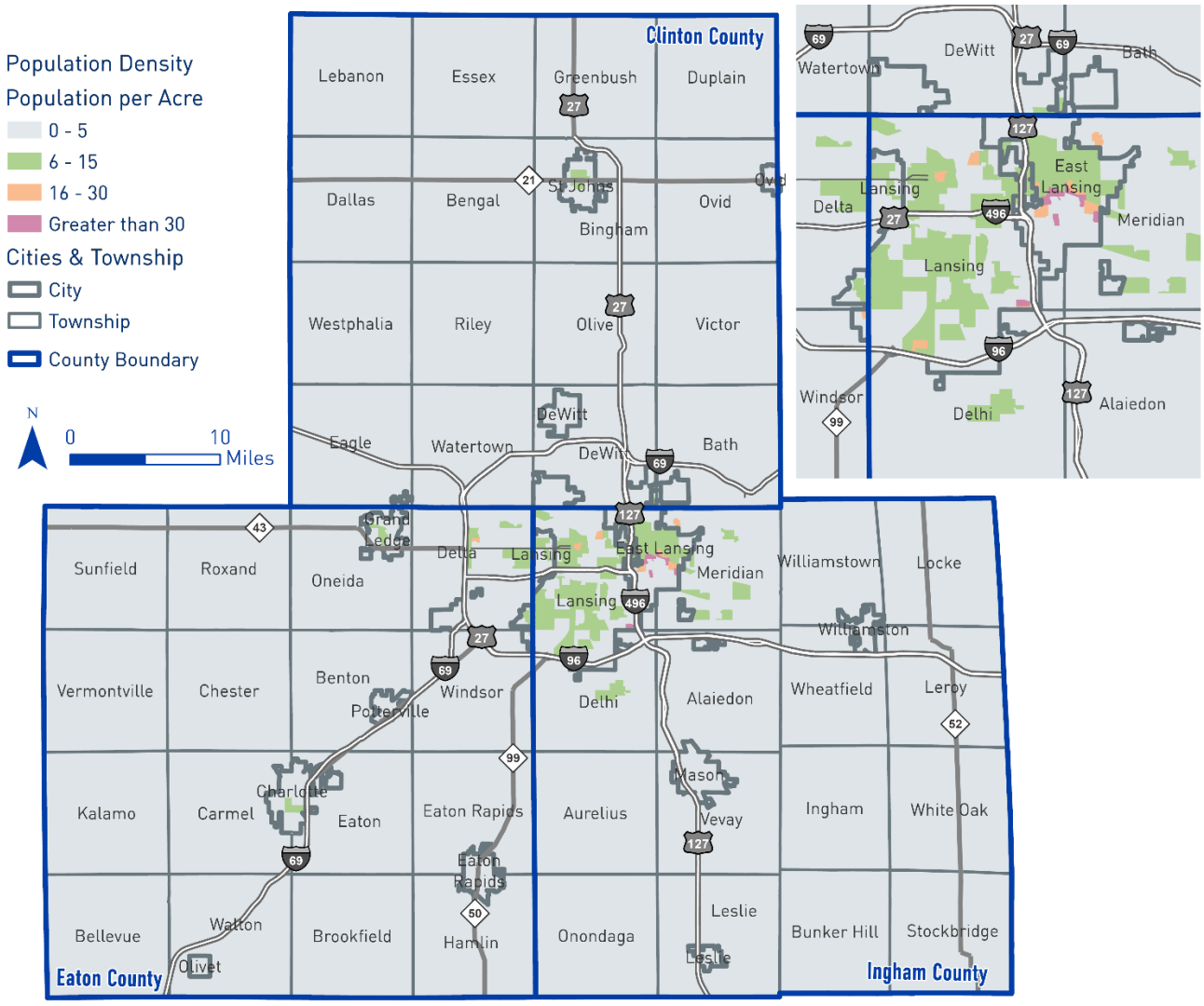
Population Density

Population density is a core driver of transit viability. Higher densities correlate with shorter walking distances, more frequent stops, and consistent ridership. Areas with clustered residential development, multifamily housing, or planned infill development score higher in the assessment.

The population density map (**Figure 11**) illustrates where residents are most concentrated and therefore where transit has the strongest potential for walk-up boardings. Key characteristics include:

- **Highest densities (>30 people/acre)** occur in parts of Lansing and East Lansing, particularly near MSU, downtown Lansing neighborhoods, and multifamily housing clusters.
- **High–moderate densities (16–30 people per acre)** are concentrated around downtown in urban areas and near-core corridors, including areas immediately surrounding downtown Lansing and East Lansing, as well as select arterial corridors and mixed-use neighborhoods that support frequent fixed-route transit service.
- **Moderate densities (6–15 people/acre)** appear in suburban areas surrounding Lansing, including portions of Meridian Township, Delta Township, and southwest Lansing, as well as in the downtown areas of smaller communities such as Charlotte, St. Johns, and Grand Ledge, where compact development patterns support local transit activity.
- **Low-density areas (<5 people/acre)** dominate the rural portions of Clinton, Eaton, and Ingham Counties and are also present within the urbanized area, reflecting land uses such as industrial districts, institutional campuses, parks, and transportation facilities that occupy large areas but contain relatively small residential populations. In both rural and urban contexts, these low-density areas generally limit the productivity of fixed-route transit when considered solely from a residential density perspective, though they may still generate travel demand based on employment or activity-based uses.

Figure 11: Population Density



Source: U.S. Census Bureau, American Community Survey (ACS) 2023 5-Year Estimates, Table B01001.

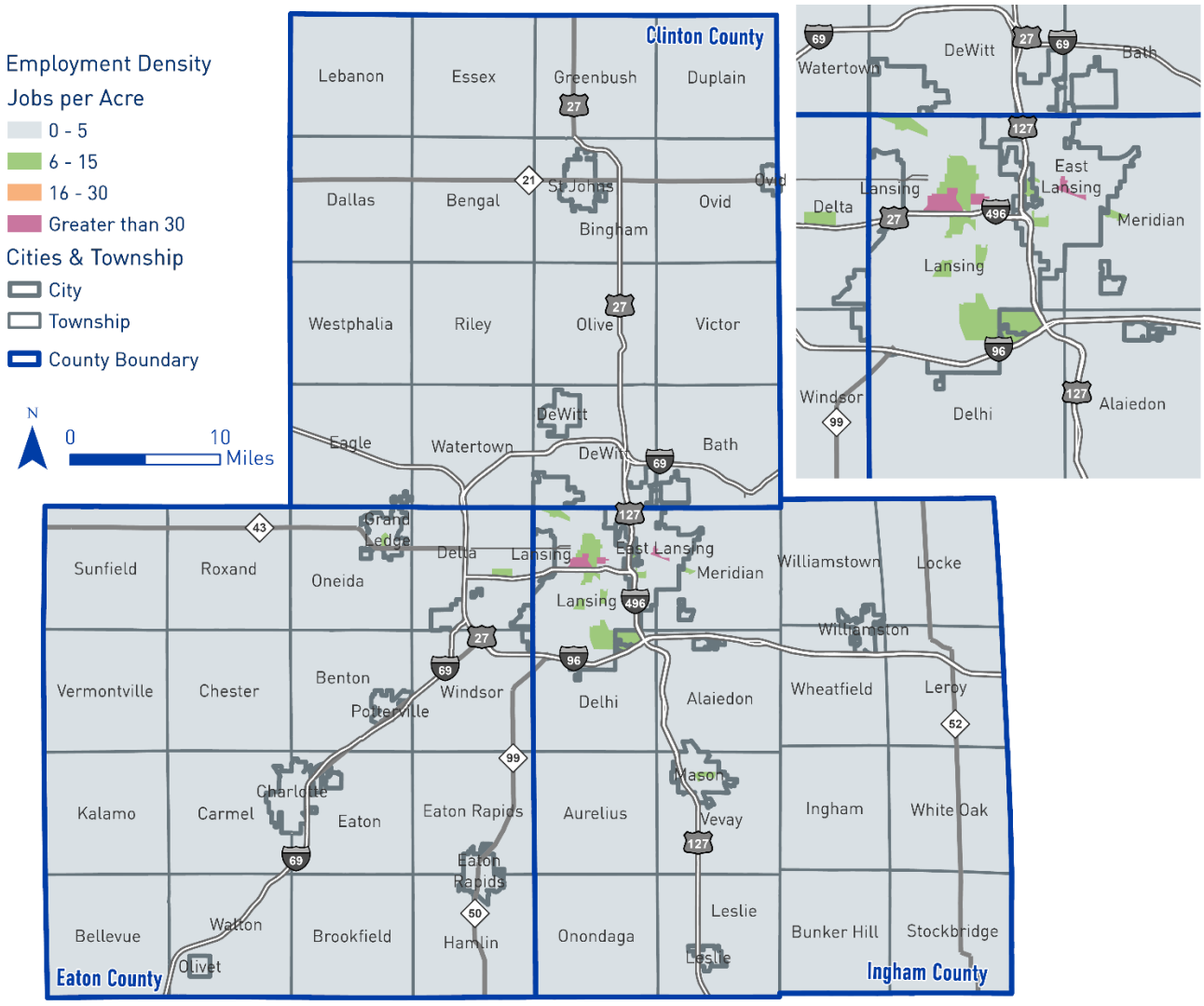
Employment Density

Areas with greater concentrations of jobs generate higher daily travel volumes. These include downtowns, concentrations of state government offices, medical and educational campuses, and major industrial or commercial corridors. Employment density helps identify anchor points for routes, bidirectional demand patterns, and opportunities to strengthen first- and last-mile access.

Employment density identifies areas where jobs are clustered, which are typically major generators of morning, midday, and evening transit demand. The employment density map (**Figure 12**) shows:

- **High-density job clusters (>30 jobs/acre)** are in key institutional and employment centers, such as downtown Lansing, and the Sparrow Hospital area.
- **High–moderate employment densities (16–30 jobs per acre)** are not present in the mapped results indicating a sharp transition between moderate-density commercial areas and highly concentrated institutional or downtown employment centers within the region.
- **Moderate employment centers (6–15 jobs/acre)** extend into near-downtown areas, commercial corridors such as Saginaw Highway, and regional retail nodes like Meridian Mall and Delta Township commercial districts.
- **Low-density employment (<5 jobs/acre)** prevails in rural areas and many urban and suburban areas with dispersed workplaces and limited transit-supportive land use.

Figure 12: Employment Density



Source: Census Bureau, Longitudinal Employer–Household Dynamics (LEHD) Origin–Destination Employment Statistics (LODES), 2021 Workplace Area Characteristics (WAC).
Note: Employment data for the MSU campus appears to be underrepresented in the dataset. LODES data are based on employer-reported workplace addresses. Large institutions may report employees at a single administrative location, which can underrepresent the true spatial distribution of jobs. Therefore, employment patterns for major institutions are interpreted in conjunction with complementary datasets (see Land Use and Built Environment Conditions).

