

# Rural Transit Challenges

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MAP Transportation Bonanza

MDOT's Office of Passenger Transportation

# Driving Innovation

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Mobility Innovations Specialist

Transportation Bonanza  
February 15, 2024



# OPT Innovation Initiatives

- \$15M Equitable Mobility Challenge
- STSFA grant: Perceptions and Implications of Road Use Charges
- Statewide MaaS platform
- Mobility Wallet Challenge
- SMART grant: Advancing Rural Mobility
- COVID-19 Research and Demonstration Grant: Automated wheelchair securements
- Tech Talks
- Connected and Automated Vehicle Corridor
- Automated Bus Consortium
- \$8M Michigan Mobility Challenge
- Michigan Mobility Funding Platform
- Advanced Automotive Technology for Border Crossings
- Statewide Rural Transit Technology Strategic Plan

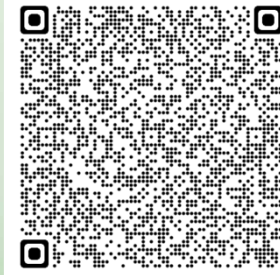
## Embracing technology

- **Accessibility and equity:** Recognition that technology can mitigate mobility barriers.
- **Acceptance of risk:** We know demo projects don't always work out as anticipated. We're OK with that. You learn as much from your failures as your successes.

# New focus in OPT

Creation of  
Mobility  
Innovations  
Specialist position

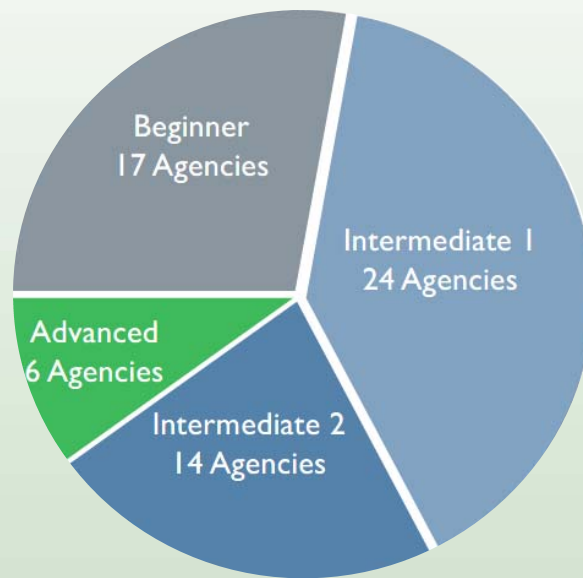
[Statewide Rural  
Transit  
Technology Plan](#)



# Rural transit tech strategic plan

- **State of the system:** Assessment of technology in use and agencies' level of tech readiness
- **Trends and opportunities:** ID technologies that are applicable to rural agencies.
- **Peer review:** Learn from others' experiences

# State of the system



- **Beginner:** Generally not using CAD but interested. Some use AVL but generally don't and aren't interested.
- **Intermediate 1:** Use CAD or AVL, might not be interested in additional technology.
- **Intermediate 2:** Use CAD and AVL, ready to explore more advanced tech.
- **Advanced:** Have implemented such tech as app-based booking, interested in additional tech.

# Rural transit tech strategic plan





# Project selection

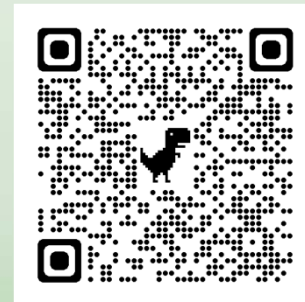
- Alignment with Rural Transit Technology Strategic Plan
- Addressing gaps, especially in areas with poor access to socioeconomic determinants of health
- Available funding



# \$15 Million Equitable Mobility Challenge



- Seeks proposals to address mobility gaps and improve access to education, jobs, health care, nutritious food, and socialization opportunities.
- Focuses on needs of seniors, people with disabilities and veterans
- Launched Jan. 23, 2024; proposals due April 14, 2024.
- [Michigan \\$15 Million Equitable Mobility Challenge](#)



# SMART grant

- “Advancing Rural Mobility”
- Use open standard data to make rural transit more accessible to the public



- Use existing and emerging data specifications for demand-response transit

# MaaS platform



- Goal is to make mobility as easy and seamless as possible
- Provide users with information about available public transit providers and how to contact them
- Based on providers' capabilities, may include:
  - Trip planning
  - Online trip reservation
  - Mobile fare payment

# Thank you!

Office of Passenger Transportation  
[Public Transportation \(michigan.gov\)](http://michigan.gov/public-transportation)

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# LIVINGSTON ESSENTIAL TRANSPORTATION SERVICE



TRANSPORTATION BONANZA  
FEBRUARY 2024

# LETS at a Glance

- 85 dedicated employees and 42 transit vehicles
- Classified as Small Urban transit agency
- Serving Livingston County since October 1977
- Transportation Complex constructed in 1999
- 568 square mile service area and regional service



# Public Transportation Services

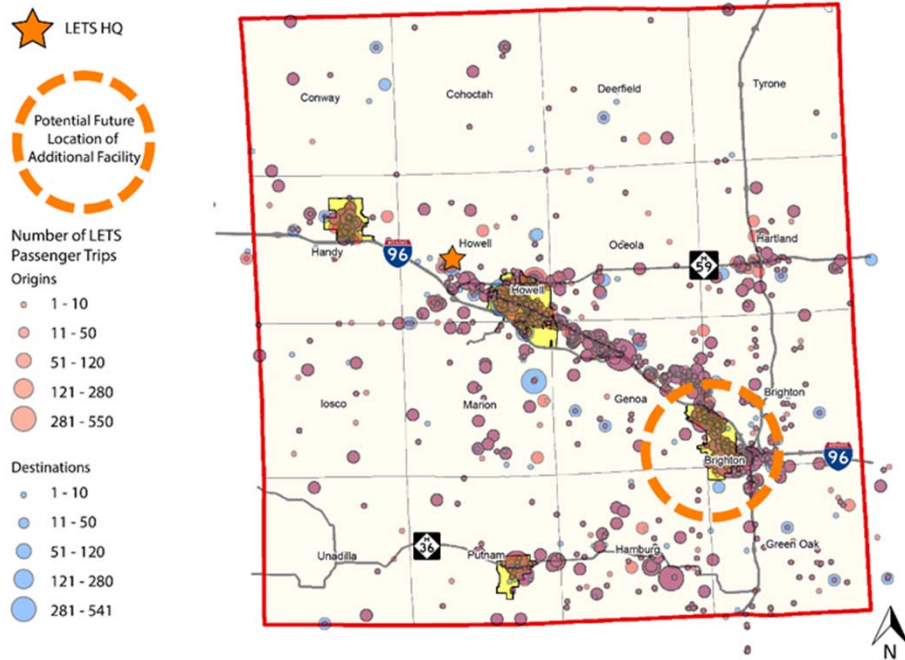
- Advance reservation (demand-responsive) service
- On-demand, same-day service
- Regional service to surrounding counties
- Healthcare Transportation Service
- Michigan Flyer Airport Shuttle Service
- Partnership with People's Express
- Local service for Hamburg and Putnam/Unadilla Twp.
- Community event shuttles



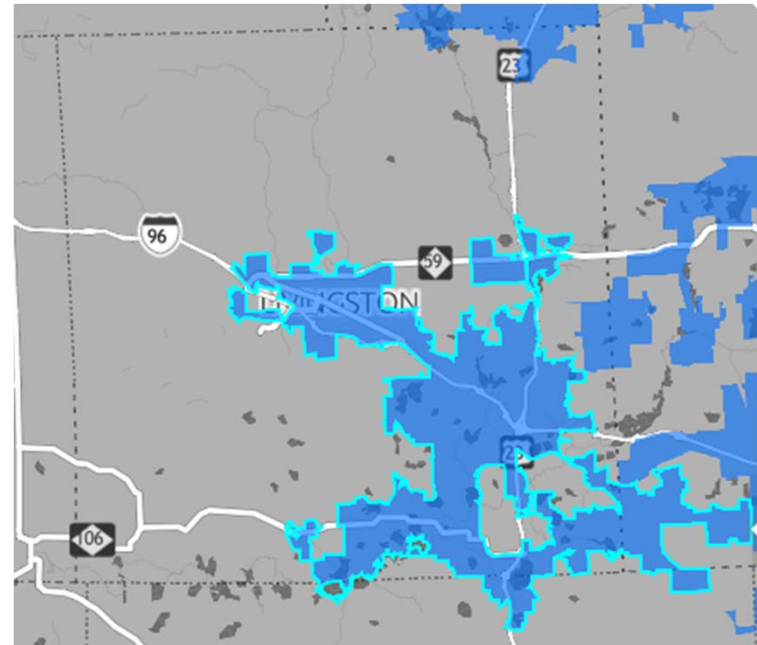


# Urban/Rural Service Distribution

LETS Passenger Trip Origin and Destinations (October 2022 Data)



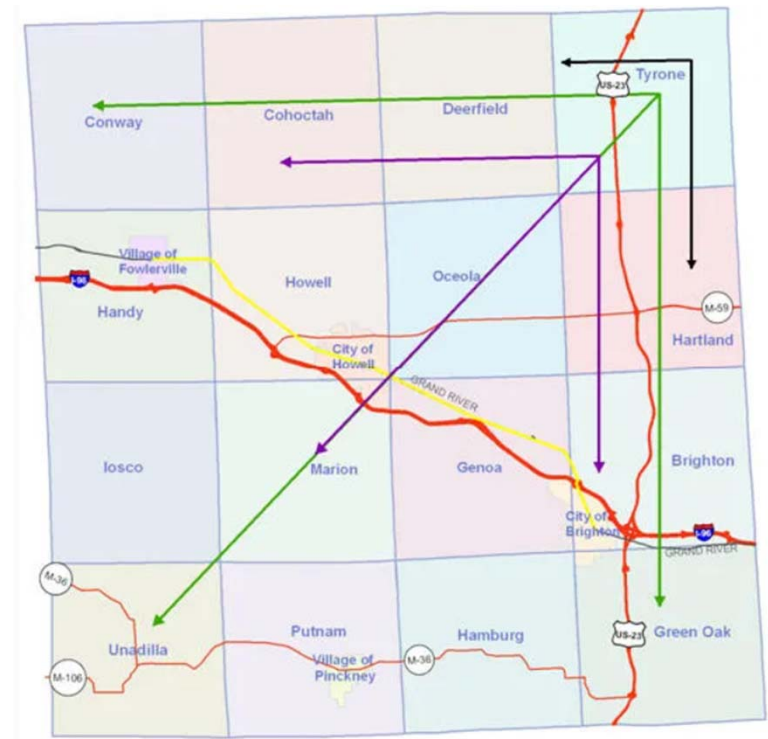
South Lyon--Hamburg--Genoa Urban Area – 2020 Census



