



2023 MPO-RPC Joint Webinar Series

Digging into the Data: Learning How to Leverage the MPO's Data for Your Community

February 16, 2023



Poll 1



Tell us who you are!





Housekeeping Items

This webinar is being recorded.

Participants are muted.

Feel free to introduce yourself in the chat.

Put all questions in the Q&A. Staff will monitor the Q&A and answer as many questions live at the end as we can. We will try to answer quick clarifications during the presentation if possible.

The webinar slides and recording will be sent to registrants and available for review on the MPO and CARPC websites after the event.



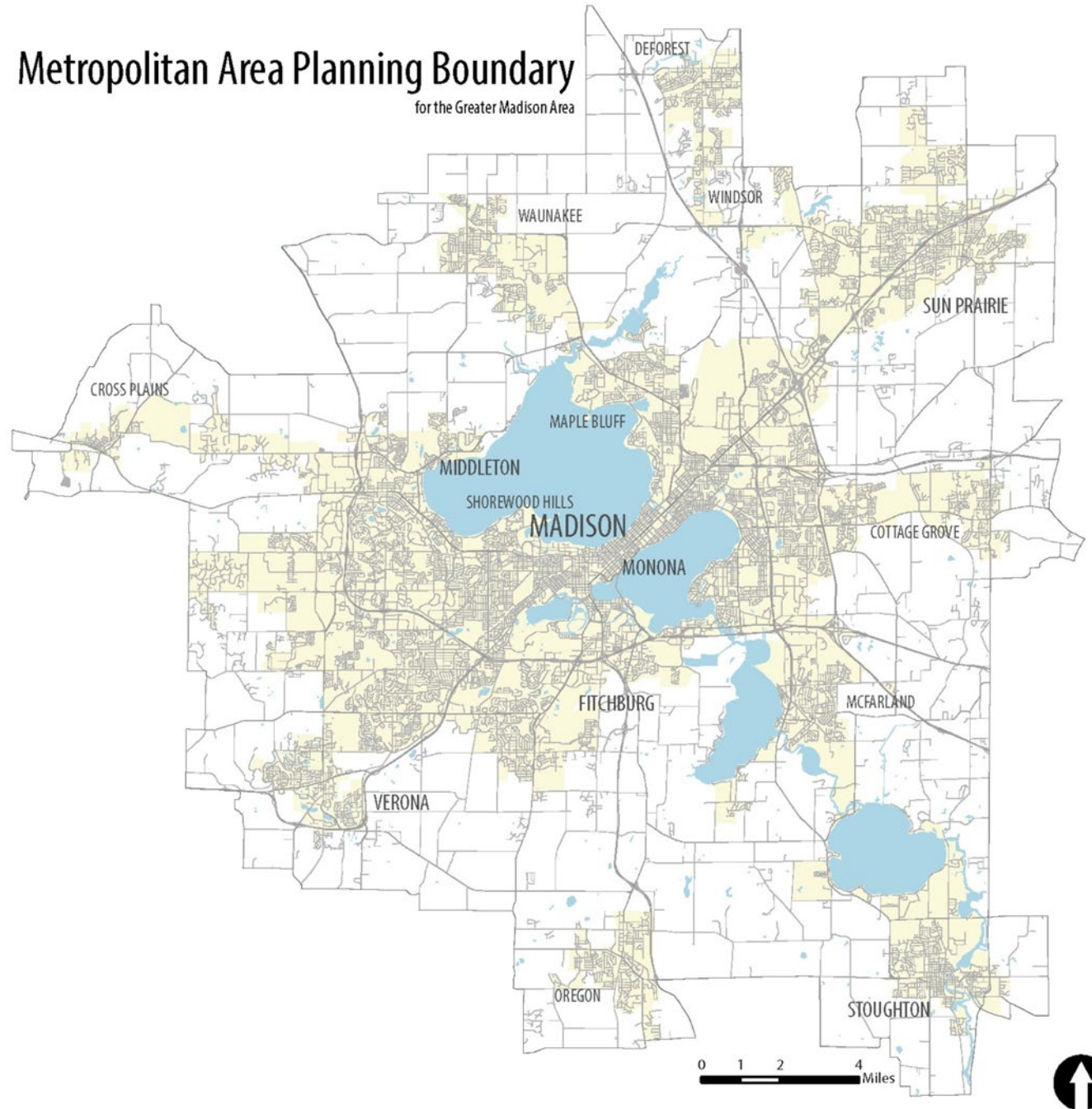
ABOUT THE MPO

MISSION

Lead the collaborative planning and funding of a sustainable, equitable transportation system for the greater Madison region.

VISION

A sustainable, equitable regional transportation system that connects people, places, and opportunities to achieve an exceptional quality of life for all.





Primary Responsibilities

What the MPO Does



Brings communities together to prioritize, coordinate, and fund transportation projects in our region.



Develops a long-range Regional Transportation Plan (RTP) that looks ahead 20 - 30 years.



Collects data and develops or supports special plans and studies.



Approves federal funding for projects.



Manages RoundTripGreaterMadison.org and promotes sustainable transportation options such as bicycling, bus, carpool, vanpool and walking.

What the MPO Does NOT Do



Design, construct or maintain roadways or bike paths



Control traffic or enforce traffic laws



Operate public transit service



Plan how land is used



Poll 2

What data sources do you use most frequently?





What Data Can the MPO Provide?

traffic volume
big data
stress bike network
employment growth
environmental justice land use
pavement condition
census crash
traffic congestion

Starting Out with the Basics



 **Connect Greater Madison** Regional Transportation Plan 2050 Interactive Summary

[Introduction](#) [How Will the Region Grow?](#) [Our Transportation System Today](#) [Our Transportation System Tomorrow](#) [Recommendations and Additional Resources](#)