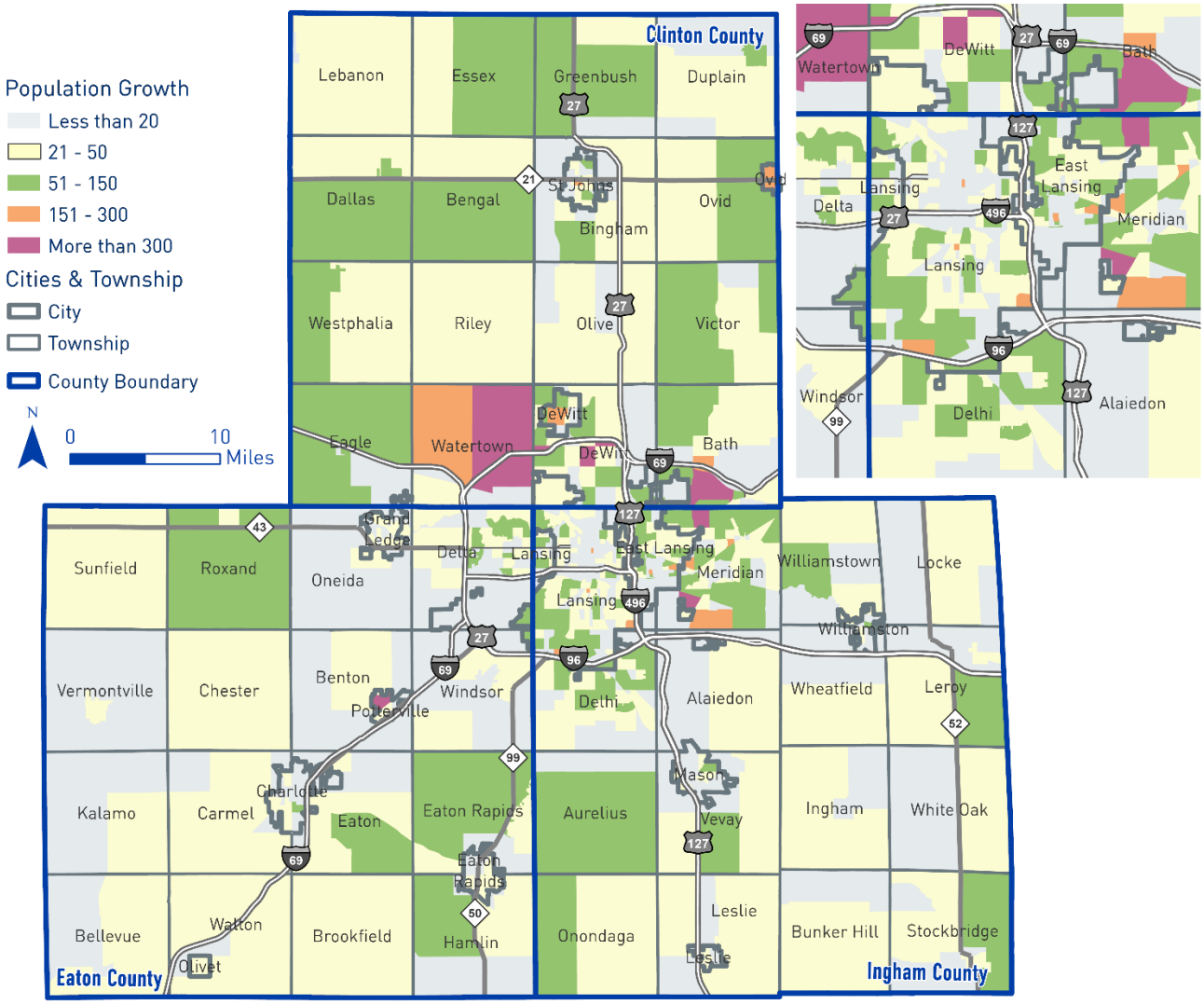
Projected Growth

Projected population and employment growth across the tri-county study area was evaluated using forecasts developed by the Tri-County Regional Planning Commission (TCRPC). These forecasts provide insight into how future development patterns may influence travel demand and transit markets over the planning horizon.

Population growth is projected to be more dispersed than employment growth, with moderate increases across several suburban and exurban townships. Areas within and adjacent to Lansing and East Lansing are forecast to see modest population growth (**Figure 13**), while higher population increases are projected in portions of DeWitt, Watertown Township, Meridian Township, Delhi Township, Eaton Rapids, and select areas of Clinton County.

Rural townships generally show low population growth, with some areas experiencing minimal change. This pattern reflects continued outward residential development while maintaining employment concentrations within the urban core.

Figure 13: Population Growth



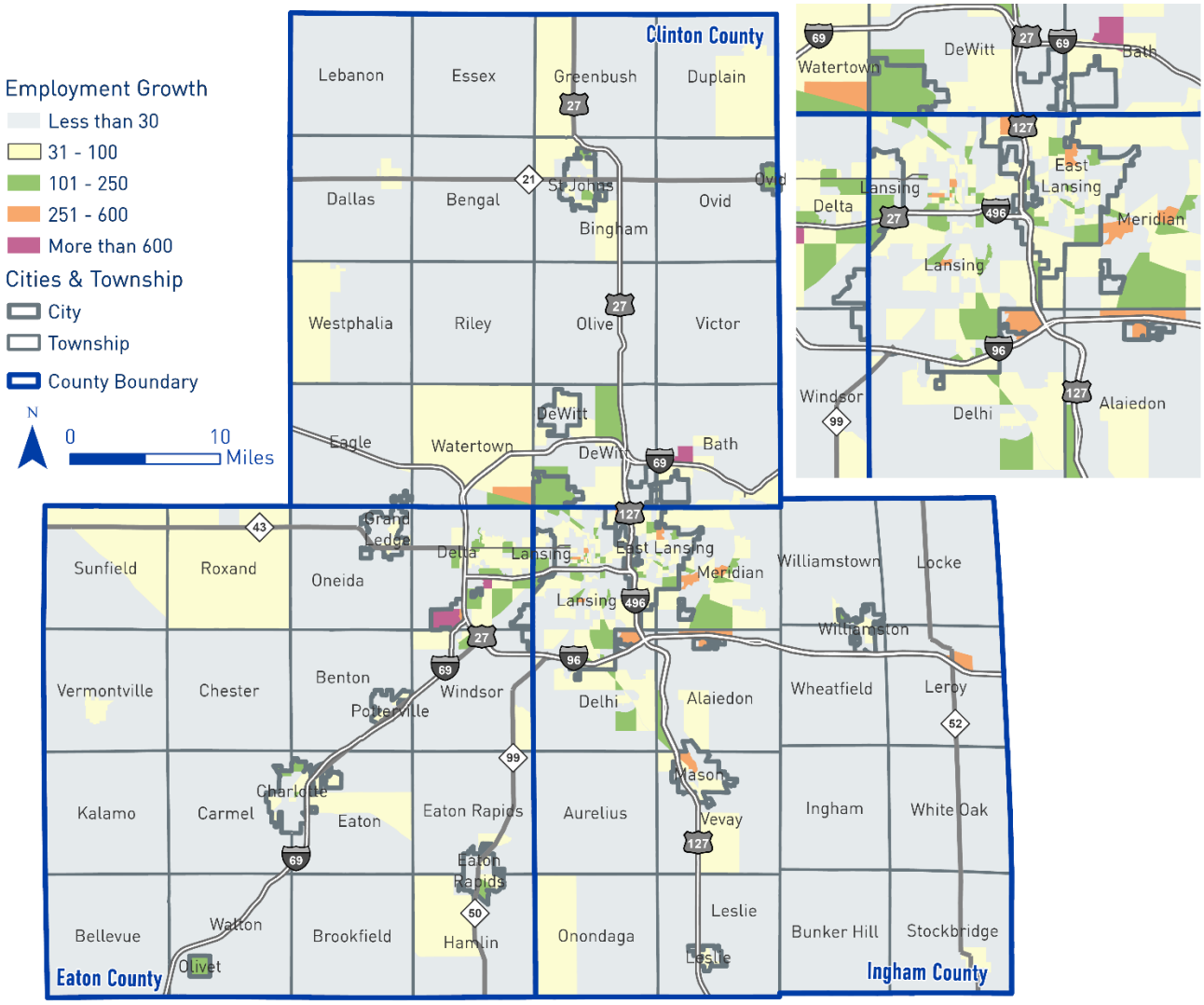
Source: TCRPC, Forecasts and Metropolitan Transportation Plan Modeling, 2050.

Employment growth is forecast to be concentrated primarily within the Lansing metropolitan core and along major regional corridors. Areas within Lansing, East Lansing, and portions of

Delta Township, Meridian Township, and DeWitt are projected to experience moderate to high employment growth (**Figure 14**), reflecting continued investment in institutional, medical, educational, and commercial sectors. Select suburban and edge-of-core locations show pockets of higher employment increases, while much of the rural portions of Clinton and Eaton Counties are projected to experience limited employment growth.

Overall, the employment forecasts suggest that major job centers will remain centralized, reinforcing existing commuting patterns and supporting continued demand for transit services connecting the urban core with surrounding communities.

Figure 14: Employment Growth



Source: TCRPC, Forecasts and Metropolitan Transportation Plan Modeling, 2050.

The combined population and employment forecasts indicate that future growth is expected to reinforce existing travel patterns rather than create new primary demand centers.

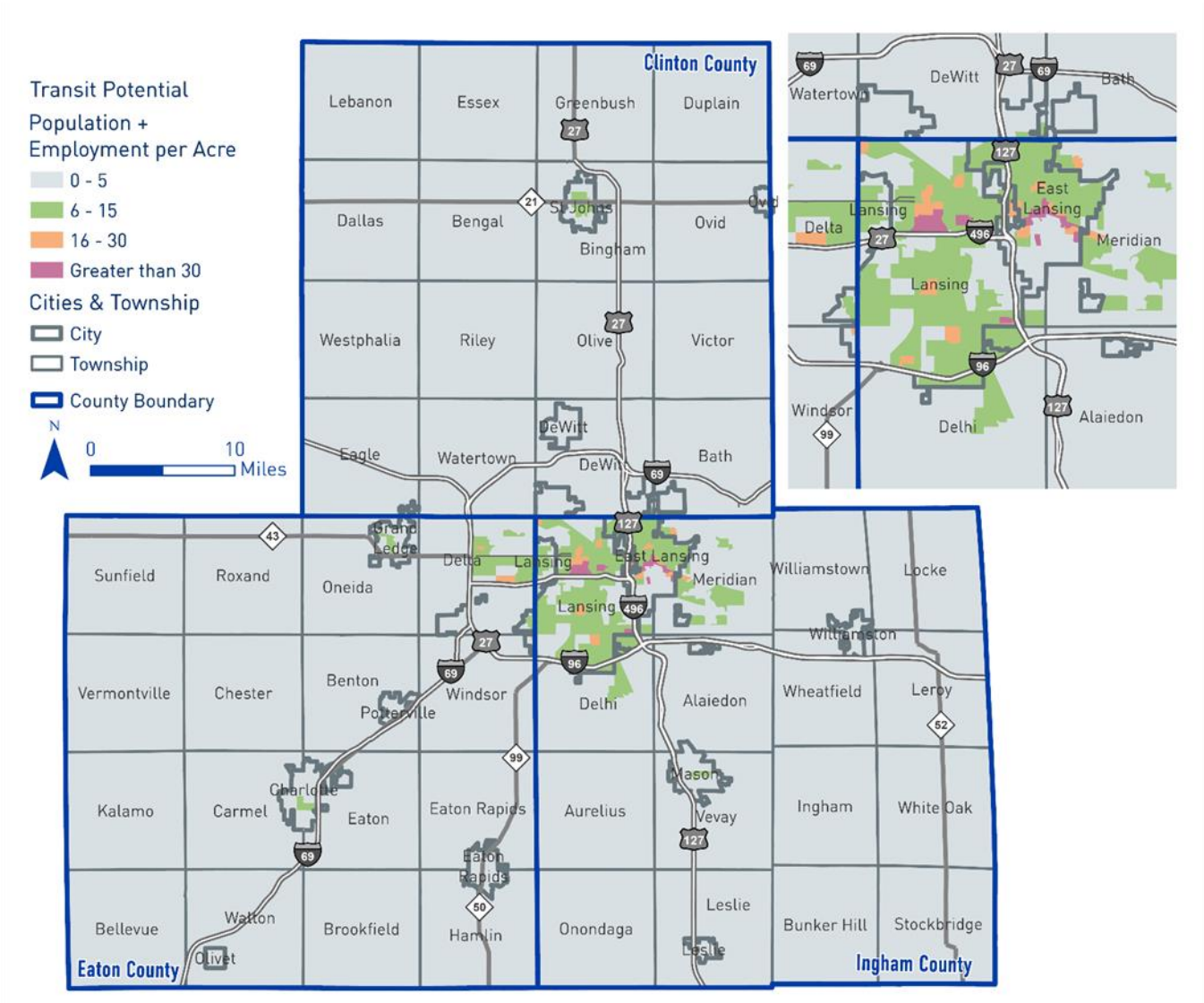
Employment growth concentrated in the urban core will continue to drive inbound commuting, while dispersed residential growth in suburban areas will increase the importance of regional connections.