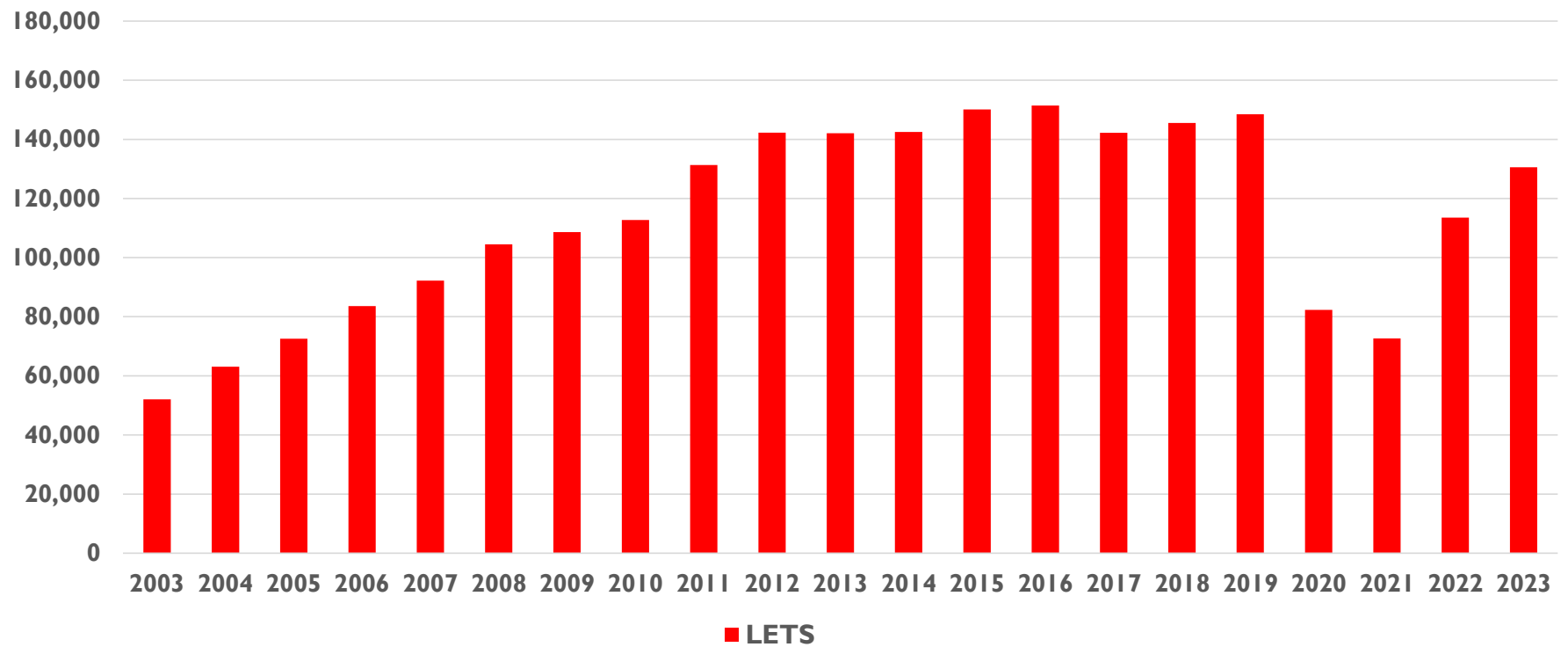
# Passenger Fare Schedule

- In-County fares charged per one-way trip
- Maximum in-County fare is \$6

Distance	Regular Fare	Senior/Disabled
Within Township	\$2	\$1
To Adjacent Township	\$2	\$1
Two Townships Away	\$4	\$2
Three Townships Away	\$6	\$3
Regional (Surrounding Counties)	\$22 Round Trip	\$16 Round Trip

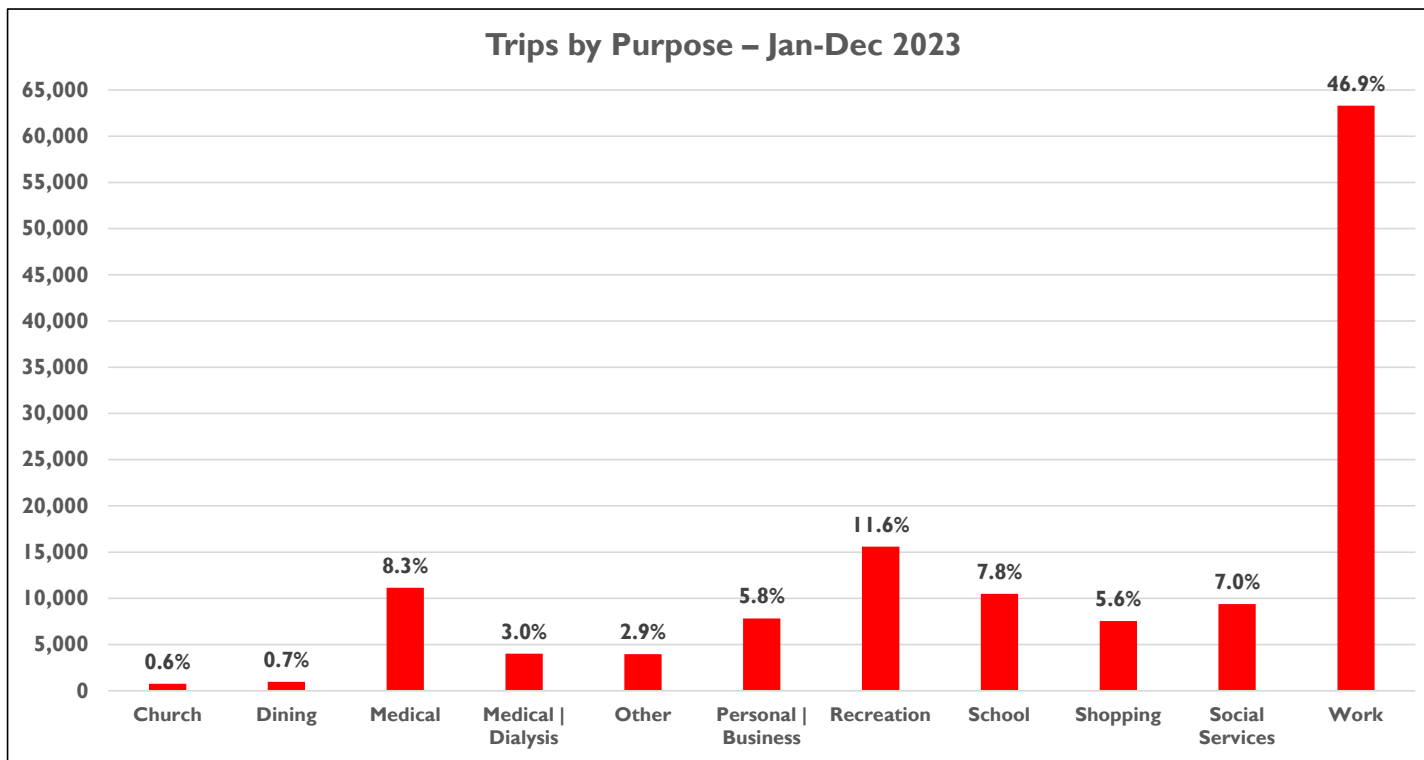


# LETS Annual Ridership FY 2003-23



Note: Based on Fed/State fiscal year which runs October-September

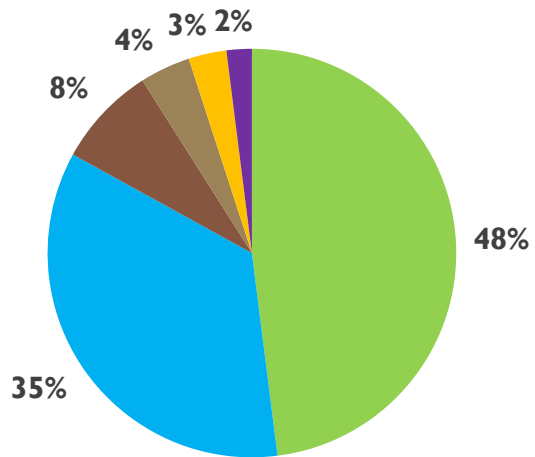
# Regular Service Trip Purposes



# Operating and Capital Funding Sources

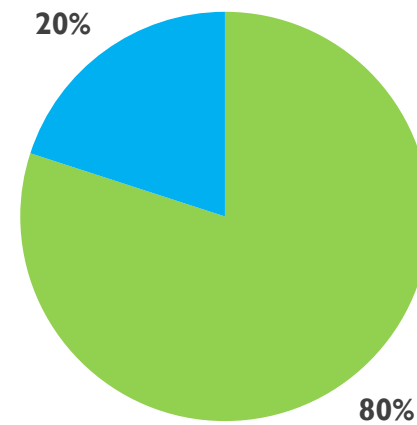
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Operating Funding Sources