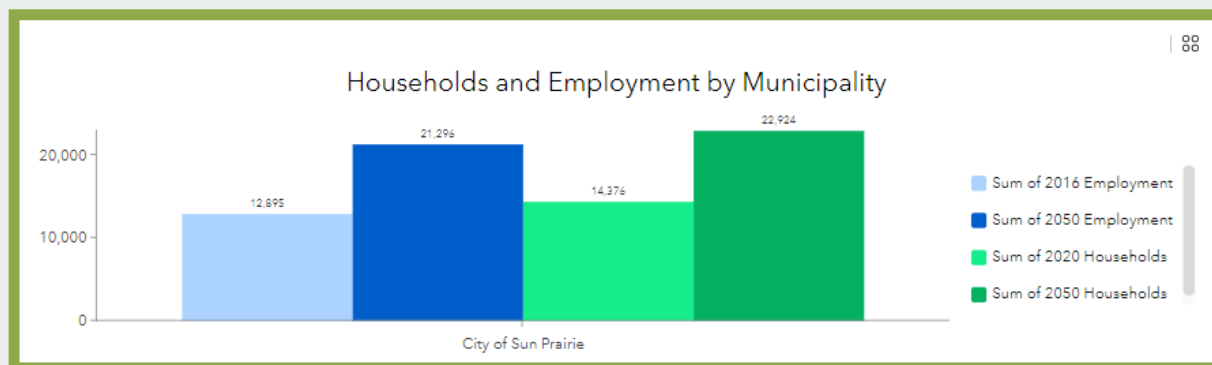
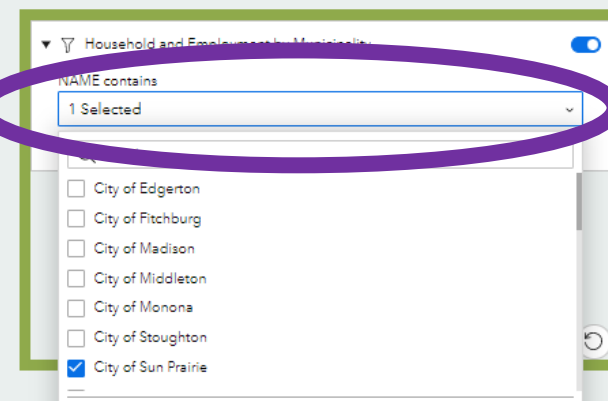
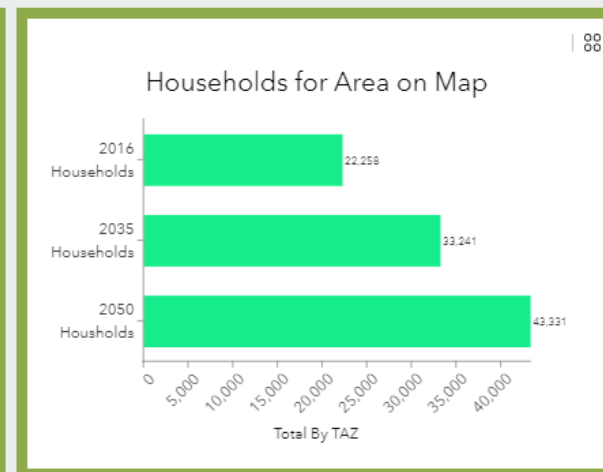
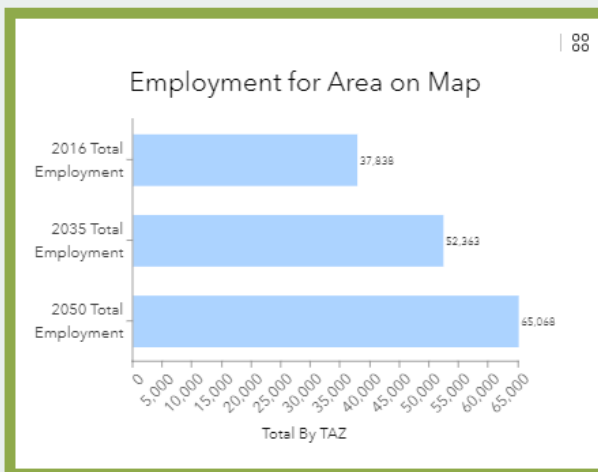
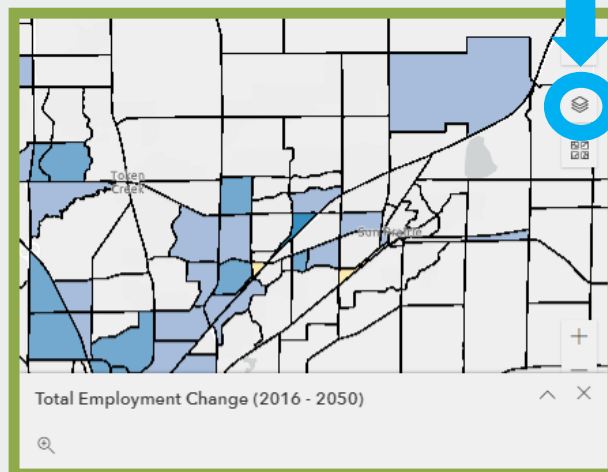
CONNECT GREATER MADISON
2050
REGIONAL TRANSPORTATION PLAN

 The Connect Greater Madison 2050 Regional Transportation Plan (RTP) sets the framework for the future of transportation in the Madison region, identifying how the region intends to invest in the transportation system to accommodate current travel demands and future growth, while setting priorities that balance limited funds.

This interactive site is a general overview of the Connect Greater Madison 2050 Regional Transportation Plan. Refer to the **Additional Resources** section for the full version of the plan.



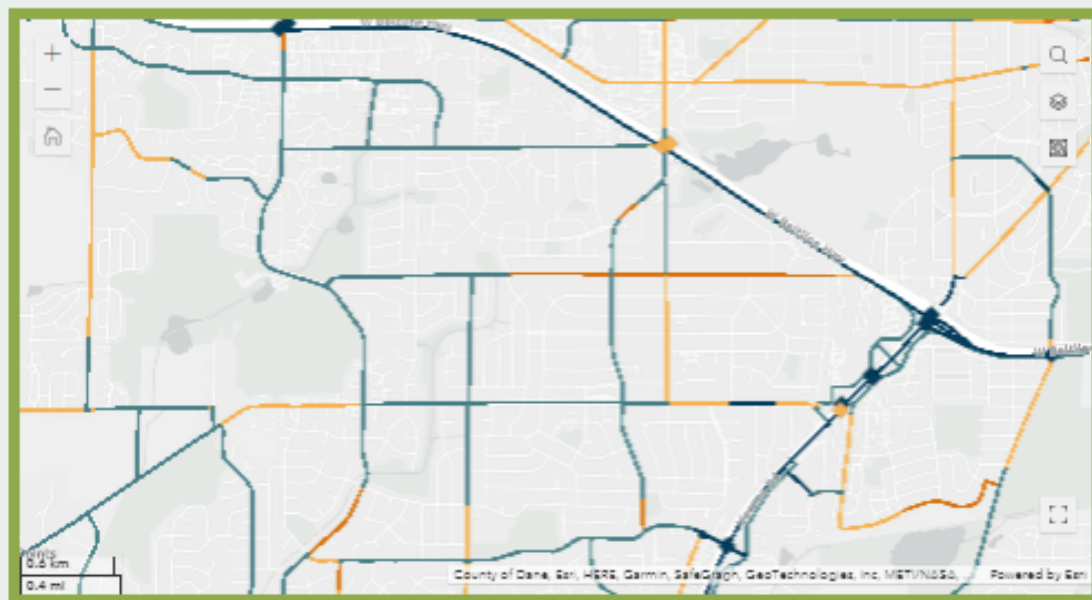
Population and Employment Growth



- Roadways
- Transit
- Bicycle
- Pedestrian
- Safety
- Intelligent Transportation