Transit Potential

The final composite map (**Figure 15**) integrates population and employment densities to identify combined transit-supportive areas. The highest-scoring areas, including downtown Lansing, the MSU campus, East Lansing activity centers, and major commercial corridors, reflect a combination of concentrated residential populations and strong employment bases. Areas with moderate composite scores include parts of Meridian Township, Delta Township, south Lansing, and segments of east and west sides Lansing, where mixed land uses and moderate densities support viable fixed-route transit service. In contrast, the majority of rural townships score low, consistent with dispersed development patterns and limited transit-supportive land use; demand-response services will more efficiently meet transit needs in these areas.

This composite measure highlights where transit is most likely to be effective and productive today and serves as a baseline for evaluating opportunities for service restructuring, frequency enhancements, and long-term transit investment.

Figure 15: Transit Potential



Sources: U.S. Census Bureau, American Community Survey (ACS) 2023 5-Year Estimates, Table B01001; Census Bureau, LODES, 2021 WAC.

Transit Need

While transit potential measures where service is most likely to be productive from a land-use perspective, the transit need assessment identifies areas within the tri-county region where residents are more likely to rely on public transit due to socioeconomic or demographic characteristics. Certain population groups, particularly students, seniors, low-income residents, people with disabilities, and zero-vehicle households, tend to use transit to a greater degree than other groups. A transit needs analysis highlights areas where the need for mobility services, regardless of mode, is expected to be highest based on the concentration of these population groups with a high propensity for transit use. This identifies locations where

mobility services are most essential to ensure equitable access to employment, education, healthcare, and daily activities.

Methodology

The transit need analysis relies on 2023 American Community Survey (ACS) data to calculate the concentrations of five demographic groups with a high propensity to use transit:

- Households without access to a vehicle (**Figure 16**)
- Persons with disabilities (**Figure 17**)
- Low-income individuals (**Figure 18**)
- Young people (total population aged 15–24 within each Census Block Group, **Figure 19**)
- Older adults (total population aged 65 and older within each Census Block Group, **Figure 20**)

Census Block Groups with higher concentrations of these populations are also likely to have a higher need for mobility services.

For each demographic analysis, a Jenks Natural Breaks Classification Method was used to assign each Block Group to one of five density categories.[6] A points system was employed by which one point was awarded to Block Groups with the lowest concentrations of the population subgroup being examined, and five points were given to Block Groups with the highest concentration of that particular demographic category.

Figure 21 shows the composite Transit Need map based on the sum of scores for each demographic analysis. For example, if a Block Group falls in the highest density category for each of the five demographic analyses, it receives a Transit Need score of 25 (5+5+5+5+5). The lowest possible Transit Need score is 5 (1+1+1+1+1).

Zero-Vehicle Household Density

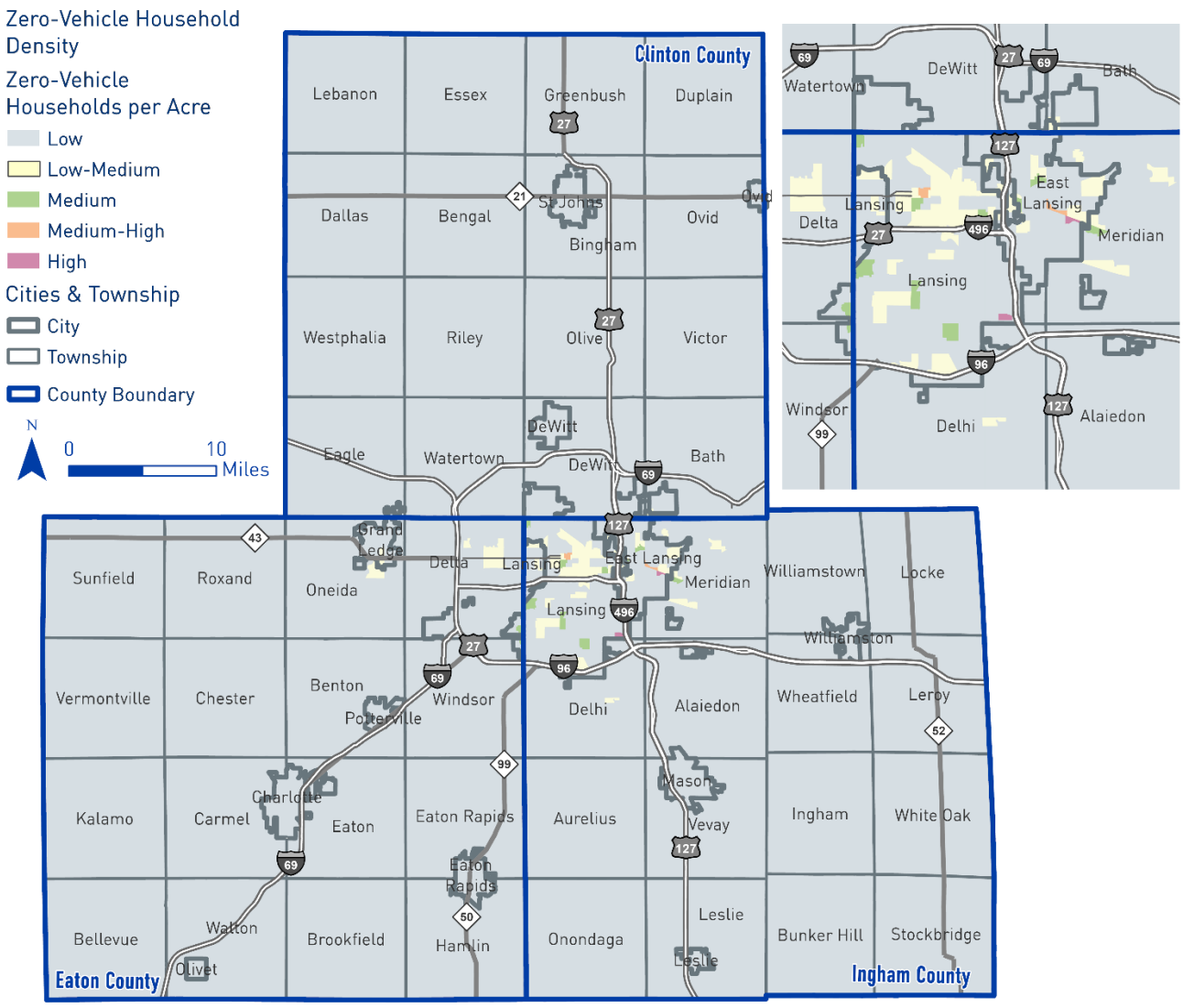
Zero-vehicle households are among the strongest predictors of transit reliance, as the absence of personal vehicle access constrains residents' ability to meet daily travel needs. Higher Zero-Vehicle Household density[7] clusters (**Figure 16**) are observed in:

- Central Lansing neighborhoods with older housing stock and higher rental prevalence.
- Student-oriented housing areas in East Lansing.
- Select multifamily developments in Charlotte and Eaton Rapids.

These findings highlight areas where transit availability is particularly critical to maintaining basic accessibility.

[6] Jenks Natural Breaks is a data classification method that identifies natural groupings in the data by minimizing variation within classes and maximizing differences between classes, allowing mapped categories to reflect meaningful patterns in the underlying distribution rather than equal intervals.
[7] U.S. Census Bureau, *American Community Survey (ACS) 2023 5-Year Estimates*, Table B25044.

Figure 16: Zero Vehicle Households, 2023



Source: U.S. Census Bureau, American Community Survey (ACS) 2023 5-Year Estimates, Table B25044.

Population With Disabilities Density

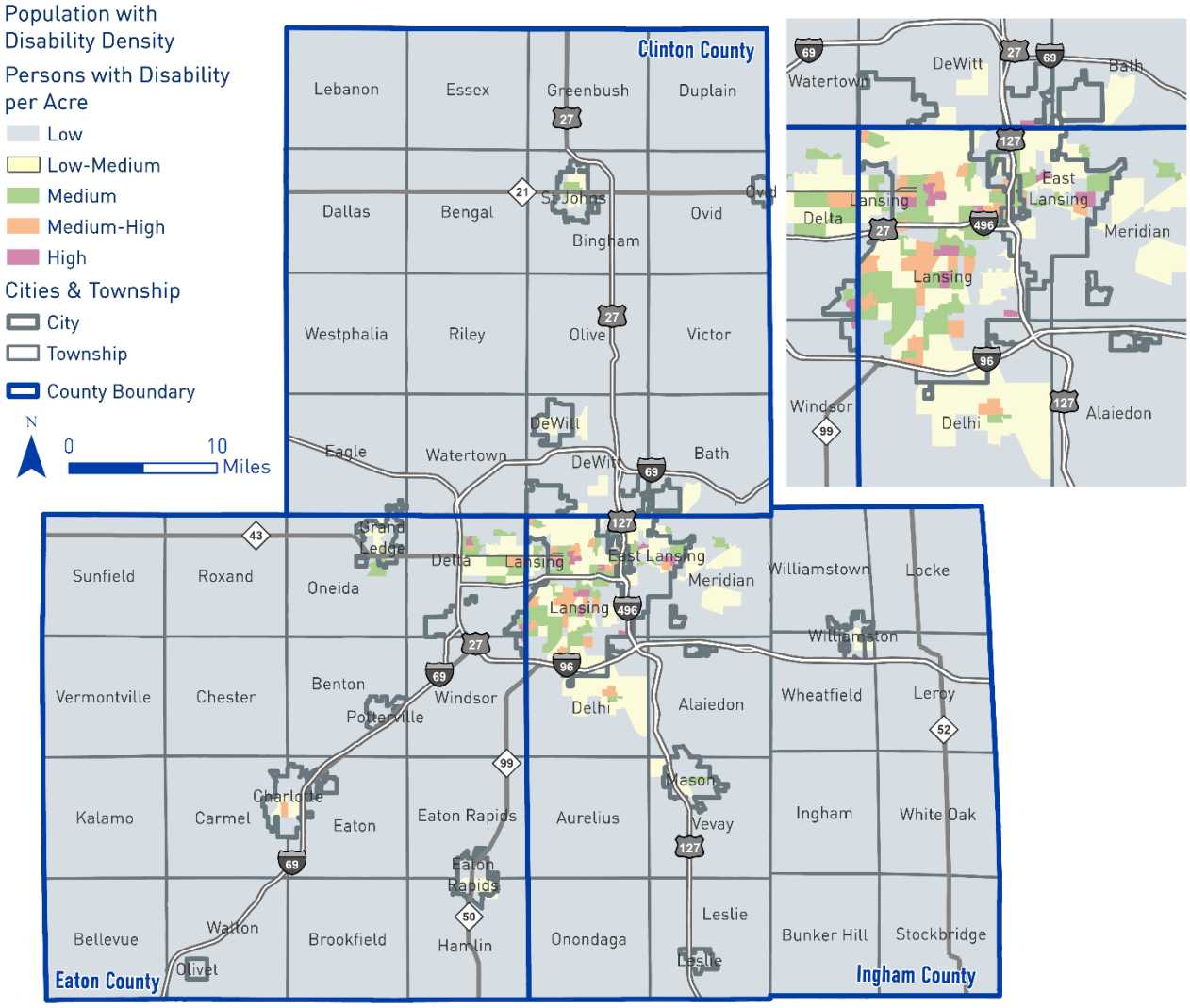
Individuals with disabilities may experience limitations related to driving, walking, or accessing the built environment. Areas with elevated densities of individuals with disabilities[8] (**Figure 17**) include:

- Central Lansing, particularly near medical facilities and older residential neighborhoods.
- East Lansing areas, adjacent to multifamily housing.
- Localized concentrations in Delta Township, Charlotte, and Eaton Rapids.