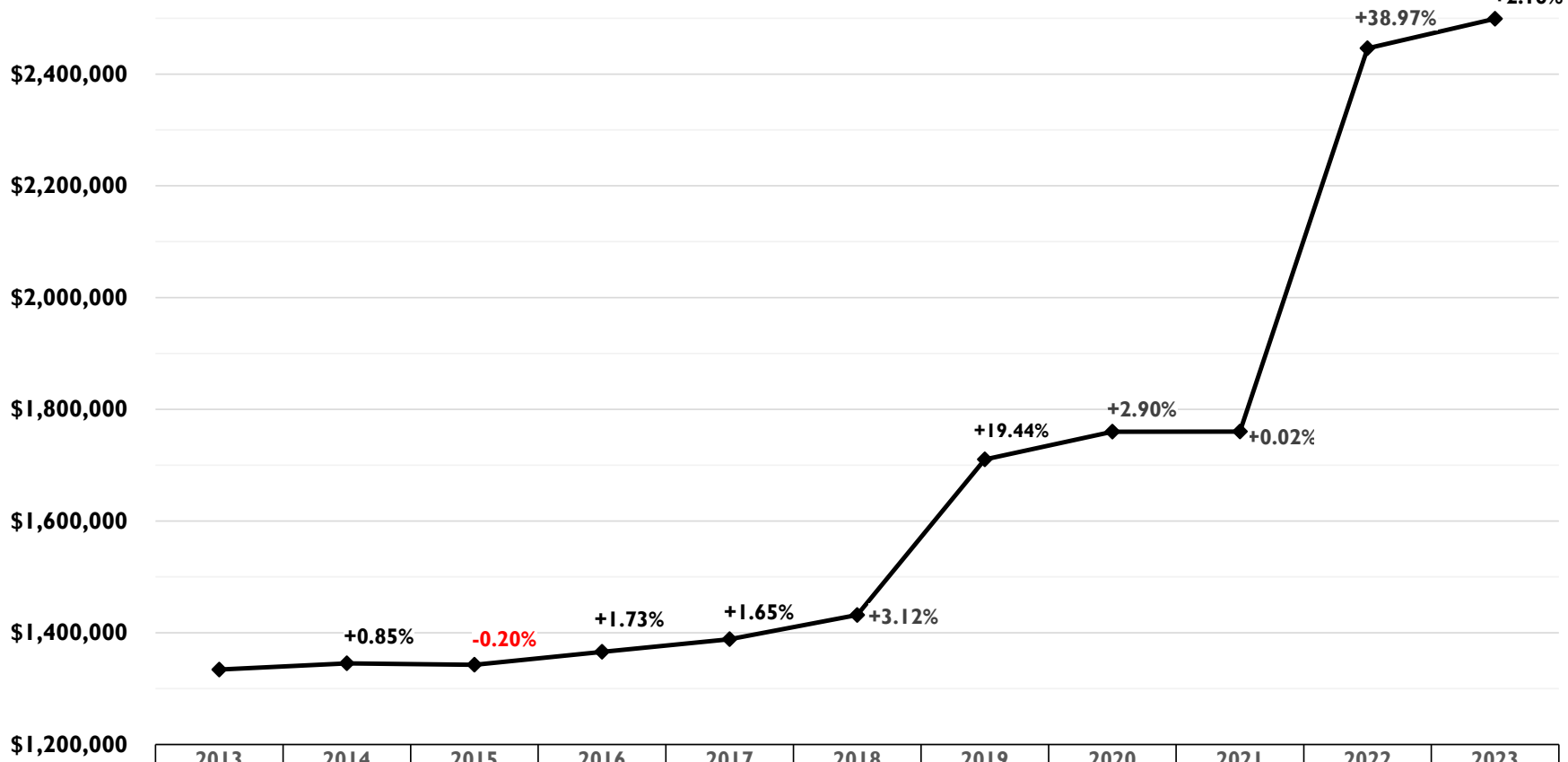
- Federal
- State
- Service Contracts
- Passenger Fares
- Other Local
- County GF Approp.

Capital Funding Sources



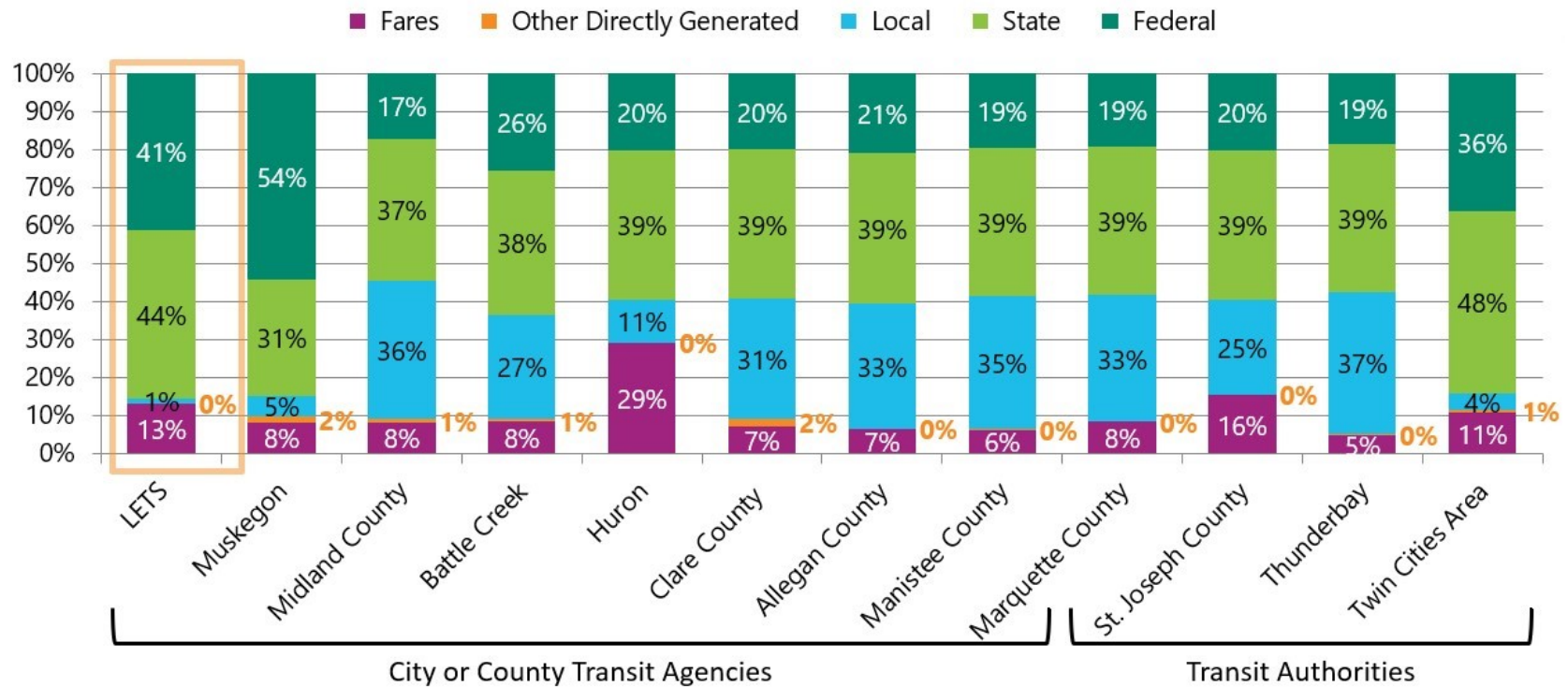
- Federal
- State

### Federal Section 5307 Apportionments FY 2013-23



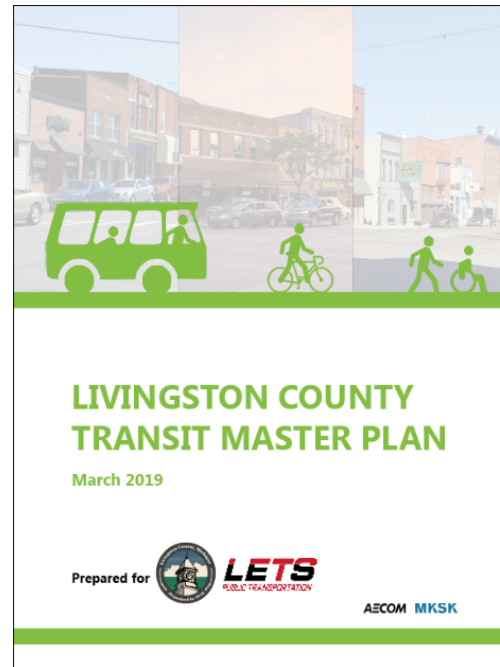
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Apportionments	\$1,334,067	\$1,345,342	\$1,342,660	\$1,365,899	\$1,388,450	\$1,431,821	\$1,710,227	\$1,759,899	\$1,760,218	\$2,446,200	\$2,499,081

# Michigan Transit Funding Source Comparison



# 2019 Livingston County Transit Master Plan

View the complete plan at <https://milivcounty.gov/lets/livingston-county-transit-master-plan/>





# Transit Master Plan Recommendations

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## System Efficiency

1. Diversified Fleet
2. Trip Management System Improvements
3. New Operations Center



## Regional Connections

8. Detroit Metro Airport Service
9. Commuter Service to Ann Arbor
10. Connections to Out-of-County Providers



## New & Expanded Services

4. Weekday Service Expansion
5. Expanded Weekend Service
6. Grand River Avenue Bus Route
7. Community Shuttles



## Multimodal Transportation

11. Grand River Avenue Sidewalk Network
12. County-wide Bike & Pedestrian Connections
13. Passenger Hub

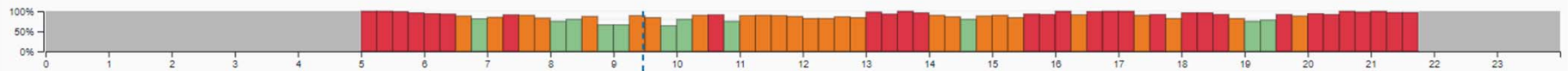
# Trip Management System Improvements

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- Prior to 2021 software upgrade, routes were created manually by dispatchers
- Building routes to accommodate >500 trips/day was extremely labor intensive
- Phone was the only option for booking trips; no updates or ride reminders
- New transit software automates route creation, continuously optimizes as new trips are booked
- Real-time operational insights inform short-term service adjustments and staffing decisions
- Web-based platform facilitates remote dispatching, reduces burden on local servers
- Much improved customer experience with SMS trip notifications, automated reminder calls
- Launched mobile app one year later with self-scheduling, electronic fare payment, push notifications

# Ecolane Software Dashboard

## Fleet utilization



## Trips

	Total
All	519
Subscription	166
Mandatory target run	87
No show	22
Same-day booking	91
Outsourced	
No run	
Run without vehicle	9
Active	
Completed	497