Make sure to click the dropdown arrow to get full list of options

Pavement Condition



Understanding pavement conditions, and where a road is in its lifecycle, is the key to selecting the proper pavement preservation treatments, and ensuring the most efficient management of our roadway assets. The ratings shown are based on the Pavement Surface Evaluation and Rating (PASER) system, for local roads, and the Pavement Condition Index (PCI), for state-owned roads. Pavement rated "fair" or worse is generally nearing the end of its repairable life.

Bridge condition is measured by the National Bridge Inventory (NBI). Measured by percentage of deck area, 49% of bridges in the Madison area are in good condition and just 1% are in poor condition.

Maps including:

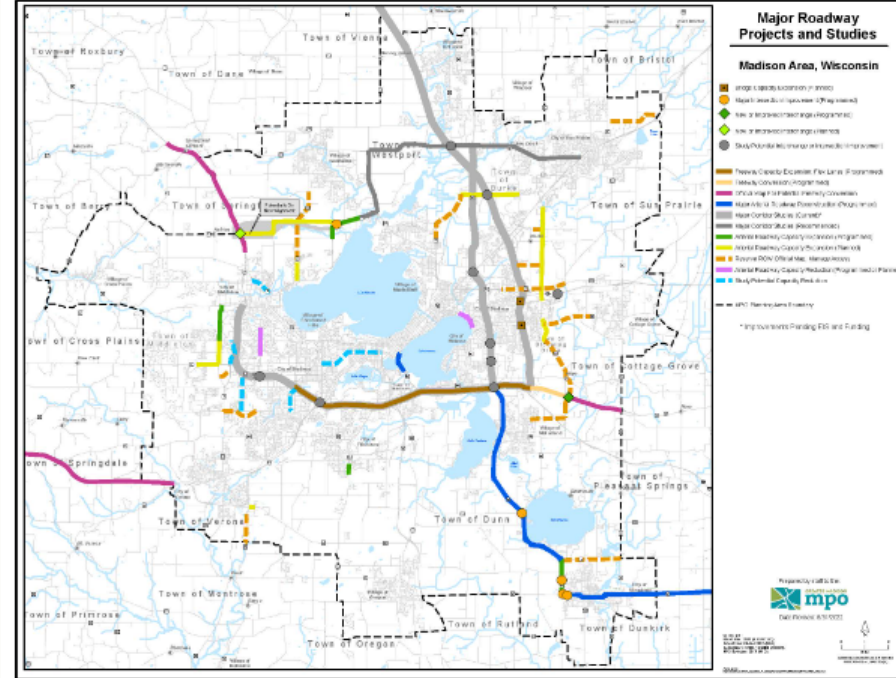
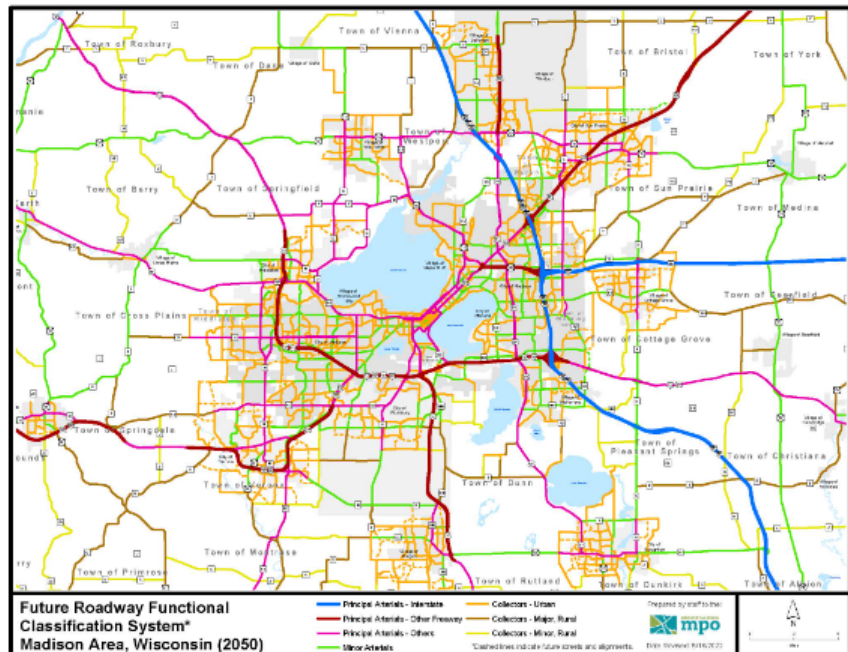
- ☐ Pavement Condition
- ☐ Traffic Volumes
- ☐ Truck Routes and Truck Volumes
- ☐ Travel Time Reliability
- ☐ Metro Route Redesign
- ☐ Bicycle Facilities
- ☐ Bicycle Level of Traffic Stress
- ☐ Pedestrian Facilities
- ☐ Traffic Signals and ITS Devices



[Introduction](#)
[How Will the Region Grow?](#)
[Our Transportation System Today](#)
[Our Transportation System Tomorrow](#)
[Recommendations](#)

Make sure to click the dropdown arrow to get full list of options

Future Roadway Network
Future Transit Network
Future Bike Network

[Future Roadway Functional Class Map PDF](#)
[Major Roadway Projects and Studies Map](#)


Maps including:

- ☐ Future Roadway Functional Classification
- ☐ Major Roadway Projects and Studies
- ☐ Future Planned Regional Transit Network
- ☐ Future Planned Transit Network-High Frequency Network
- ☐ Future Planned Bikeway Network
- ☐ Planned Priority Regional Paths

Traffic speeds, access, and street connectivity vary according to each street's function. Local streets are generally low-speed low-volume routes, with frequent intersections and