[8] U.S. Census Bureau, *American Community Survey (ACS) 2023 5-Year Estimates*, Table C21007.

These areas represent important geographies for ensuring ADA-accessible transit service and complementary paratransit coverage.

Figure 17: Population with Disability Density



Source: U.S. Census Bureau, American Community Survey (ACS) 2023 5-Year Estimates, Table C21007.

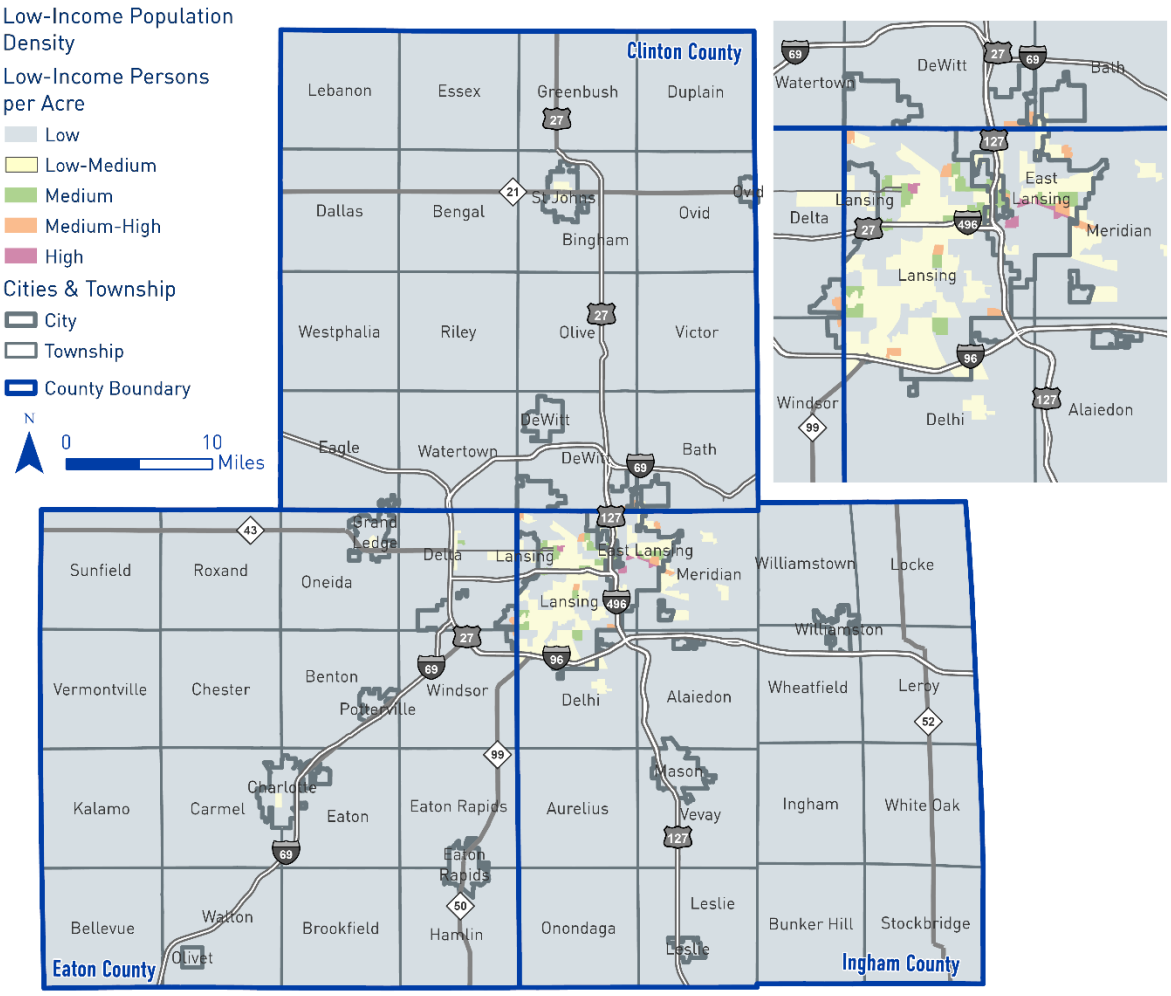
Low-Income Population Density

Low-income populations are more likely to rely on transit due to the financial burden of vehicle ownership and related operating costs. Higher-density concentrations of low-income residents[9] (**Figure 18**) occur in:

- Core neighborhoods within the City of Lansing,
- East Lansing Block Groups with significant student populations, and
- Select residential areas in south and west Lansing.

Most rural Block Groups across Clinton, Eaton, and Ingham Counties fall into the lowest density categories, consistent with dispersed housing and limited affordable housing options.

Figure 18: Low-Income Population Density



Source: U.S. Census Bureau, American Community Survey (ACS) 2023 5-Year Estimates, Table C17002.

[9] U.S. Census Bureau, *American Community Survey (ACS) 2023 5-Year Estimates*, Table C17002.

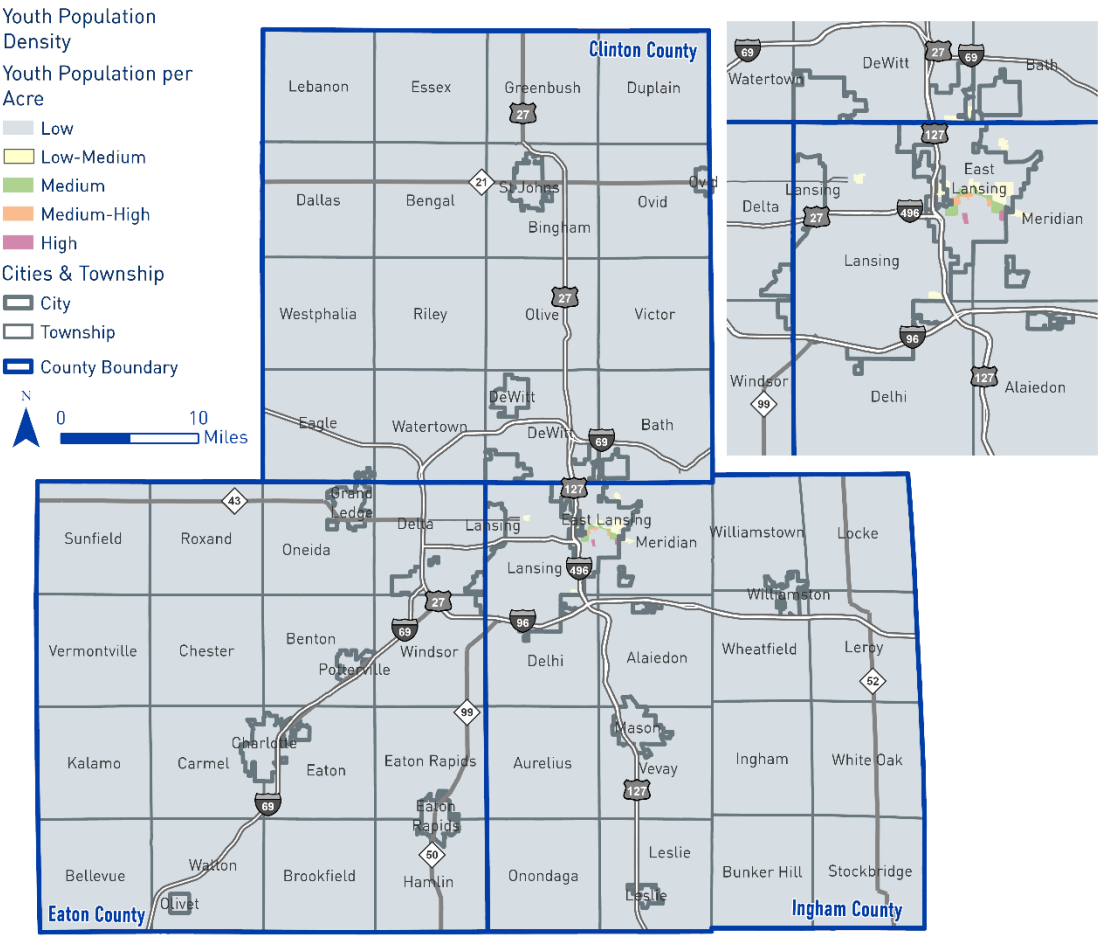
Youth Population Density

Youth populations (people aged 15–24) exhibit high transit need because they cannot legally drive and often depend on public transit for school, extracurricular activities, and local travel. Elevated youth densities[10] (**Figure 19**) appear in:

- Residential neighborhoods in Lansing and East Lansing. Growing suburban corridor communities in Meridian Township and Delta Township.

These geographies highlight opportunities to improve safety, span of service, and frequency along corridors serving schools and youth activity centers.

Figure 19: Youth Population Density



Source: U.S. Census Bureau, American Community Survey (ACS) 2023 5-Year Estimates, Table B01001.

[10] U.S. Census Bureau, *American Community Survey (ACS) 2023 5-Year Estimates*, Table B01001.