## Will-call

	Total
All	
Unconfirmed	
Confirmed	

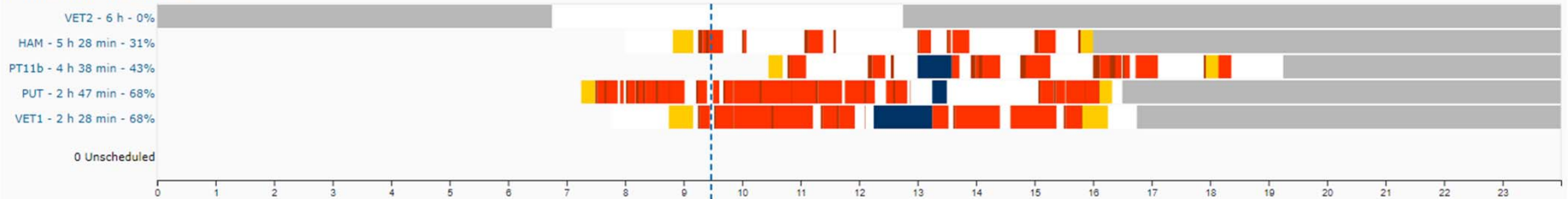
## Outsourced

	Total
Scheduled	
Offered	
Accepted	
Handled	

## On-time performance [View all >](#)

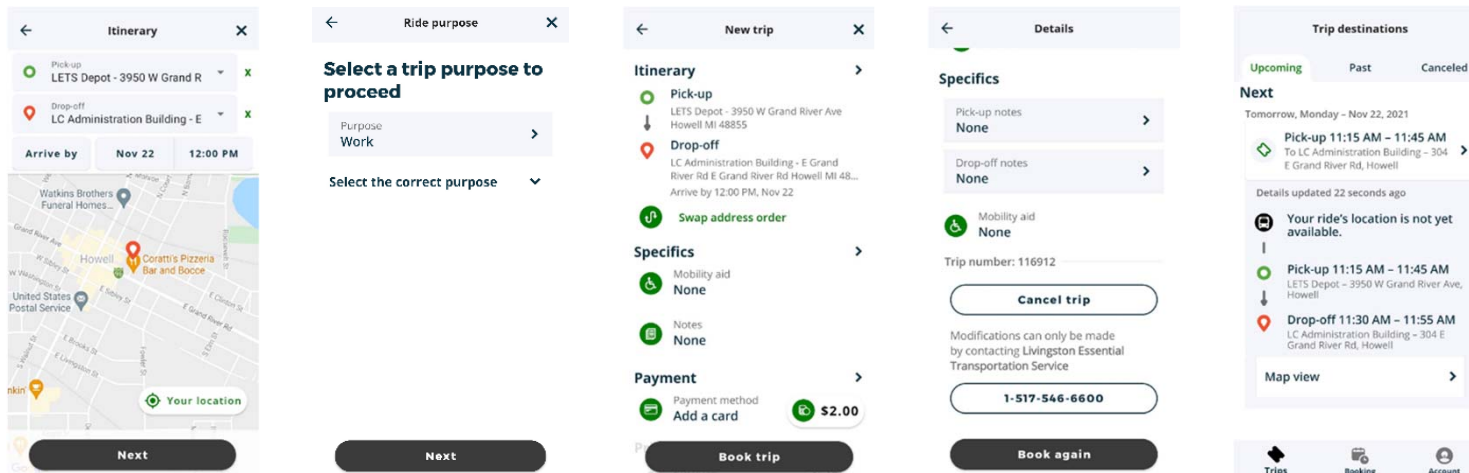
Time	Total	On time	Late	No info	Will-call	No-show	On-time %
06:00	18	15	2			1	88 %
07:00	39	34	5				87 %
08:00	57	56				1	100 %
09:00	46	40	3			3	93 %
10:00	37	33	1			4	97 %
11:00	42	35	6			1	85 %
12:00	42	37	3			2	92 %
<b>Total</b>	<b>519</b>	<b>465</b>	<b>33</b>			<b>22</b>	<b>93 %</b>

## Least utilized [View all >](#)

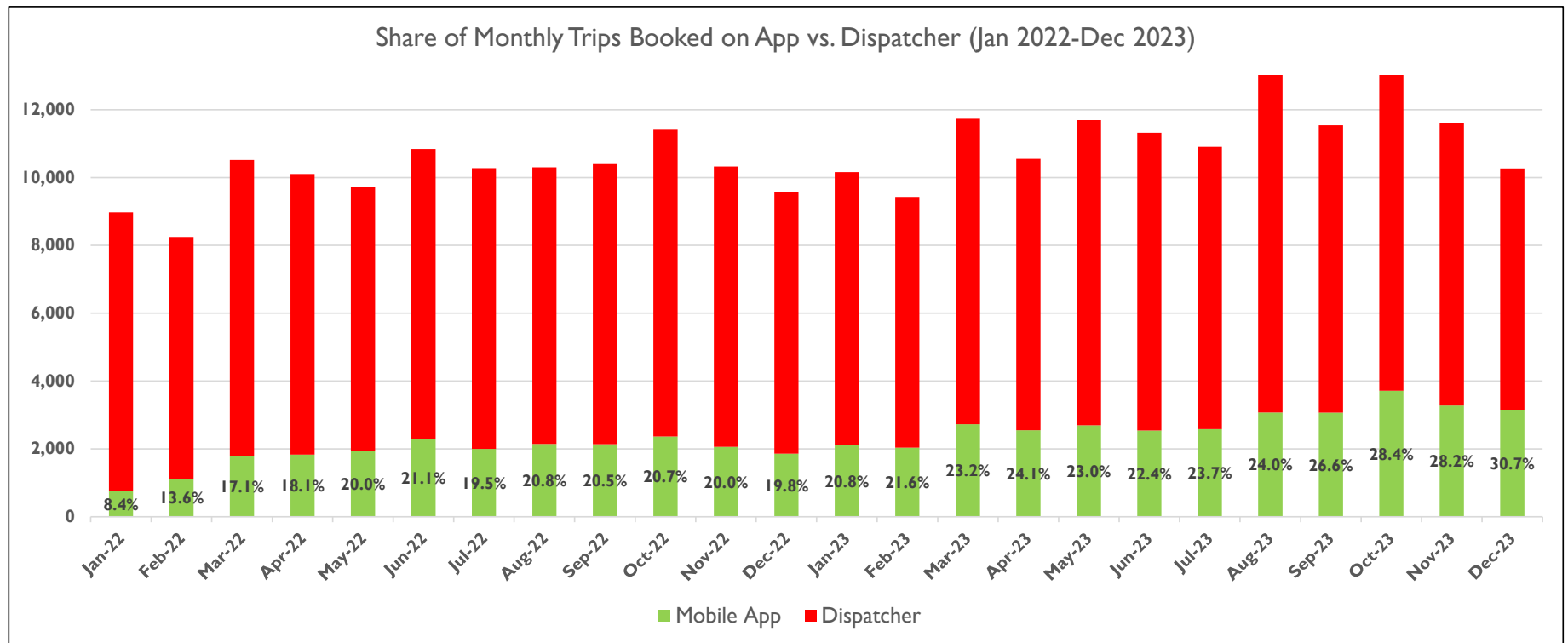


# LETS GO Mobile App

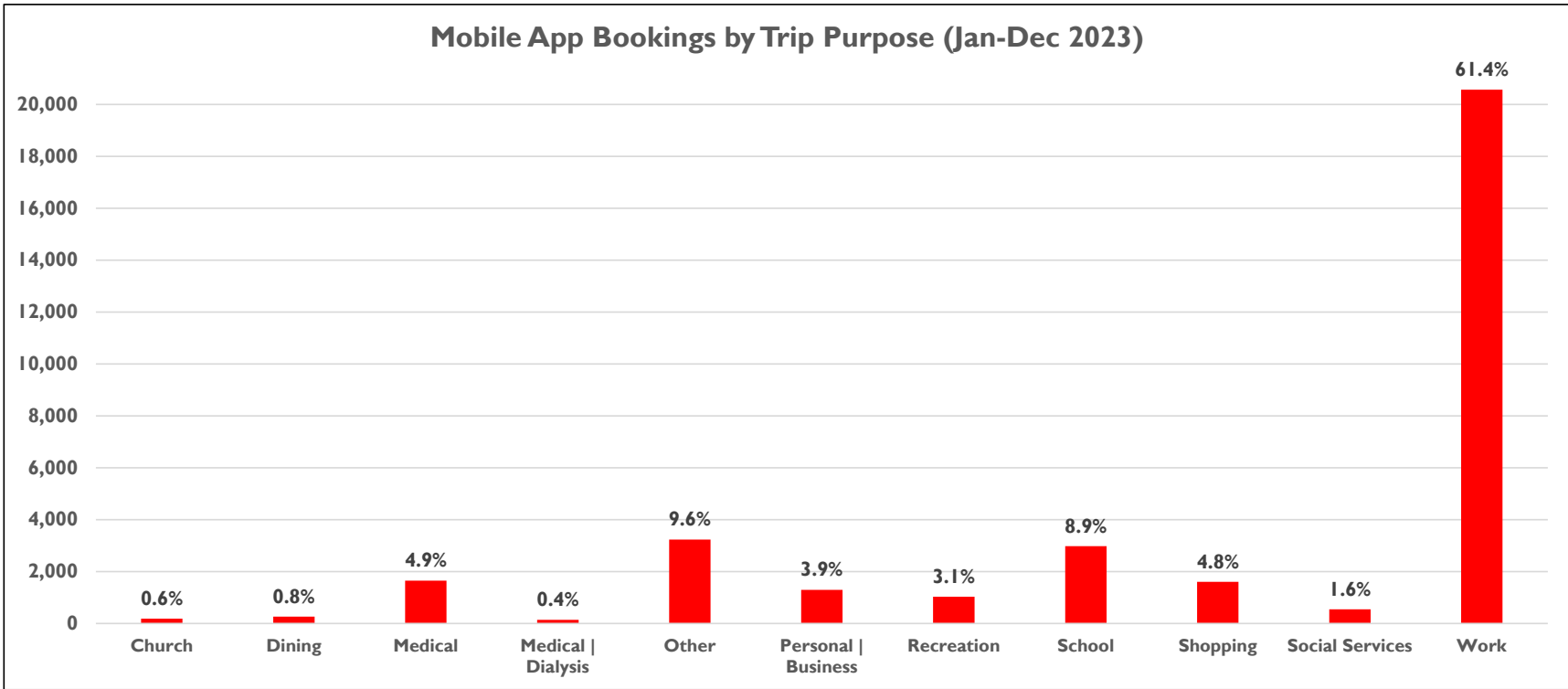
- Launched in January 2022 to improve the customer experience from trip booking through day of service
- Offers a convenient and efficient alternative to calling the dispatch office
- Customers can book trips up to 2 weeks in advance or on-demand
- Live bus tracking and trip updates via push notification



# LETS GO Mobile App – Share of Trip Bookings



# LETS GO Mobile App – Trip Purposes



# Service Expansion through Community Partnerships

- Grant funding available to expand services but additional “local match” needed
- Pursued targeted expansion through partnerships with community stakeholders
- Service agreements with Hamburg, Putnam, and Unadilla Townships for dedicated bus
- Partnership with Ascension, Trinity, and Michigan Medicine for healthcare transportation
- Partnership with People’s Express of Whitmore Lake for rural service