Potential future projects are identified as either programmed, scheduled to be built during the next 5 years, or planned, currently unscheduled. Studies, which may or



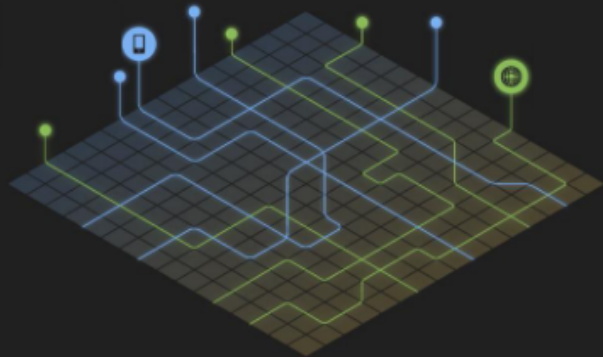
StreetLight Insight Overview

StreetLight's platform provides users with 24/7 access to transportation analytics in U.S. and Canada

Inputs: Connected device data

DATA SOURCES:

IoT data, GPS data
Contextual data (road, census, etc.)
Road, rail and bus networks

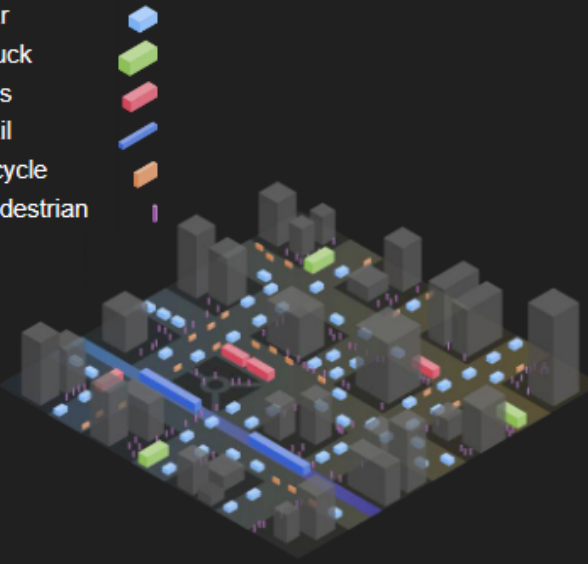


Every month, we ingest, index and process vast amounts of data to develop a view into North America's network of roads, bike lanes and sidewalks.

Processing: Machine Learning + Algorithmic Processing

MODES:

Car
Truck
Bus
Rail
Bicycle
Pedestrian



Our proprietary data processing engine Route Science® transforms them into contextualized, normalized, aggregated, multimodal travel patterns.

Output: StreetLight InSight® Metrics

FUNDAMENTALS:

Origin Destination

Routing

VMT/VKT

Select Link

AADT, MADT, hourly traffic

Turning Movement Counts

Vehicle Hours of Delay (VHD)

TRIP ATTRIBUTES:

Trip speed, travel time, length

Trip circuitry

TRAVELER ATTRIBUTES:

Inferred trip purpose

Demographics

StreetLight InSight® lets you analyze how vehicles, bicycles, pedestrians, trucks, and bus and rail passengers move across virtually every road and Census Block.



StreetLight Insight Overview

Faster, better answers to your biggest problems
Industry Use Cases:



Transportation Planning

- Before & After Studies
- Congestion Studies
- Event & Tourism Studies
- Freight Studies
- First & Last Mile Studies
- Transit Studies
- Travel Demand Management/Modeling
- Traffic Calming
- Cut-through Analysis
- Public Engagement



Traffic Engineering and Operations

- Congestion Studies
- Corridor Studies
- Travel Time
- Turning Movements
- Work Zone Safety
- Detour Planning & Outreach
- Weaving Analysis
- AADT / Traffic Counts
- Routing
- Pavement Asset Management



Safety and Active Transportation

- Safety Exposure Model
- Countermeasure Assessment
- Statewide and Local Context Classification
- Temporary and Permanent Count Analyses
- Bike Route Heat Maps
- Corridor Analysis
- Corridor Safety Assessment