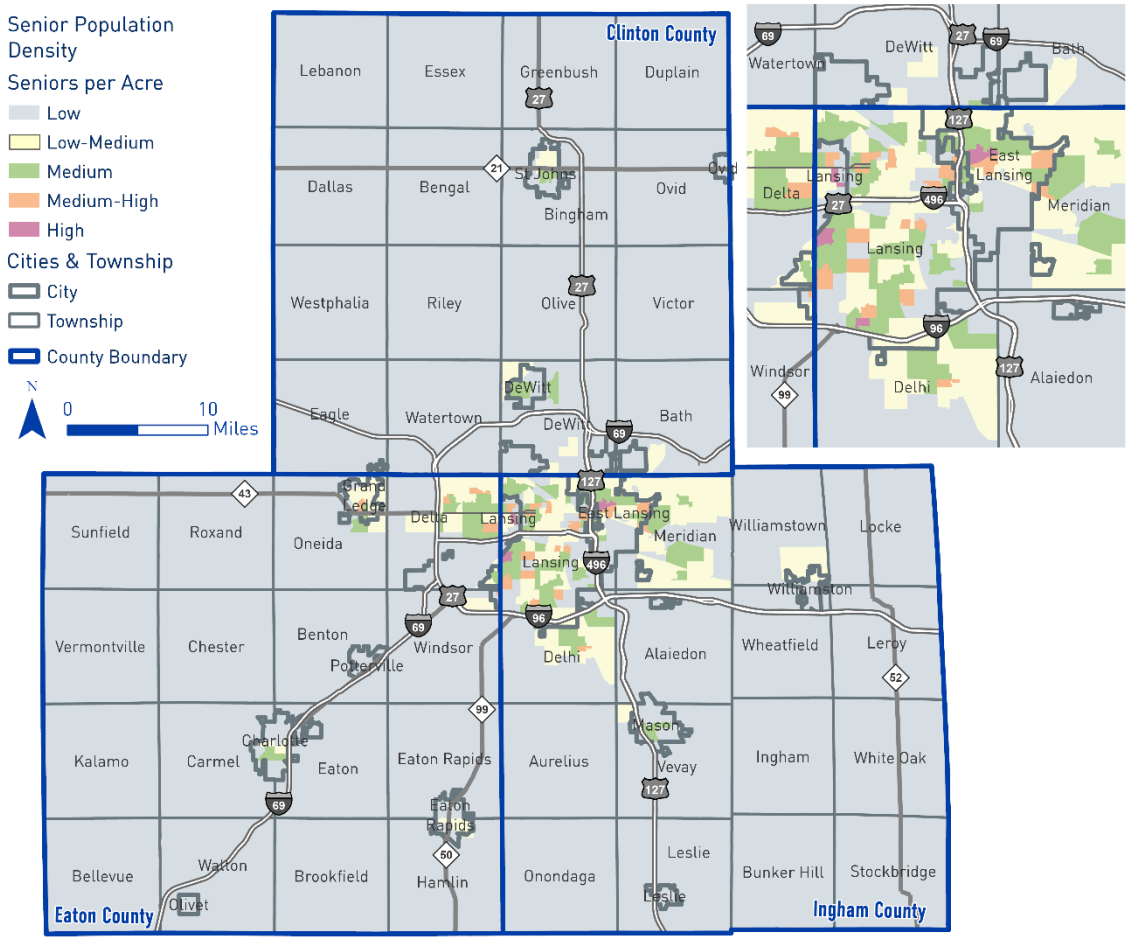
Senior Population Density

Some older adults (people age 65 and over) may reduce driving due to health, safety, or lifestyle changes, increasing reliance on transit and specialized mobility services. Higher concentrations of older adults[11] (**Figure 20**) are found in:

- Residential neighborhoods in Lansing and East Lansing.
- Suburban areas with senior housing developments, particularly in Meridian Township.
- Selected Block Groups in Charlotte and Eaton Rapids.

These patterns underscore the importance of providing accessible, reliable service that accommodates medical, shopping, and social trip purposes.

Figure 20: Senior Population Density



Source: U.S. Census Bureau, American Community Survey (ACS) 2023 5-Year Estimates, Table B01001.

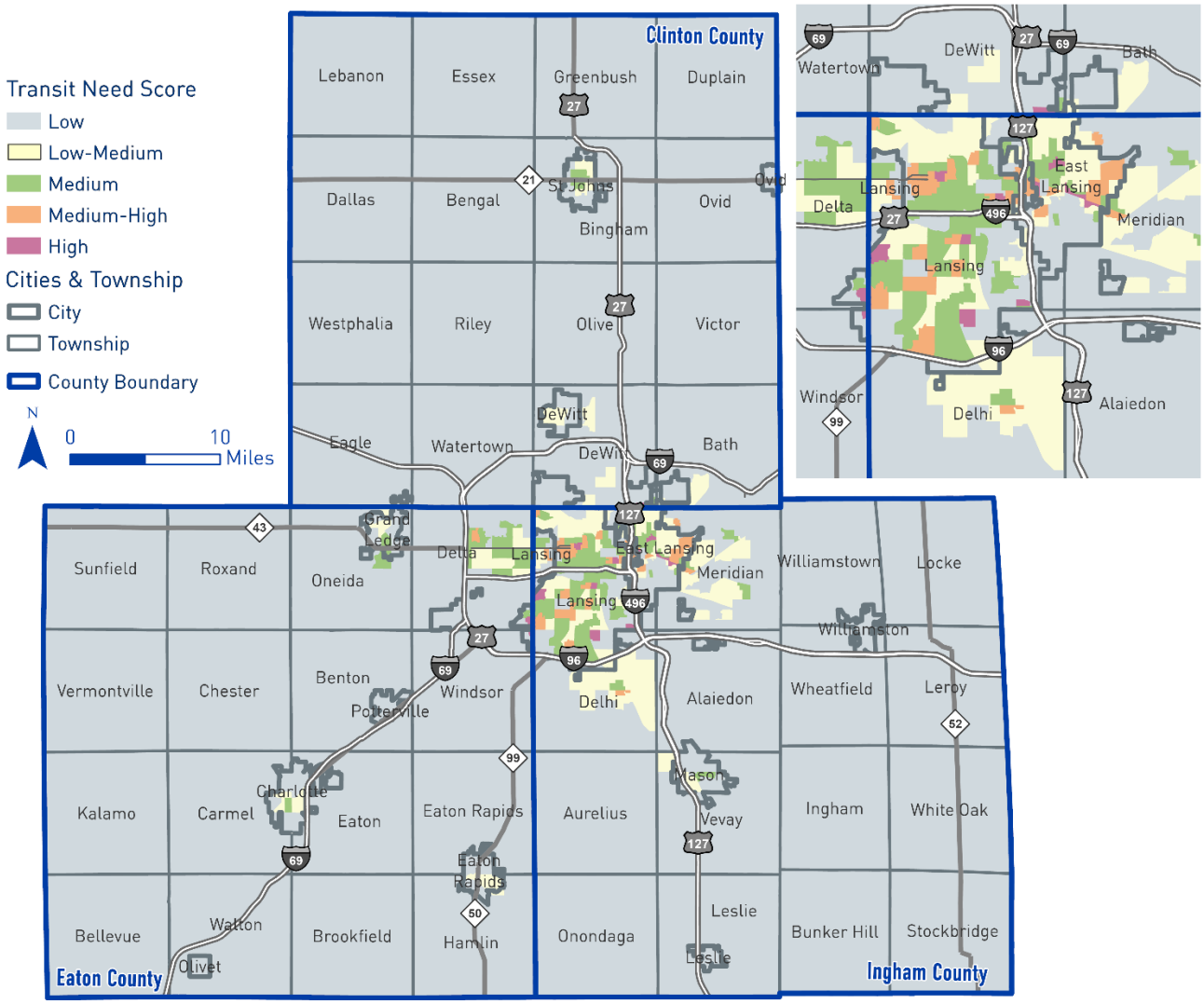
[11] U.S. Census Bureau, *American Community Survey (ACS) 2023 5-Year Estimates*, Table B01001.

Transit Need

Figure 21 presents the composite transit need map, representing the sum of the five demographic categories discussed above. Areas with the highest Transit Need Scores, typically in central Lansing, East Lansing, and portions of south and west Lansing, reflect overlapping concentrations of multiple populations that are more likely to be reliant on transit. These areas represent priority locations for evaluating service adequacy, identifying potential gaps, and considering improvements.

Conversely, rural areas across the tri-county region exhibit relatively low composite need scores, consistent with lower population densities and fewer households with characteristics associated with higher transit reliance. These areas are more conducive to demand-response services to meet transit needs.

Figure 21: Transit Need



Land Use and Built Environment Conditions

This section summarizes land use and built environment characteristics that influence travel behavior, transit accessibility, and service effectiveness across the tri-county study area. Key factors include land use mix, development density, and the distribution of activity and employment centers.

Mixed-use development supports transit by generating all-day, two-directional travel demand and reducing trip lengths. The most prominent mixed-use environments are concentrated in downtown Lansing, East Lansing near Michigan State University, and select suburban nodes in Delta Township, Meridian Township, and Eaton Rapids. Outside these areas, land use patterns are predominantly single use, particularly in suburban and rural townships, contributing to higher automobile dependence and lower transit efficiency.

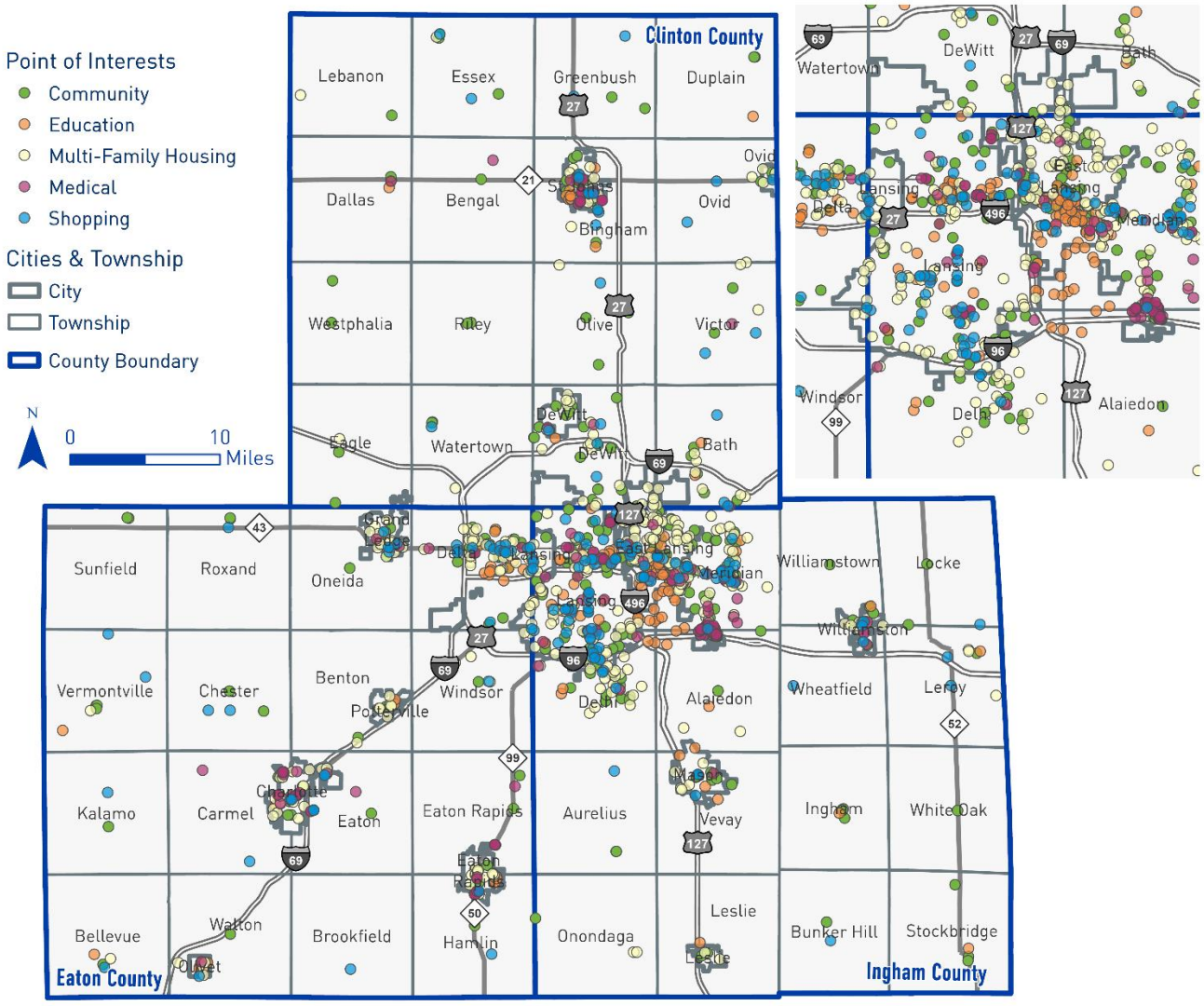
Activity Centers and Major Trip Generators

Activity centers and major trip generators are key determinants of transit demand, as they represent destinations that generate consistent, recurring travel. Understanding their spatial distribution helps identify corridors with stronger potential and highlights areas where improved connectivity or service enhancement may be needed.