# Detroit Metro Airport Shuttle

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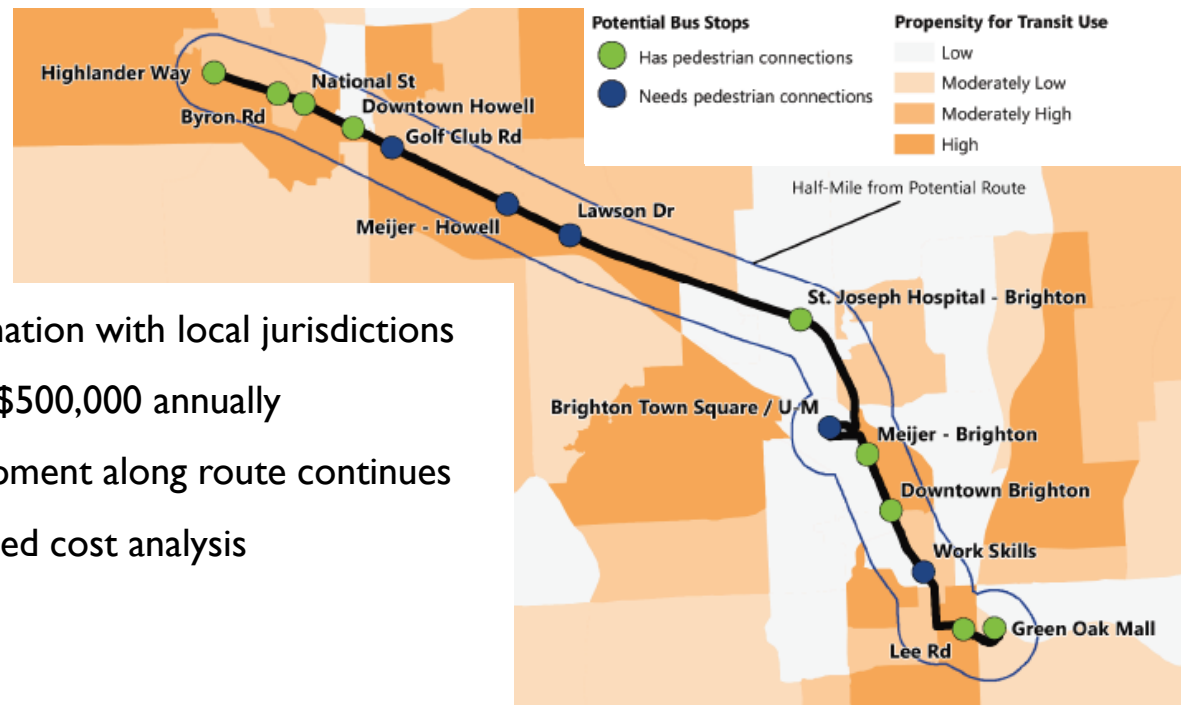
- Public feedback during planning process identified this as top priority for new services
- Launched partnership with Michigan Flyer in Fall 2019
- Operates as contracted services under LETS, eligible for State operating assistance
- **7,304 trips provided in FY 2023** (Avg. 20 passenger trips/day)



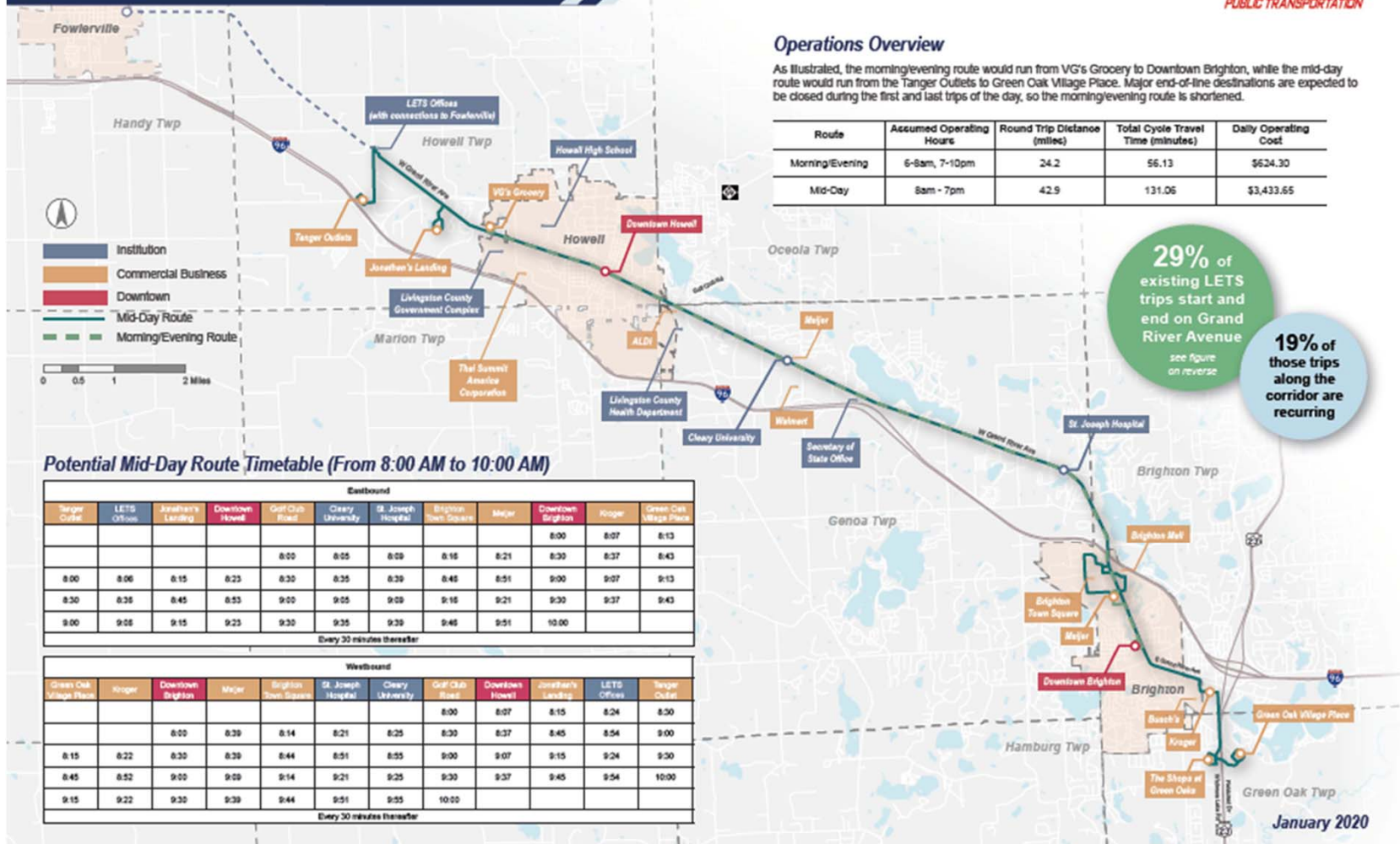


# Grand River Avenue Fixed-route Service (Proposed)

- LETS has never operated fixed-route service
- Increasing residential/commercial density
- 29% of stops within 1/2 mile of Grand River
- Completed route study in January 2020
- Would require large capital investment, coordination with local jurisdictions
- Major obstacle is local funding requirement of \$500,000 annually
- Renewed interest from stakeholders as development along route continues
- Planning process to resume in 2024 with updated cost analysis



# Grand River Avenue Bus Route



## Operations Overview

As illustrated, the morning/evening route would run from VG's Grocery to Downtown Brighton, while the mid-day route would run from the Tanger Outlets to Green Oak Village Place. Major end-of-line destinations are expected to be closed during the first and last trips of the day, so the morning/evening route is shortened.

Route	Assumed Operating Hours	Round Trip Distance (miles)	Total Cycle Travel Time (minutes)	Daily Operating Cost
Morning/Evening	6-8am, 7-10pm	24.2	56.13	\$624.30
Mid-Day	8am - 7pm	42.9	131.06	\$3,433.65

**29%** of existing LETS trips start and end on Grand River Avenue  
*see figure on reverse*

**19%** of those trips along the corridor are recurring

## Potential Mid-Day Route Timetable (From 8:00 AM to 10:00 AM)

Eastbound											
Tanger Outlet	LETS Office	Jonah's Landing	Downtown Howell	Golf Club Road	Clear University	St. Joseph Hospital	Brighton Town Square	Major	Downtown Brighton	Kruger	Green Oak Village Place
				8:00	8:05	8:09	8:16	8:21	8:30	8:37	8:43
8:00	8:06	8:15	8:23	8:30	8:35	8:39	8:46	8:51	9:00	9:07	9:13
8:30	8:36	8:45	8:53	9:00	9:05	9:09	9:16	9:21	9:30	9:37	9:43
9:00	9:06	9:15	9:23	9:30	9:35	9:39	9:46	9:51	10:00		
Every 30 minutes thereafter											
Westbound											
Green Oak Village Place	Kruger	Downtown Brighton	Major	Brighton Town Square	St. Joseph Hospital	Clear University	Golf Club Road	Downtown Howell	Jonah's Landing	LETS Office	Tanger Outlet
		8:00	8:09	8:14	8:21	8:25	8:30	8:37	8:45	8:54	9:00
8:15	8:22	8:30	8:39	8:44	8:51	8:55	9:00	9:07	9:15	9:24	9:30
8:45	8:52	9:00	9:09	9:14	9:21	9:25	9:30	9:37	9:45	9:54	10:00
9:15	9:22	9:30	9:39	9:44	9:51	9:55	10:00				
Every 30 minutes thereafter											