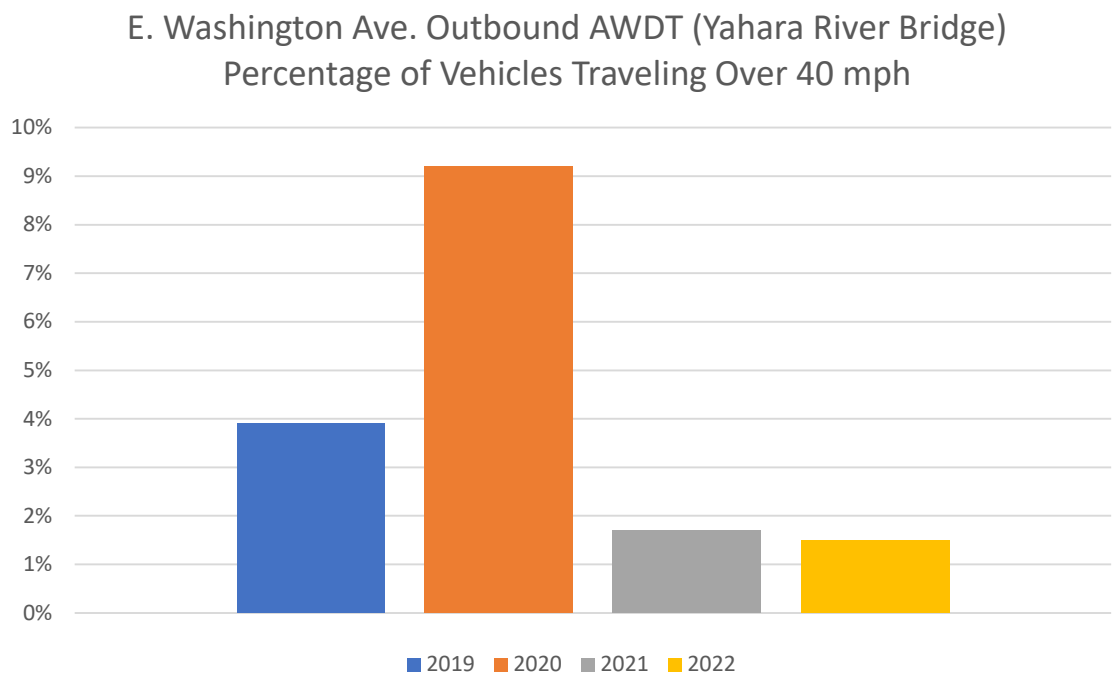
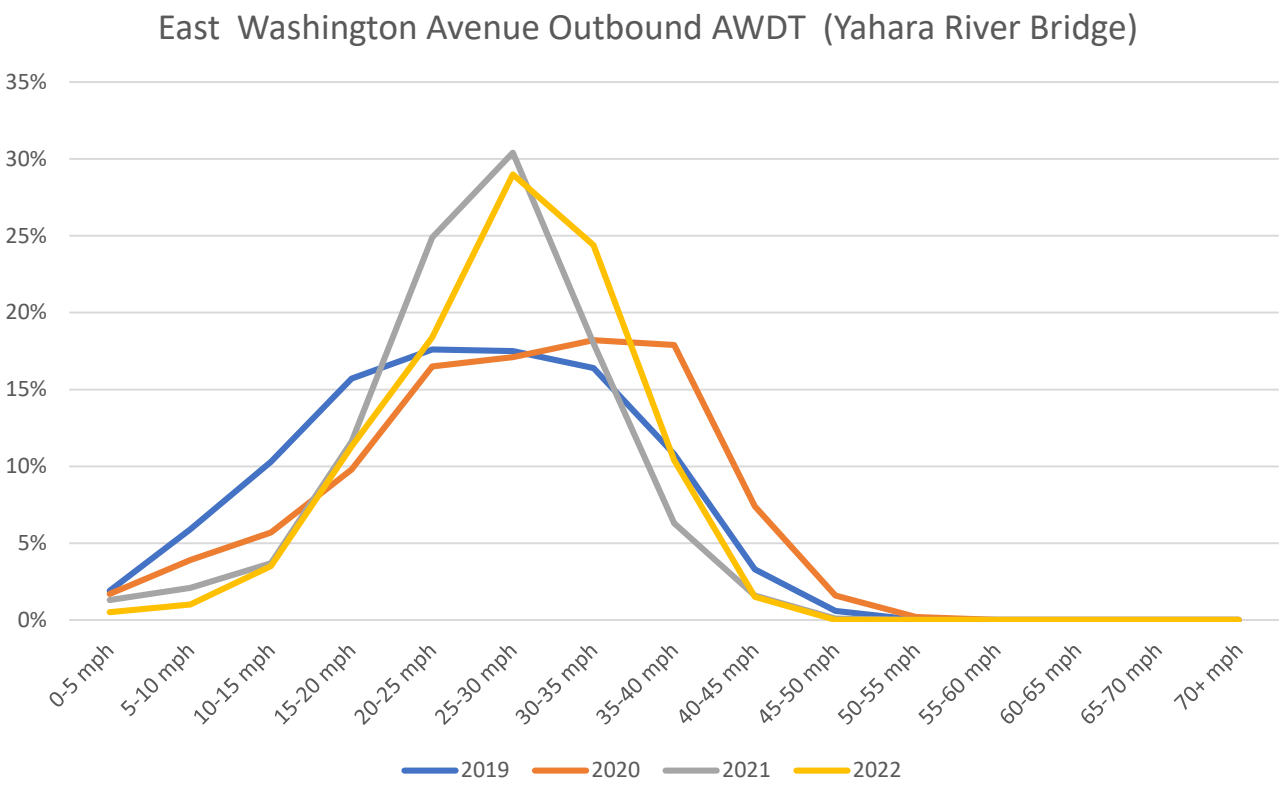
Smart Cities and New Mobility

- Before & After Studies
- EV Infrastructure Planning
- Greenhouse Gas Emissions
- VMT
- Ride Hailing & Delivery Studies
- Social Equity
- Connected Vehicle Planning





E. East Washington Avenue Speed Limit Reduction



Speed Data from April 2019, April 2020, April 2021, and April 2022



Beltline Traffic Originating from Communities in Dane County

S. Of University Ave/USH 14

- 40.1% from Madison
- 24.5% from Middleton
- 6.5% Village of Waunakee
- 4.1% Town of Middleton
- 2.7% from Verona

S. Of University Ave/USH 14

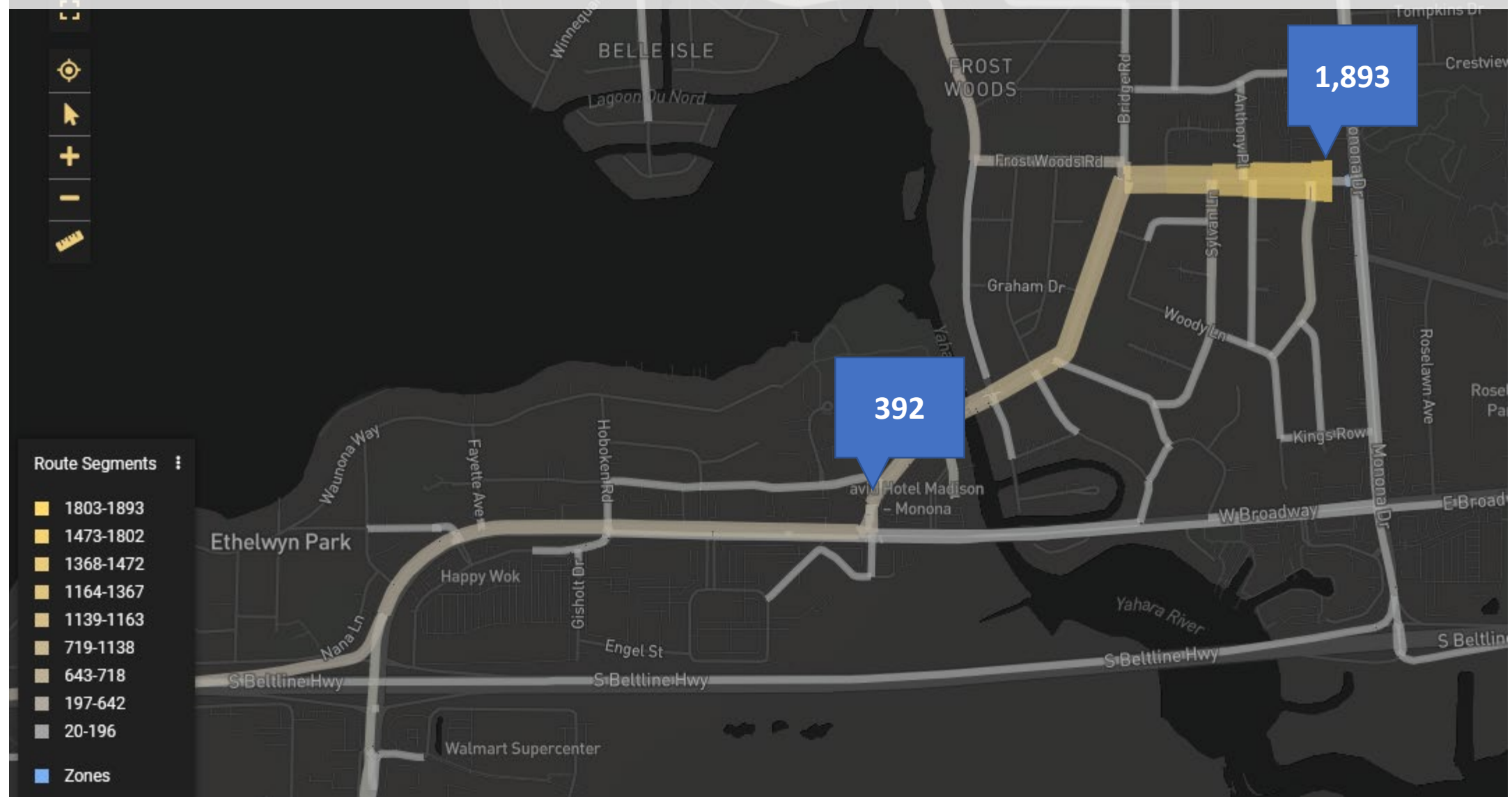
- 56.1% from Madison
- 6.7% from Middleton
- 6.7% from Fitchburg
- 4.1% from Verona
- 3.4% City of Monona