Figure 22 illustrates the distribution of key activity centers across the tri-county region, including educational institutions, medical facilities, multi-family housing concentrations, community services, and retail/commercial destinations. The highest concentration of these destinations is located within the Lansing and East Lansing urban core, where MSU, downtown Lansing employment centers, state government offices, major medical campuses, and regional retail nodes are clustered. This concentration supports strong, all-day travel demand and reinforces the need for frequent, connected fixed-route service.

Secondary clusters are present in Grand Ledge, Charlotte, St. Johns, Mason, Eaton Rapids, and along commercial corridors in Meridian and Delta Townships. While more dispersed than the urban core, these areas function as important local trip generators. In rural portions of the region, activity centers are limited and widely spaced, indicating lower suitability for frequent fixed-route service and greater reliance on demand-response service.

Figure 22: Activity Centers and Generators



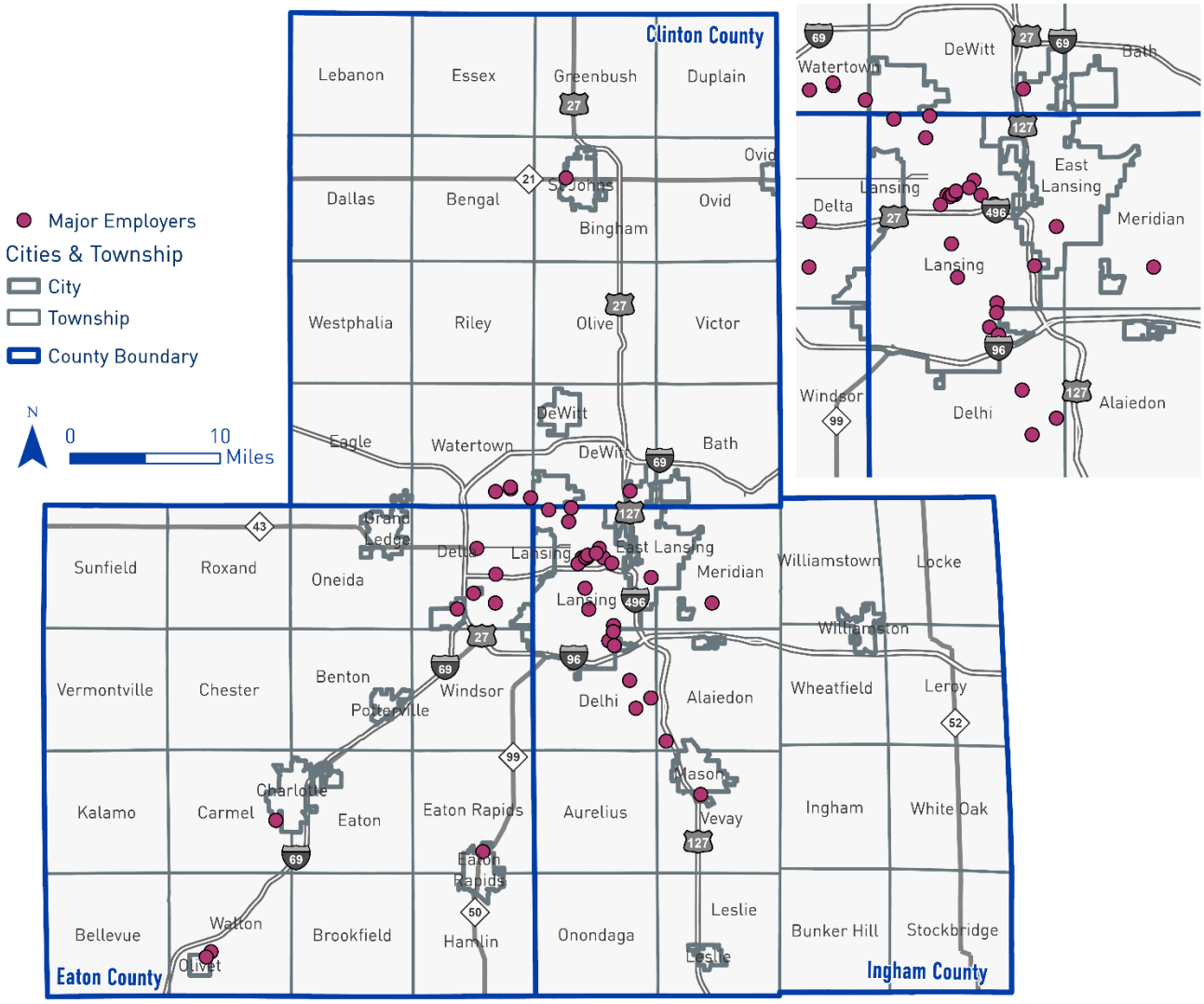
Source: Google Maps, 2025.[12]

[12] Points of Interest were collected using a "scraper" tool that scrapes data from Google Maps using a set of key words that define each category. Multi-family housing uses the keywords Apartments, Condominiums, and Mobile Home Parks. Shopping uses the keywords Grocery Store, Supermarket, Mall, Walmart, and Target. Education uses the keywords High School, College, University, and Trade School. Medical uses the keywords Hospital and Clinic. Community uses the key words City Hall, Town Hall, Library, Recreation Center, YMCA, Senior Center, and Social Security.

Major Employers

Major employer data was collected from Lansing Economic Area Partnership (LEAP).[13] Major activity centers, including employment hubs, educational institutions, medical facilities, retail centers, housing concentrations, and community services, are primarily clustered in Lansing and East Lansing, with secondary concentrations in Charlotte, Eaton Rapids, and along suburban commercial corridors. Major employers (**Figure 23**) are largely located within the Lansing metropolitan core, reinforcing existing travel patterns and transit demand.

Figure 23: Major Employers and Regional Anchors



Source: Lansing Economic Area Partnership (LEAP), Top Employers and Workforce Data.

[13] "Top Employers in Lansing, Michigan," LEAP, Accessed January 28, 2026, https://www.purelansing.com/find-a-site/workforce-data/top-employers/. (The data is reflective of employment in the tri-county region, not just the City of Lansing. LEAP receives data directly from employers.)

Travel Patterns

This section summarizes regional travel patterns based on modeled home-based work trip flows for the years 2025 and 2050. Home-based work trips represent travel between a person's residence and their primary place of employment and are a key indicator of recurring, peak-period travel demand. These trips are particularly relevant to transit planning because they tend to be consistent over time, occur during predictable periods of the day, and align closely with fixed-route transit service patterns.

The analysis highlights the spatial distribution of daily work trips, key origin–destination relationships, and changes in travel demand over time that are relevant to transit planning and service design. While non-work trips also contribute to overall transit ridership, home-based work trips provide a stable and comparable basis for understanding regional travel patterns and assessing how well existing and future transit services connect residential areas with major employment centers.

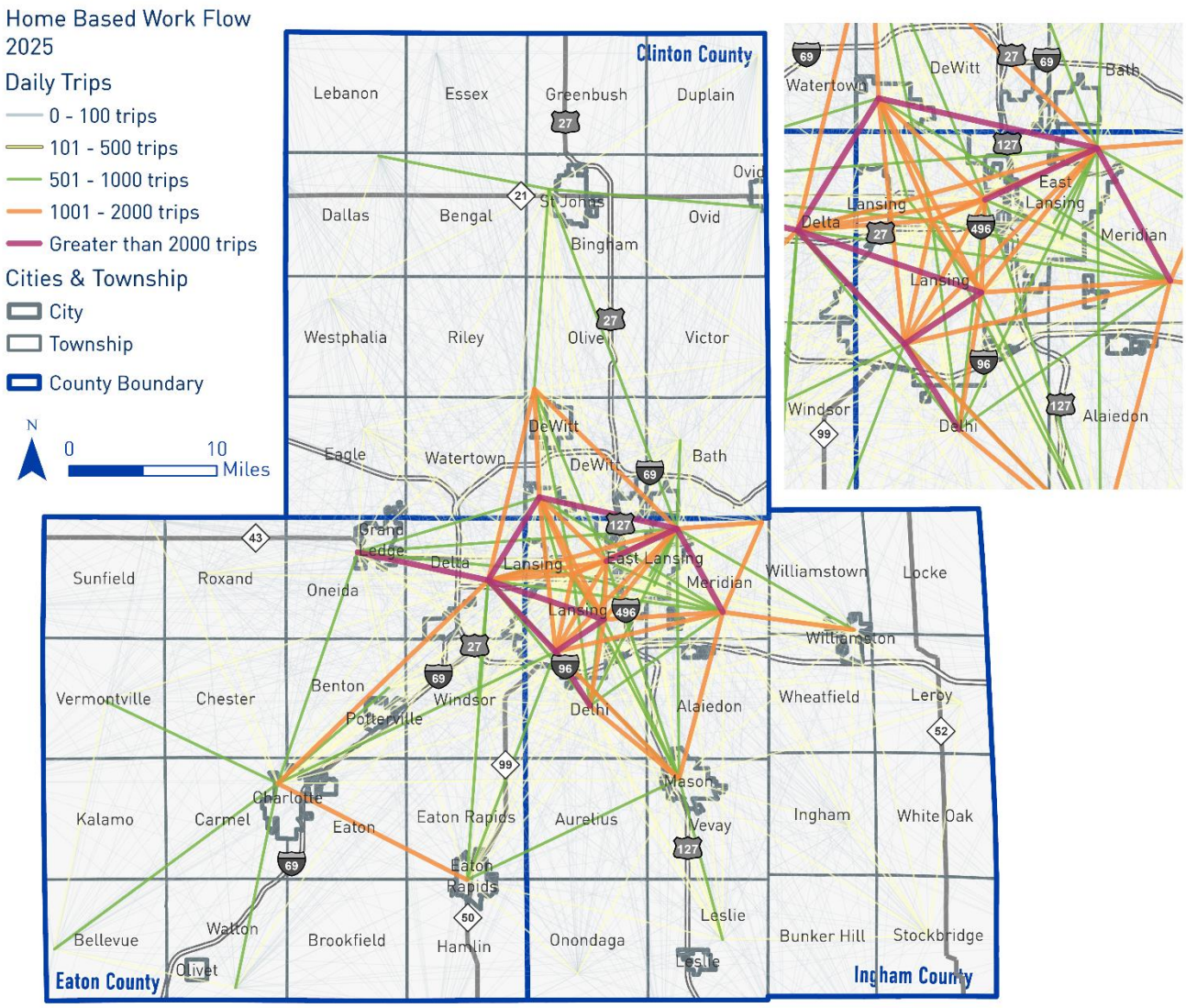
Existing Travel Patterns (2025)

The 2025 home-based workflow map (**Figure 24**) illustrates a strongly centralized travel pattern focused on the Lansing and East Lansing area. The highest-volume trip flows, exceeding 2,000 daily trips, occur between Lansing, East Lansing, and adjacent communities, including Delta Township, Meridian Township, and Delhi Township. These movements reflect the concentration of major employment centers, educational institutions, and government services within the urban core.