January 2020

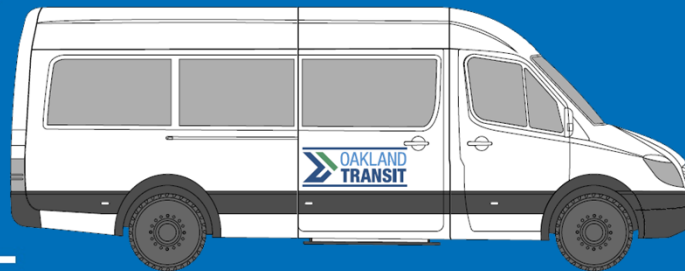
**Thank you!**

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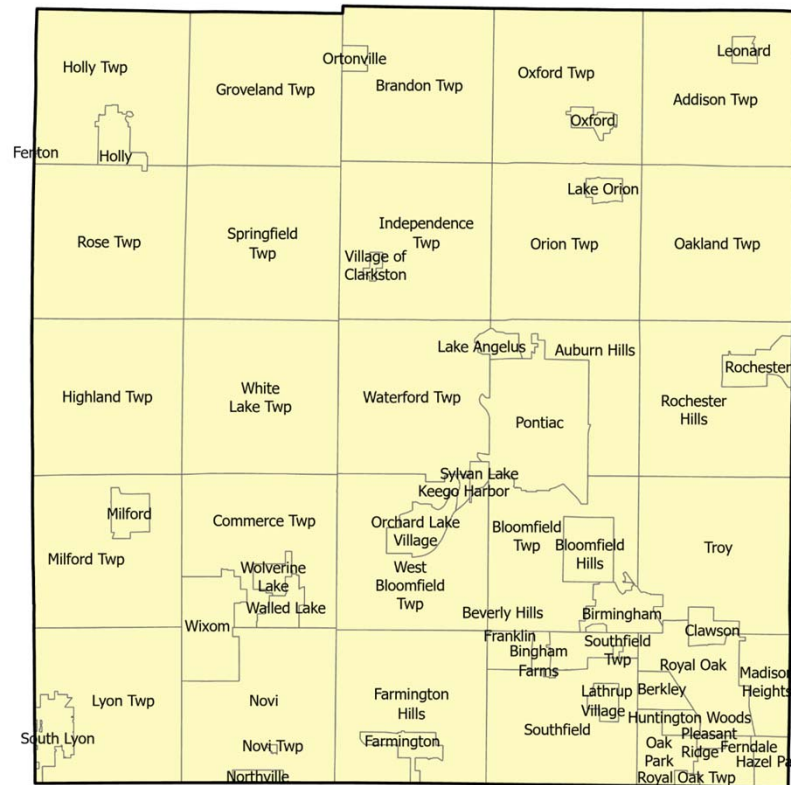


# Navigating Change

Towards a More Cohesive Rural / Small Urban Transit System



# About Oakland County



62 cities,  
villages, and  
townships

1,274,395  
people (2020)

1,023,765 jobs  
(2019)

Source: SEMCOG 2050  
Regional Forecast

# About Oakland County

- Area: 910 square miles
- More than 1,400 lakes
- 57% of Fortune 500 Companies do business in Oakland County
- Headwaters of five major rivers
- 27 Main Street Districts
- 60,000 acres of Public Parkland
- 2 National Water Trails
- 2 Cross-State Trails
- Nearly 148 miles of regional trails



Farm & Country



Back to Nature



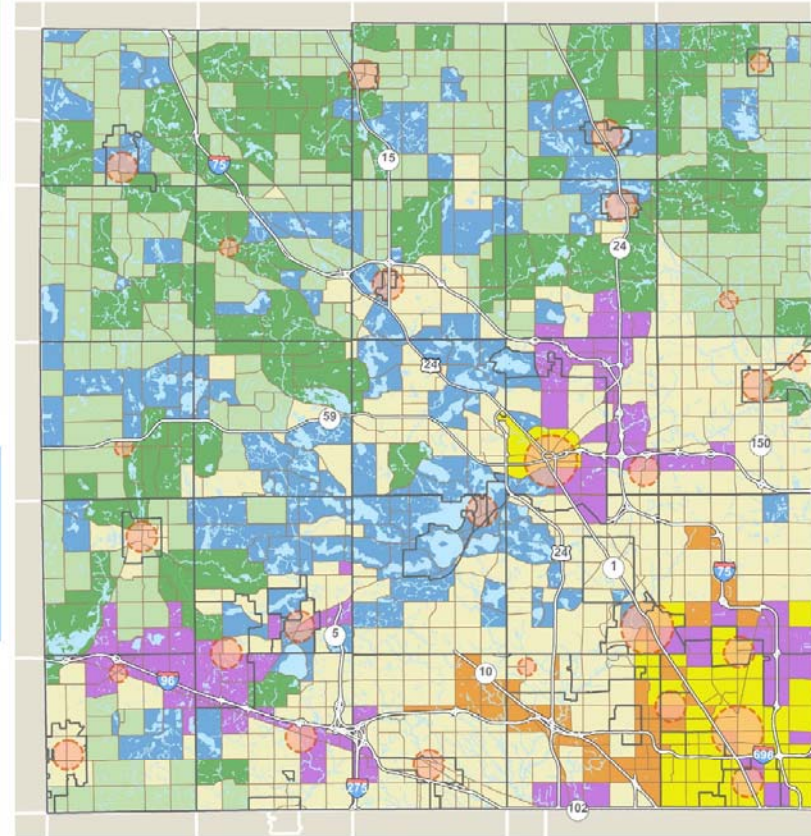
Lake Living



Suburban Style



Urban Neighborhood



Downtowns & Town Centers



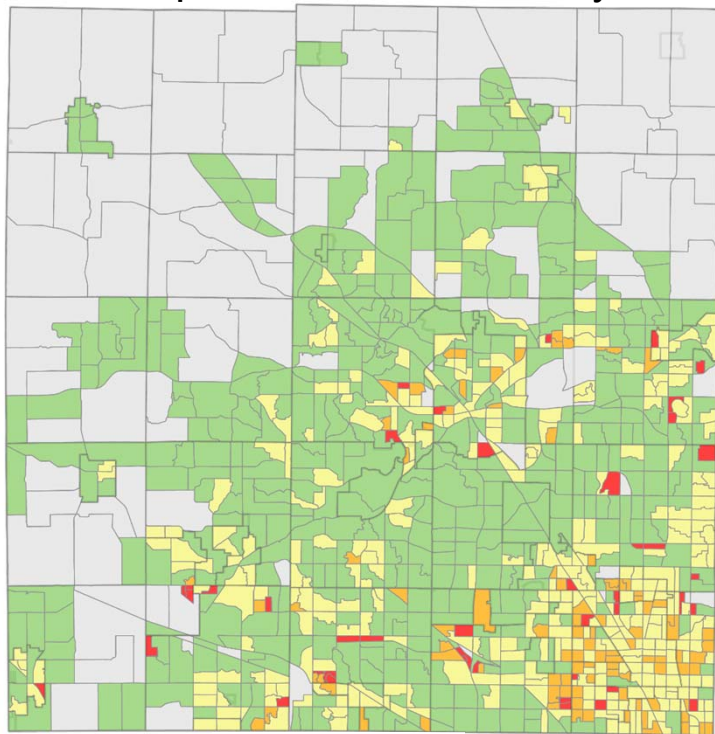
Major Office



R&D / Industrial / High Tech

# About Oakland County

## Population & Job Density



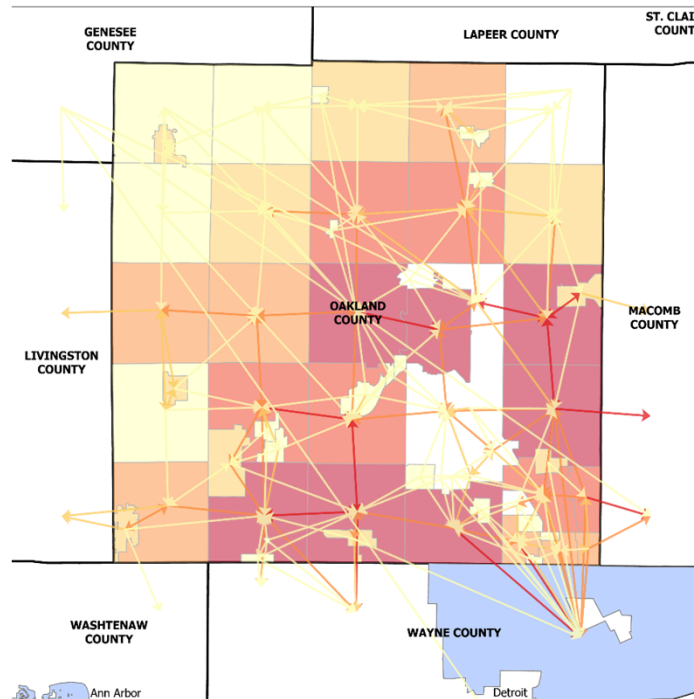
**Population + Jobs per Acre**

- < 1
- 1 - 5
- 6 - 10
- 11 - 15
- > 15

Source: ACS  
2021 and LEHD  
2021 Data



## Residents' Travel Patterns



**Daily Trips between Communities**

Top 5 Flows for each Community

- 1 - 2,500
- 2,501 - 5,000
- 5,001 - 12,000
- 12,001 - 36,806

**Daily Trips within the Community**

- 230 - 5,000
- 5,001 - 12,000
- 12,001 - 36,000
- 36,001 - 72,000
- 72,001+

Source:  
LOCUS 2022  
Q4 Data

Net “importer”  
of workers:  
About 1.7x as  
many people  
commuting in  
as those  
commuting out

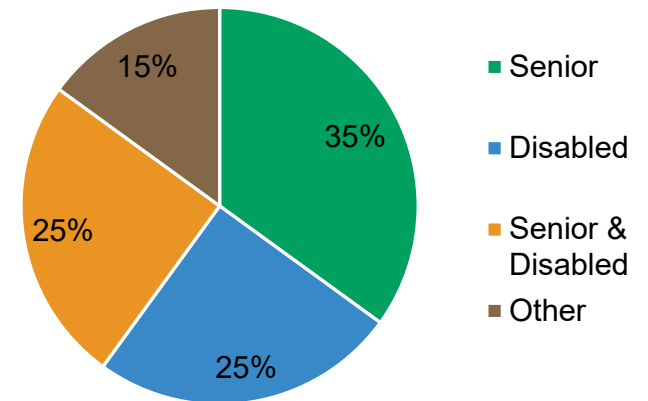
Source: LEHD 2021 Data

# Transit in Oakland County

Diverse Needs → Diverse Transit Solutions



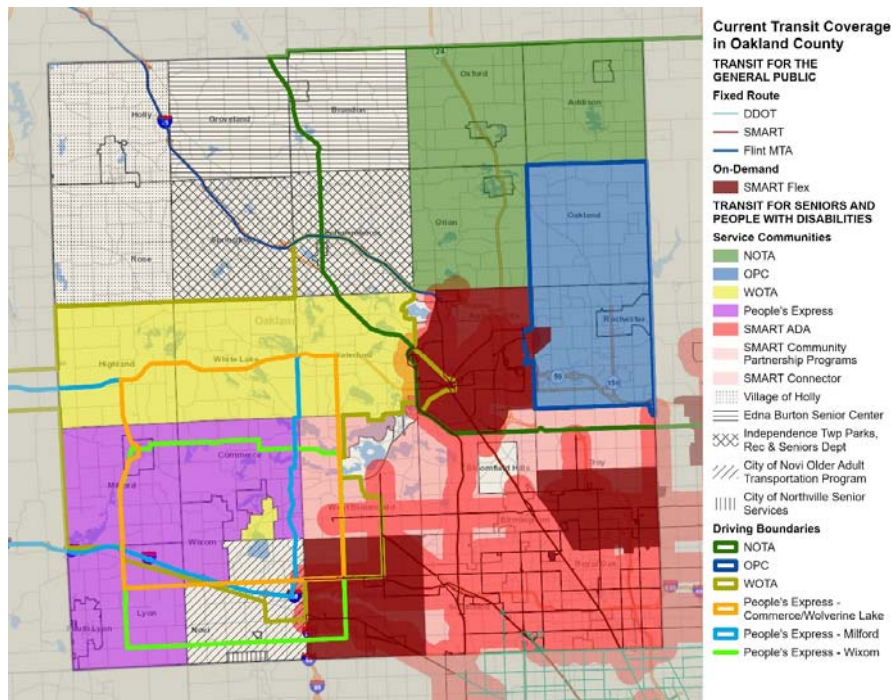
Current Community Transit Ridership:





# Transit in Oakland County

Until recently:



# Transit in Oakland County

**Pre-Nov 2022**

Business as Usual



**Post-Nov 2022**

New Possibilities

**Nov 2022**  
Countywide  
Transit Millage

# Transit in Oakland County

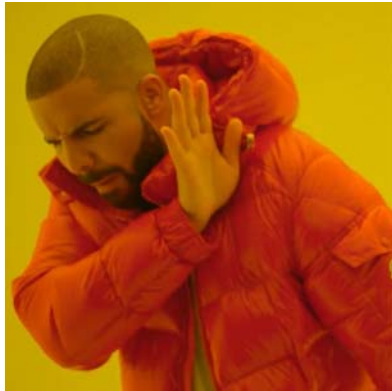


## Before the Countywide Millage:

- Communities with no transit whatsoever and communities with service for seniors and people with disabilities only
- Disconnect between rural/small urban services and the big urban system
- Varying fare structures, hours of operation, etc.

Result: Confusing and uncoordinated trip-making

# Transit in Oakland County



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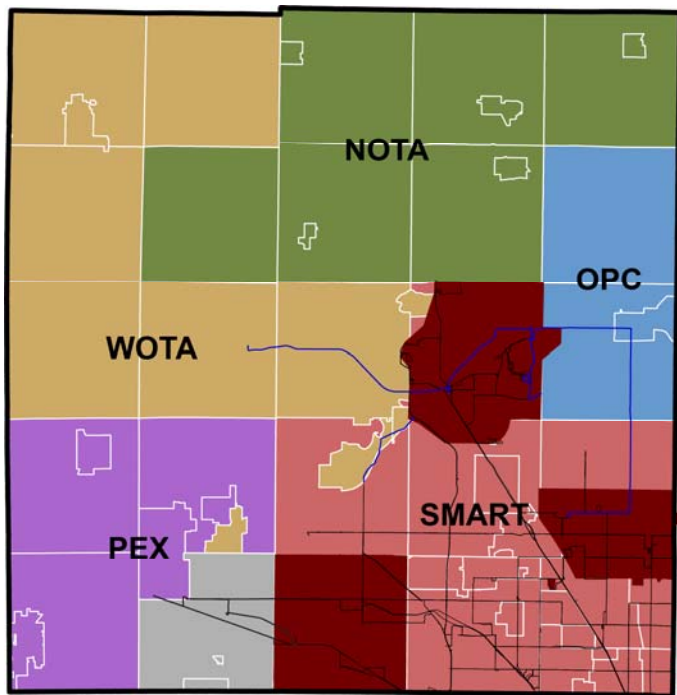
## After the Countywide Millage:

- New Transit Division within Economic Development alongside Planning
- Working towards all communities covered with general public service
- Coordinated services amongst the different transit providers, including the big urban system
- Unified fare structures, hours of operation, etc.

Result: Working towards seamless and easy-to-understand trip-making

# Transit in Oakland County

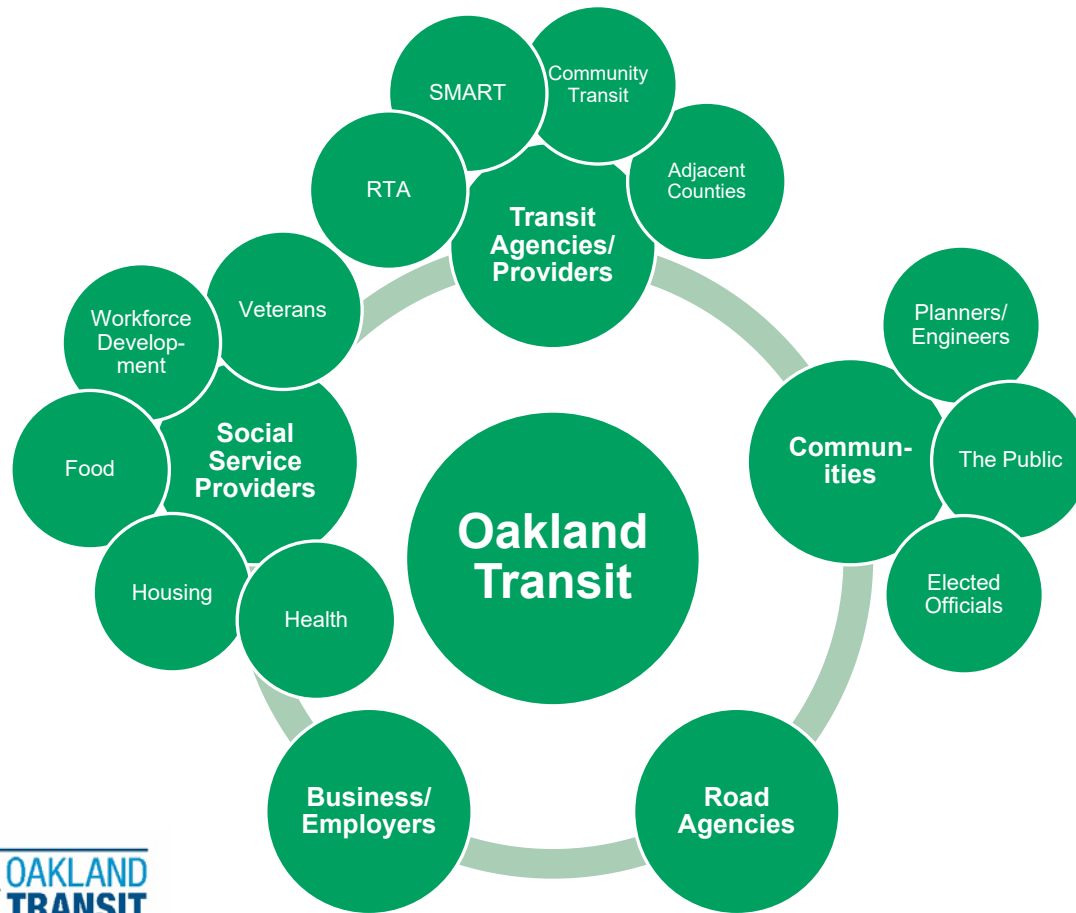
Today:



\*pending Novi decision

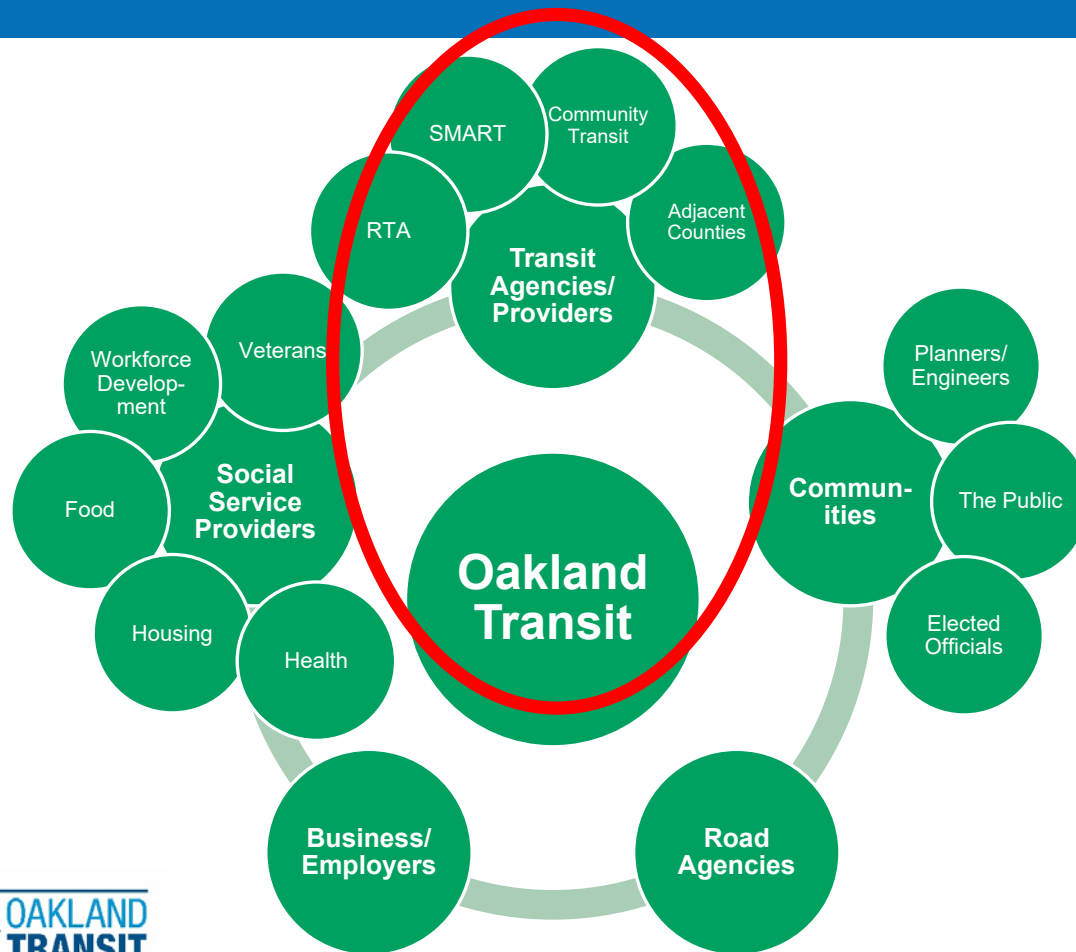


# How We're Improving: Coordination & Collaboration



- Monthly Transit Provider Meetings
- Planners Gatherings and Transit Forums
- Transit 101 Guide
- Access to Transit Technical Support and Funding
- Transportation Resource Referrals and Navigation