E. of USH 51:

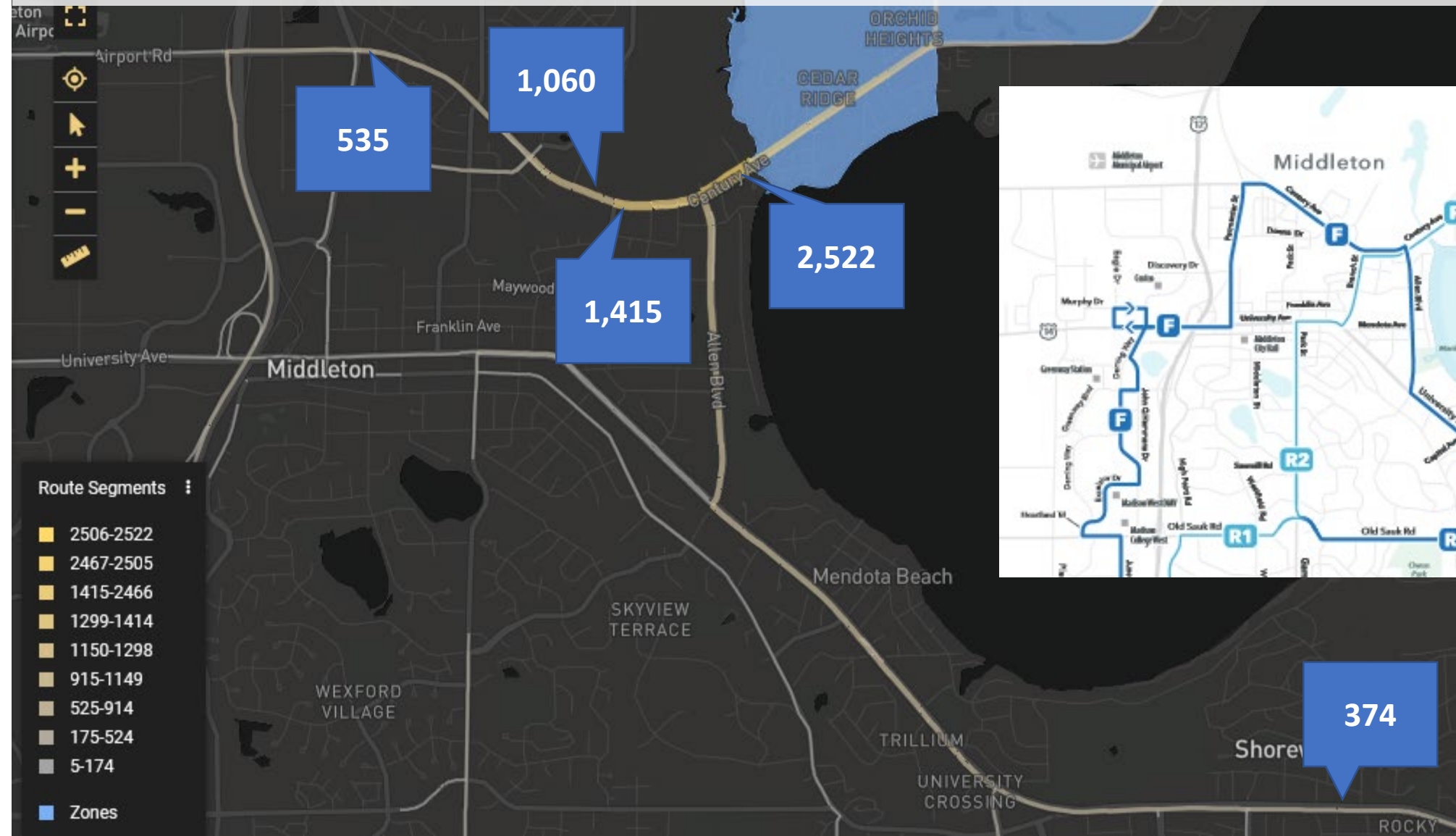
- 43.3% from Madison
- 8.6% from Sun Prairie
- 6% from Fitchburg
- 5.9% from Monona
- 3.6% Village of McFarland



Frost Woods Cut -Through Traffic (Monona)