Moderate-volume work trips, ranging from 501 to 2,000 daily trips, connect the urban core with outlying communities such as Charlotte, Eaton Rapids, St. Johns, DeWitt, and Mason. Lower volume flows extend into rural townships across Clinton and Eaton Counties, indicating longer-distance commuting patterns with more limited transit applicability.

Overall, the 2025 travel pattern reflects a hub-and-spoke structure, with Lansing and East Lansing serving as the primary employment destinations for residents throughout the tri-county region.

Figure 24: Home-Based Work Travel Flows, 2025



Source: TCRPC, Travel Demand Model, 2050.

Projected Travel Patterns (2050)

The 2050 home-based trip flow map (**Figure 25**) shows a continuation of the centralized regional travel structure, with increased travel volumes along many existing corridors. High-volume flows remain concentrated between Lansing, East Lansing, and surrounding suburban communities, indicating sustained employment centralization despite regional growth.

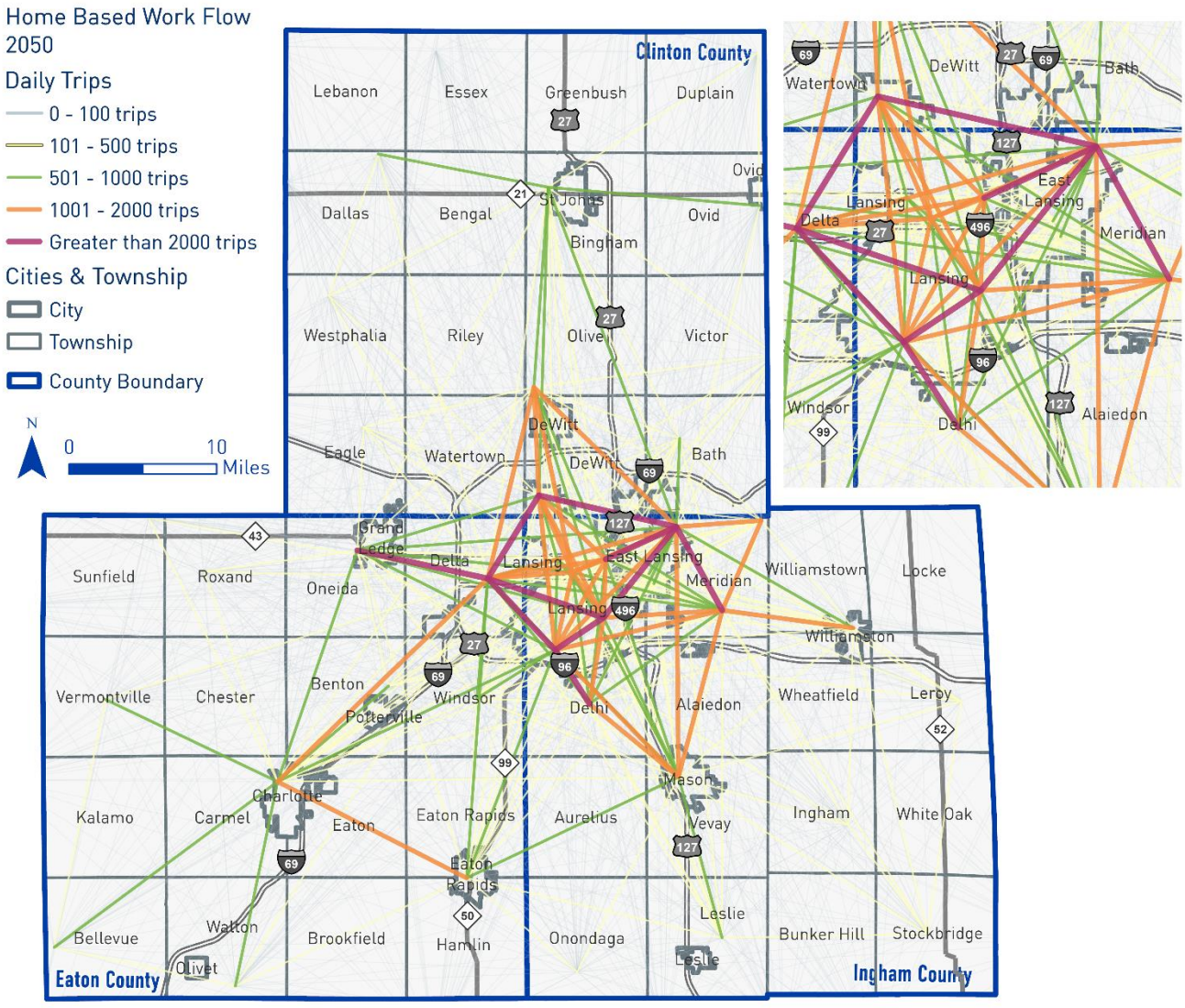
Compared to 2025, the 2050 projections show increased trip volumes (the numbered items in this list correspond to the numbered items in **Figure 25**:

1. Between Lansing and the apartment complexes north of Lake Lansing Road and Hagadorn Road.
2. Between Lansing and DeWitt.

3. Between Mason and the apartment complexes north of Lake Lansing Road and Hagadorn Road.
4. Between DeWitt and St. Johns.

More generally, the projections show increased trip volumes along established commuter corridors connecting Lansing and East Lansing with Meridian Township, Delta Township, and Delhi Township; strengthened connections to secondary employment centers such as Charlotte, Eaton Rapids, Mason, and DeWitt; and limited emergence of new high-volume travel corridors outside of the existing regional framework. These patterns suggest that future growth is expected to reinforce, rather than fundamentally alter, existing travel behavior.

Figure 25: Home-Based Work Travel Flows, 2050



Source: TCRPC Travel Demand Model, 2050.

Transit Service Utilization

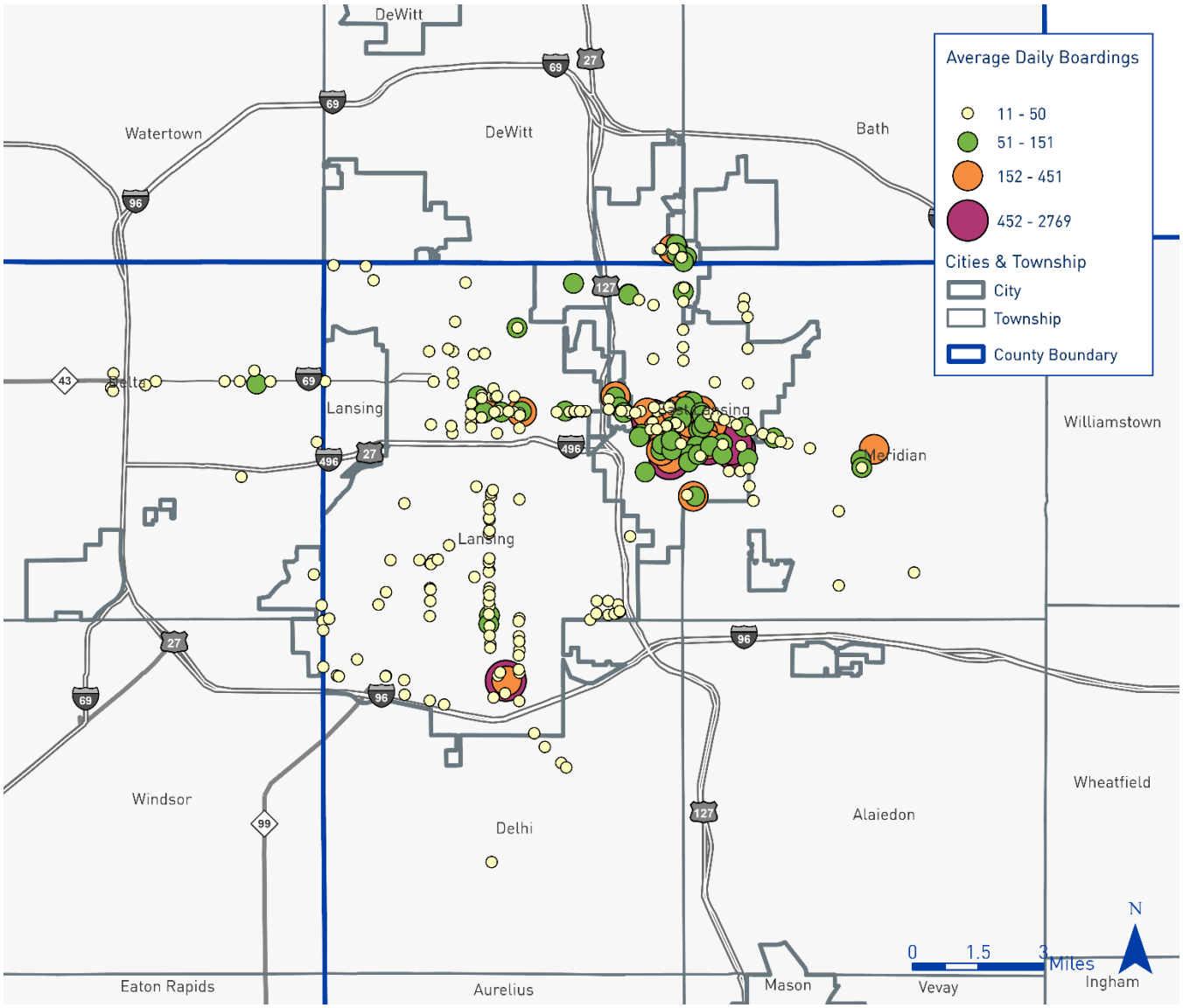
This section summarizes transit service utilization using stop-level ridership data to identify patterns of boarding activity across the study area. Average daily boardings were aggregated at the stop level and visualized to highlight locations with consistently high transit use. The natural breaks (Jenks) classification method was used to place each bus stop into a ridership range. This approach provides insight into how riders interact with the system at a fine geographic scale and helps identify high-demand corridors, activity centers, and potential service gaps.

The stop-level ridership map (**Figure 26**) shows a concentration of high-activity stops within the Lansing and East Lansing urban core. Stops with the highest average daily boardings, defined as those with average daily boardings greater than approximately 450 passengers per stop, are primarily located along major corridors, near downtown Lansing, within the MSU campus area, and at key transfer points. These locations reflect the convergence of frequent service, high population and employment densities, and major activity centers.

Moderate ridership stops, generally accommodating between approximately 50 and 450 average daily boardings, are distributed along primary arterials connecting the urban core to surrounding neighborhoods and suburban communities. These stops typically serve residential areas, commercial corridors, and secondary employment centers, but with lower daily boarding volumes compared to the core.

Lower ridership stops, defined as those with fewer than approximately 50 average daily boardings, are prevalent in outlying suburban and rural areas, where development density is lower, and service is less frequent. In these locations, ridership is often more trip-specific, reflecting commuter, shopping, or medical travel.

Figure 26: Stop-Level Ridership for October 2025



Source: CATA, General Transit Feed Specification (GTFS), October 2025.