# How We're Improving: Coordination & Collaboration



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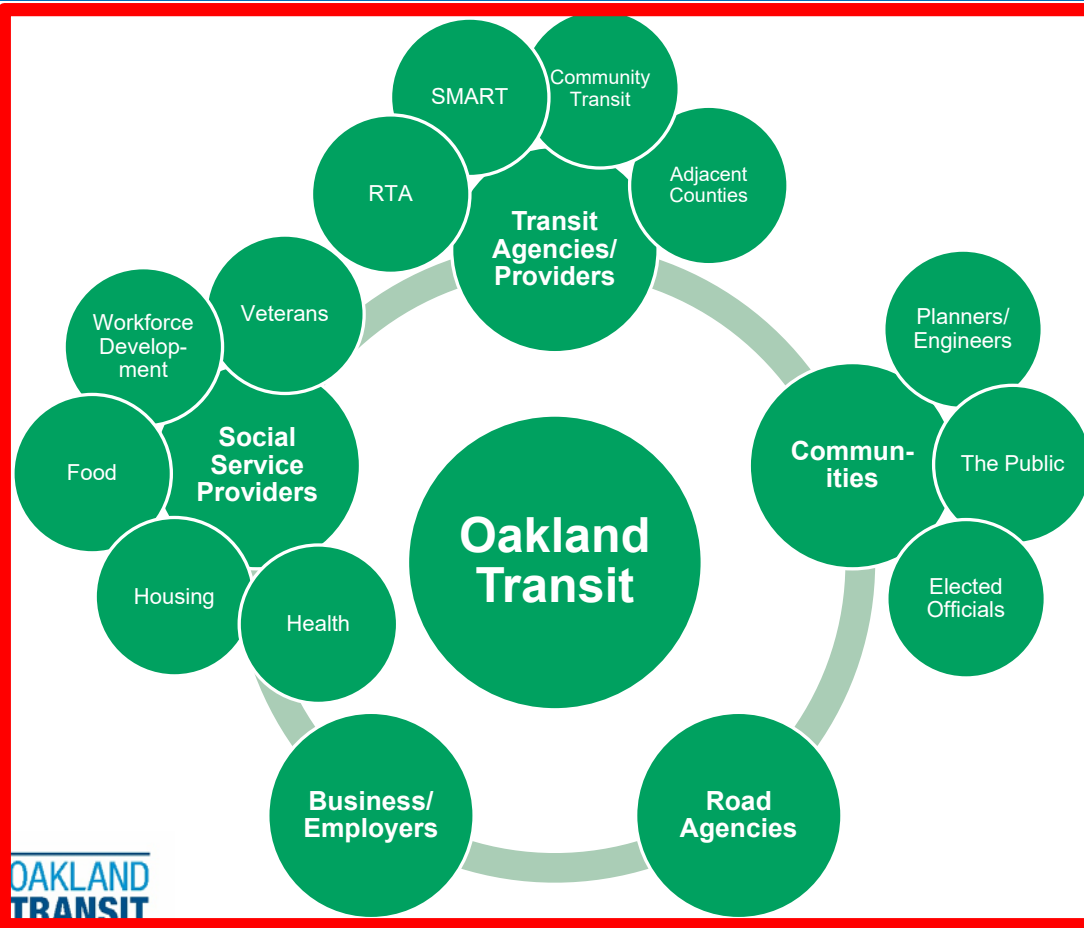
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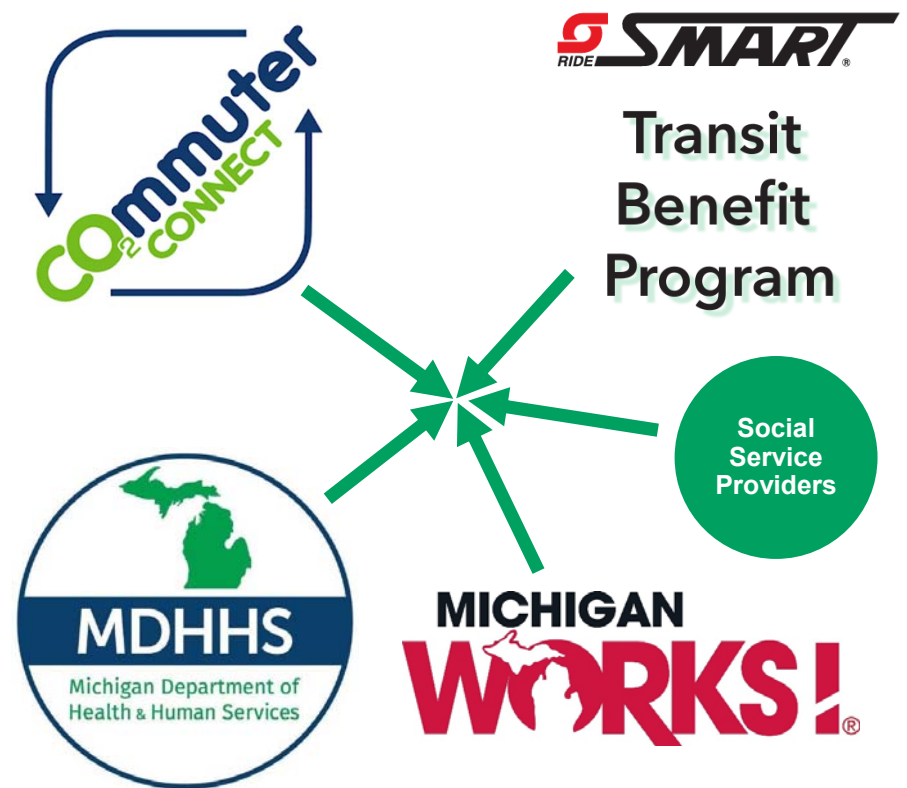
# How We're Improving: Coordination & Collaboration



- Monthly Transit Provider Meetings
- Planners Gatherings and Transit Forums
- Transit 101 Guide
- Access to Transit Technical Support and Funding
- **Transportation Resource Referrals and Navigation**

# Lessons Learned: Free Bus Passes or Something More?

- Get to the root of the need
  - Awareness, access to info, language, hand to hold
- Inventory and build on existing - don't reinvent the wheel
  - Existing fund and system for those who can't afford their fare
  - Existing training of dispatch and drivers to spot signs of homelessness, etc and connect riders to resources
  - Centralized Dispatch for Veterans
  - Moonshot Project
- Bring experts outside your silo to the table and vice versa
  - Blueprint to End Homelessness Subcommittee



# How We're Improving: Technology

- [Interactive web map](#) to see transit options
- New dispatch software
  - Algorithms to match riders to drivers in real-time (more like Uber/Lyft)
  - Riders can book trips online or with an app
  - All transit providers on the same platform to enable better coordination, trip sharing, and transfers

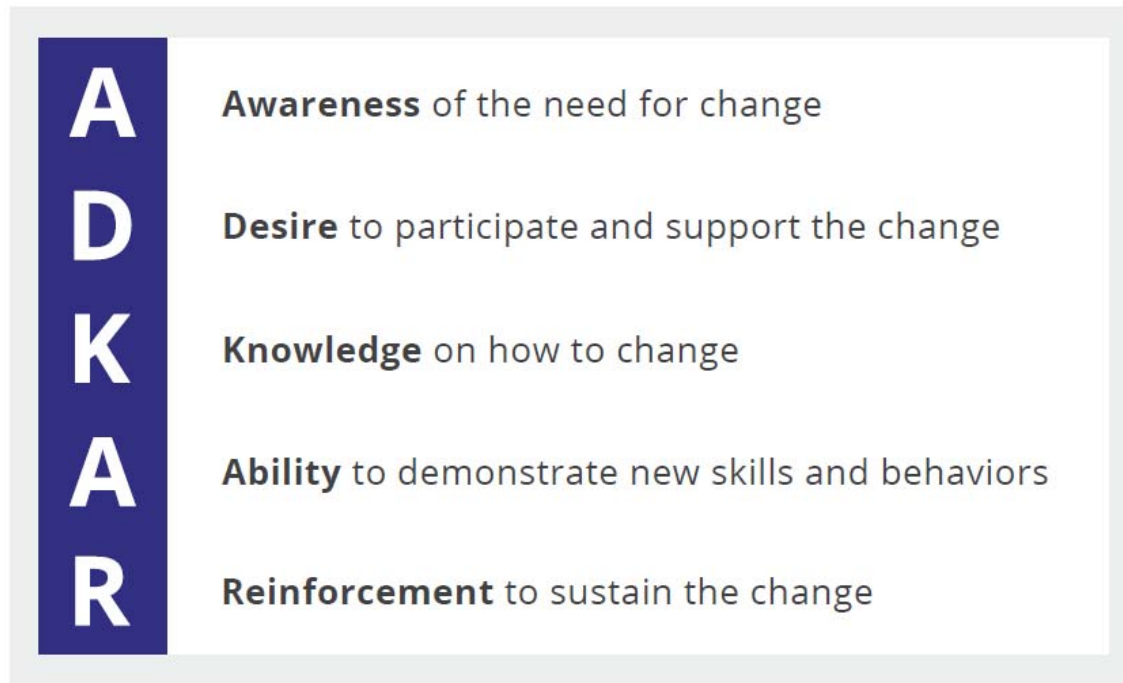


# Lessons Learned: Transitioning Smoothly to New Tech

- Engage end users from the beginning
  - Procurement vs. after-the-fact
- Lead with empathy and consider how each step of current processes will be impacted
  - Walmart vs. Mom-and-Pop
  - Frozen tablets
- Let people “kick the tires” before go-live



# Navigating Change



[Prosci – An Introduction to Change Management](#)

- Clearly define and continually come back to: **Why** are we making this change?
- Where possible, let those “on the ground” own how change happens
- Build in time and resources for coordination and training

## My “Why”:

“You are bringing hope and life to many of us who were desperate and about to give up on life. Our isolation, powerlessness, and segregation from the rest of the world had become overwhelming for some of us. Several months ago, there was a 22 day wait for us to get transportation to a grocery store... There are several of us who are overwhelmed about the miracle of WOTA service to Holly. It just does not seem real! It is hard to believe we can independently go shopping, to the doctor, swimming, to parks, to the library, to a movie, out to eat... I rarely cry, but this miracle brings tears to my eyes. I have rarely used the word miracle, but WOTA is our miracle. Thank you!”

- Holly resident

WOTA = one of our transit providers



[OakGov.com/OaklandTransit](http://OakGov.com/OaklandTransit)

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Planner Principal  
Oakland County Transit Division

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Email: [lagpacans@oakgov.com](mailto:lagpacans@oakgov.com)