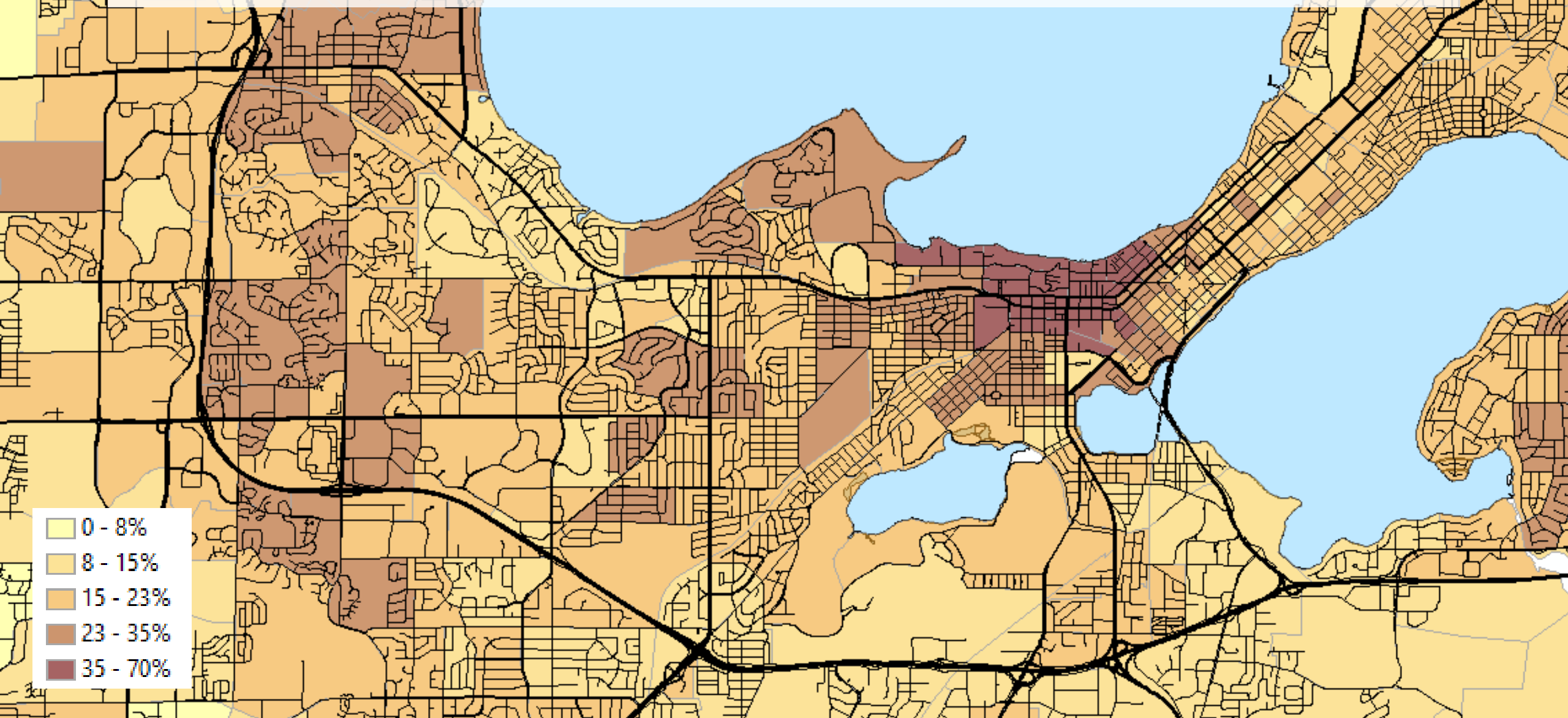


Transit Network Redesign Top Routes (Middleton)



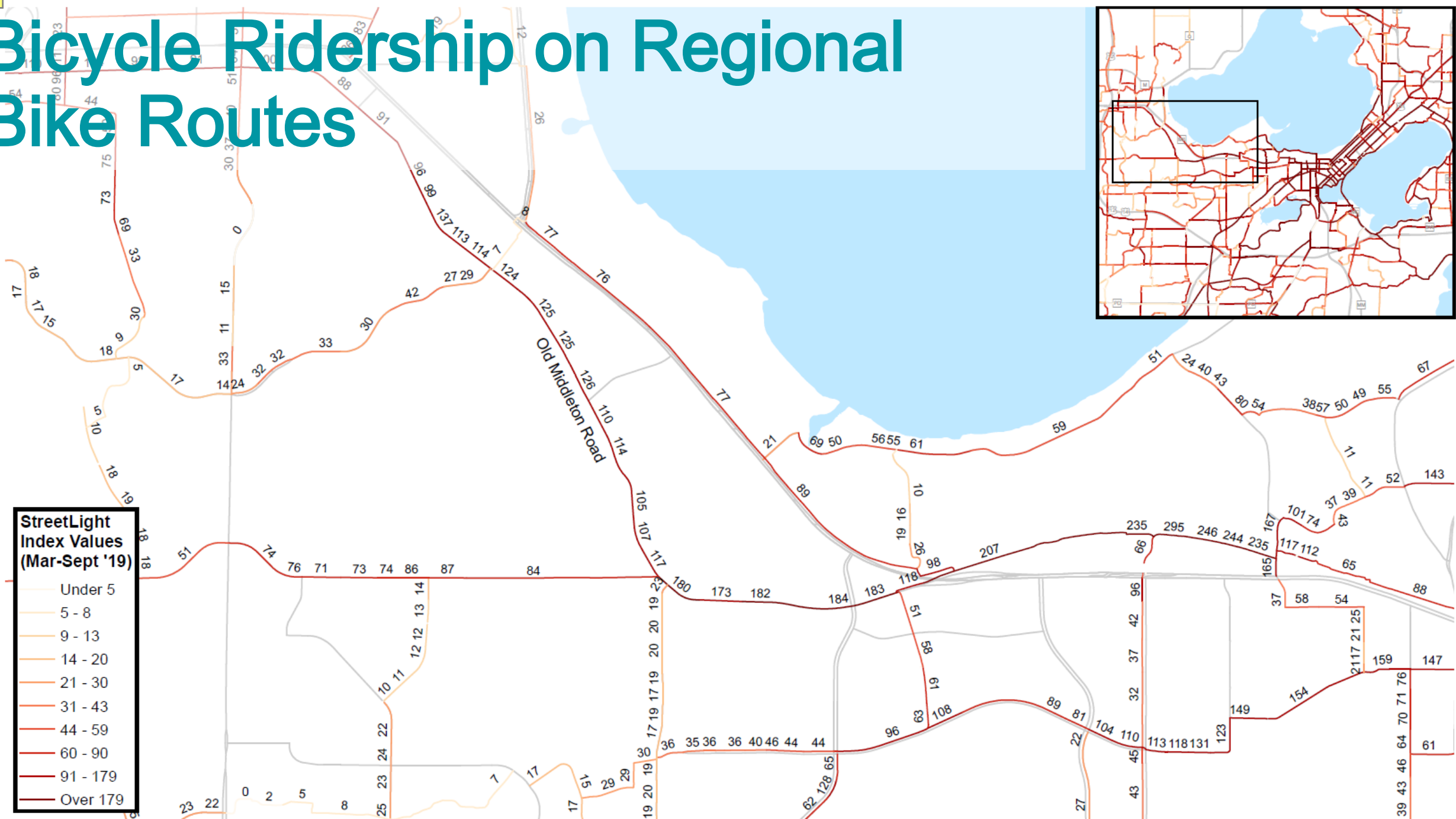
Bicycle Opportunity Zones

Percent of 0 -2 mile trips from zones





Bicycle Ridership on Regional Bike Routes



Bicycle Network & Traffic Stress

Level of Traffic Stress (LTS)