Key Findings

Census Block Groups with the highest combined Transit Potential and Transit Need scores are concentrated within Lansing and East Lansing, with additional clusters extending into adjacent portions of Delhi, Delta, and Meridian townships as well as the City of Grand Ledge. These areas represent locations where transit-supportive land use characteristics and higher concentrations of transit-dependent populations overlap (**Figure 27**). Notably, these same areas also align closely with the region's highest-volume home-based work trip patterns (**Figure 28**), indicating that the strongest underlying transit markets are also those generating the greatest daily travel demand. This spatial convergence reinforces the importance of these corridors and activity centers as priorities for evaluating service adequacy and future transit investments.

Figure 27: Bivariate Transit Potential and Transit Need

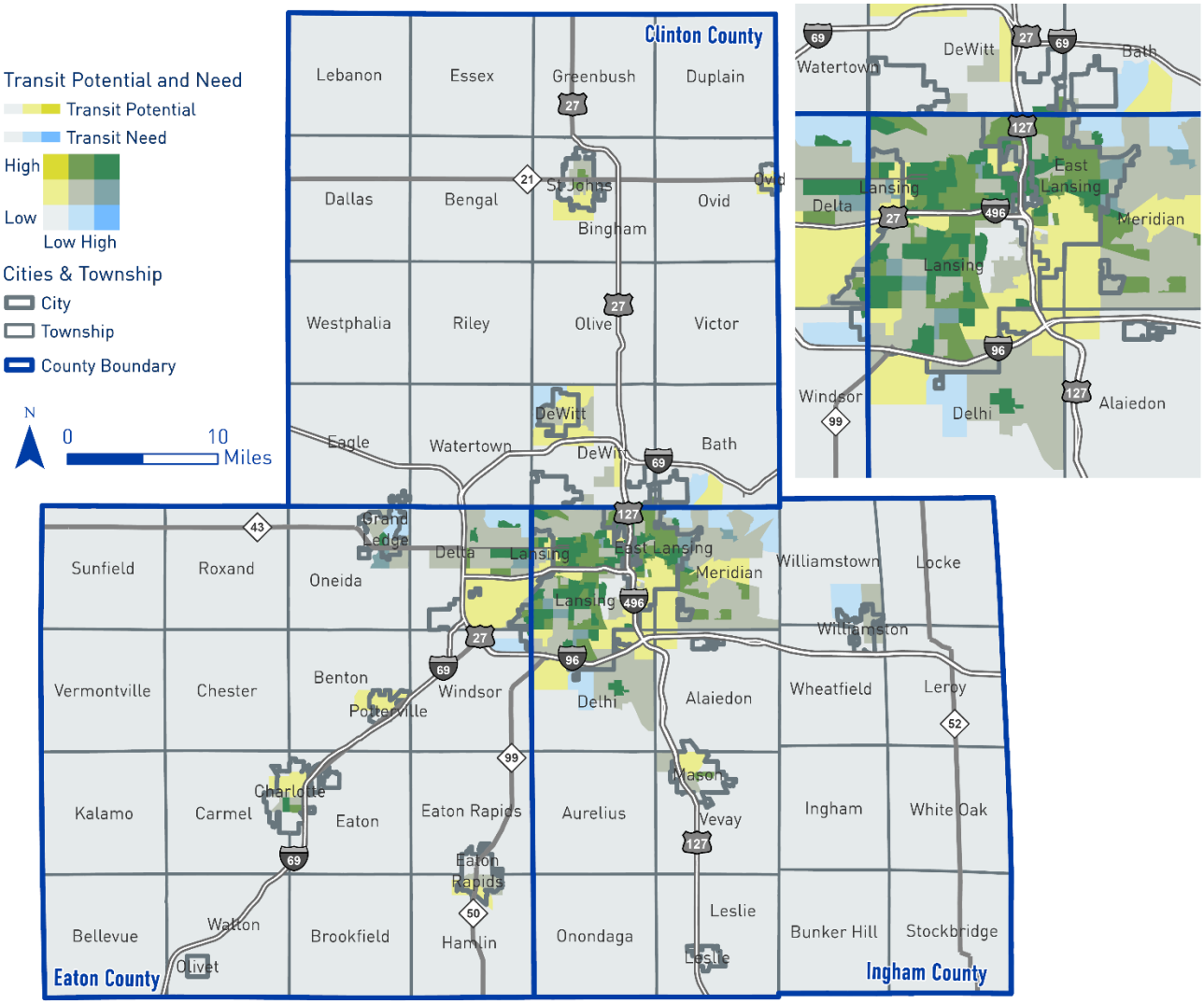
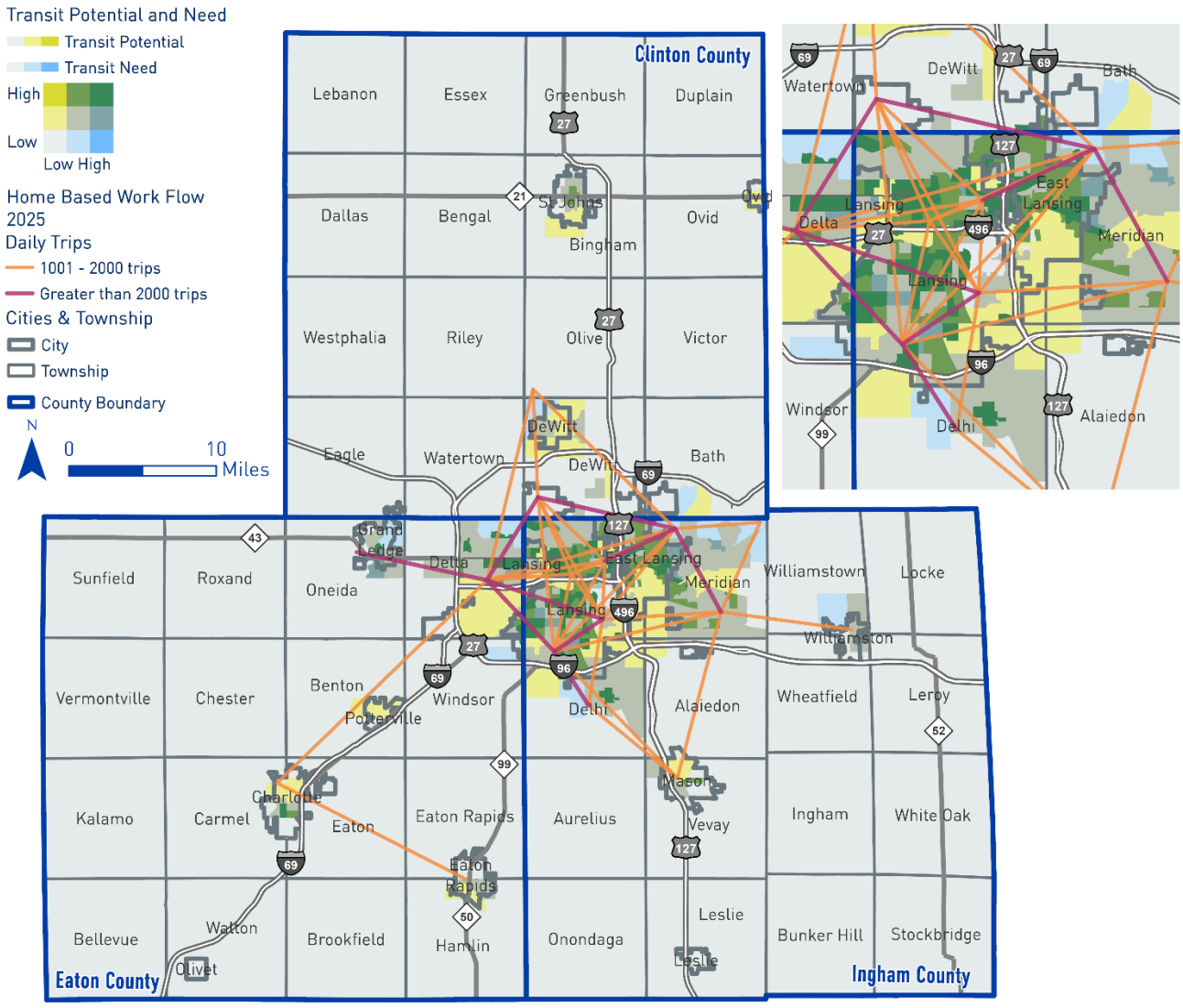


Figure 28: Bivariate Transit Potential and Transit Need and Travel Patterns



Areas displaying high transit potential regardless of need are largely associated with employment centers, mixed-use corridors, and institutional anchors such as downtown Lansing, the MSU campus, and major commercial corridors. In contrast, areas with high transit need but moderate or lower potential tend to occur along the edges of the urban core and in select suburban neighborhoods, reflecting concentrations of transit-dependent populations in locations with lower density or more automobile-oriented land use patterns.

Forecasted travel patterns indicate that future growth is expected to reinforce existing travel demand rather than shift demand to new areas. As a result, the urban core and key suburban corridors will continue to represent the most transit-supportive markets over the planning horizon.

The bivariate map (**Figure 27**) highlights several locations where transit need exceeds transit potential, particularly in suburban and transitional areas surrounding Lansing and East Lansing. People in these areas may experience mobility challenges due to lower densities, disconnected street networks, or limited pedestrian infrastructure, despite having populations with a high propensity to rely on transit. Conversely, some areas with high transit potential but lower need reflect strong land use conditions but lower concentrations of transit-dependent populations. These mismatches indicate opportunities for targeted service strategies, including adjustments to service frequency, stop placement, pedestrian access improvements, or alternative service models. Addressing areas where high need is not fully supported by existing transit service will be a key consideration in subsequent service evaluation and alternative development phases.

Next Steps

CATA offers a vast variety of different transit services, particularly demand-response. While this provides many options for riders, too many options can be overwhelming and confusing to navigate, especially when transitioning from the familiarity and convenience of driving. Simplifying CATA's transit service options and the agency's marketing and communications of these options is a key opportunity moving forward.

MSU is a key trip generator in the tri-county region, and several of CATA's routes and demand-response services are designed to meet the mobility needs of students and others traveling to and from the MSU campus. As such, there is a significant difference between CATA's services when MSU is in session (in-school) and when MSU is not in session (out-of-school). Balancing MSU travelers' needs with other riders' needs is an important consideration. In addition, CATA's partnership with MSU, whose contribution accounts for about six percent of CATA's budgeted 2026 operating expenditures, is an important consideration in determining the most appropriate suite of transit options to serve MSU.

CATA's demand-response services transport fewer people per amount of service provided than its fixed routes, leading to higher demand-response costs per passenger, which is typical for these services. However, demand-response service often meets the mobility needs of those who are unable to use the fixed-route system. Finding a proper balance between the two service types and employing them in the most appropriate locations will be considered in the planning process moving forward.

Regional connectivity is a long-standing challenge for the tri-county area with three different transit providers for riders to navigate and recent reductions in service to Delta Township—a key origin and destination for regional trips. Maintaining and expanding connectivity across jurisdictions to provide more seamless travel for riders is an opportunity for CATA and its partners.

Finally, CATA's services have not changed drastically over the past decade, especially CATA's fixed-route system, even considering the COVID-19 pandemic. The goal of service planning for CATA is to adapt the historical system to meet current and future mobility needs, as identified by the Transit Market Assessment.

The next step in the COA planning process is to evaluate each of CATA's routes and individual services in terms of key performance indicators and to identify strengths and improvement opportunities for each one. This will provide insight into potential service change recommendations at the individual route and service level. Together with input from stakeholders and the public, the findings of the *Existing Conditions Assessment* and the *Service Evaluation* will inform the development of system-level service alternatives moving forward.