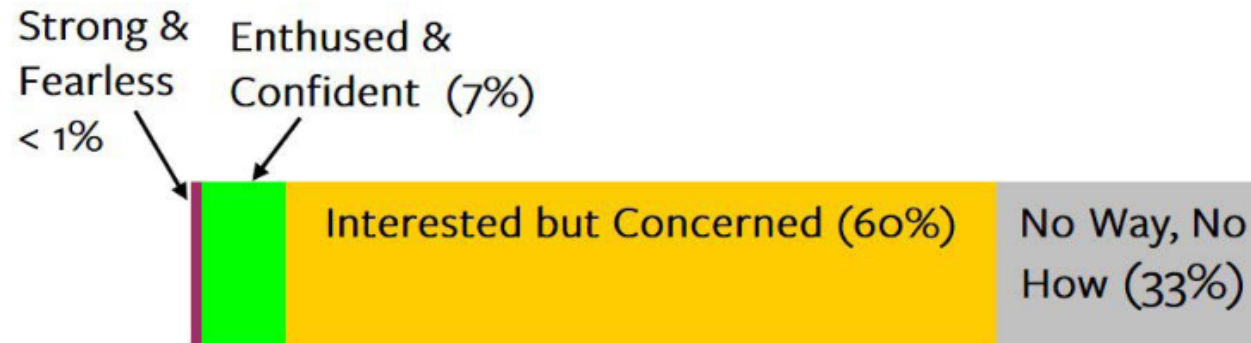
LTS 1– Strong separation from all except low speed, low volume traffic. Simple -to-use crossings. Suitable for children.

LTS 2– Except in low speed / low volume traffic situations, cyclists have their own place to ride. Limits traffic stress to what the mainstream adult population can tolerate.

LTS 3– Involves interaction with moderate speed or multilane traffic, or close proximity to higher speed traffic. Acceptable to the “enthused and confident.”

LTS 4– Involves being forced to mix with moderate speed traffic or close proximity to high-speed traffic. Acceptable only to the “strong and fearless.”

Figure 1 Four Stages of Bicycling Comfort



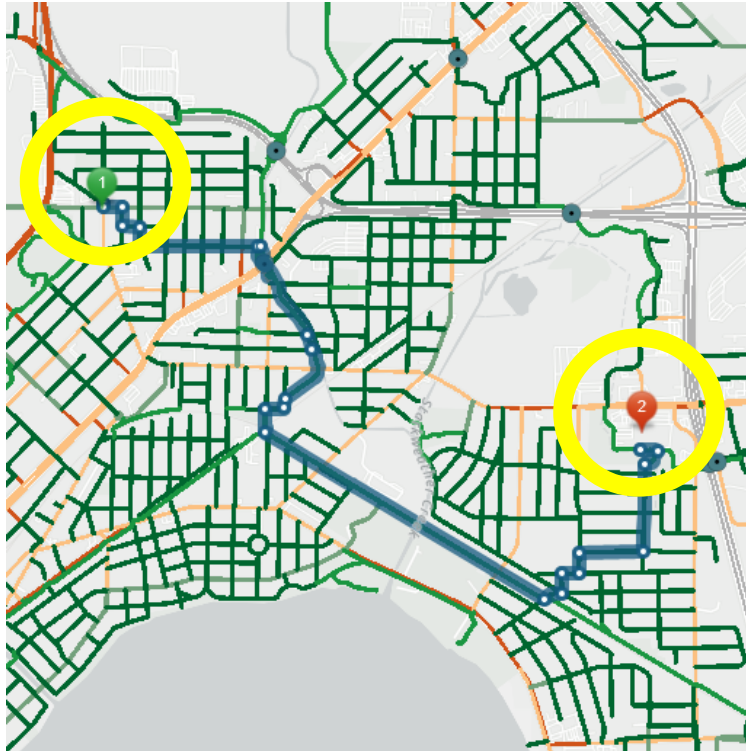
Source: Roger Geller, City of Portland



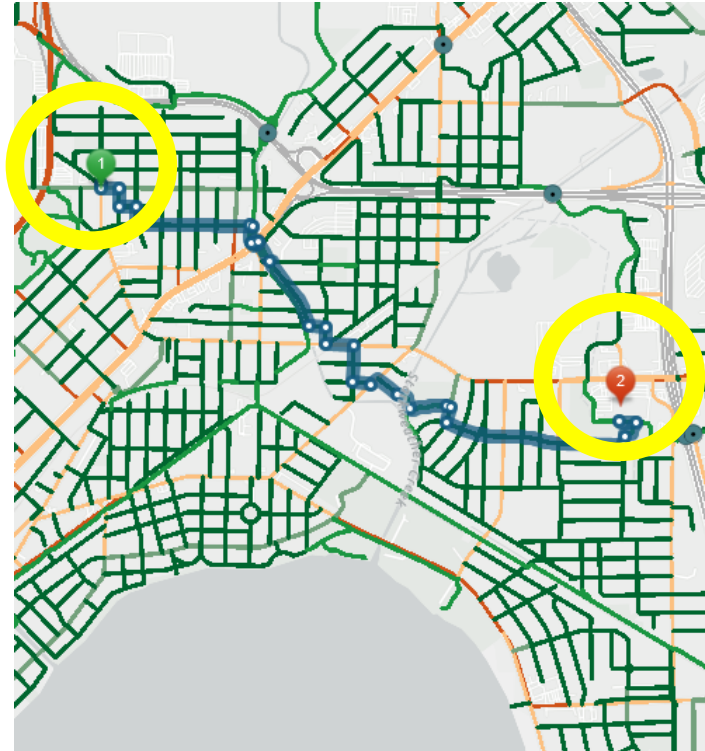


LTS Route Finder Comparison

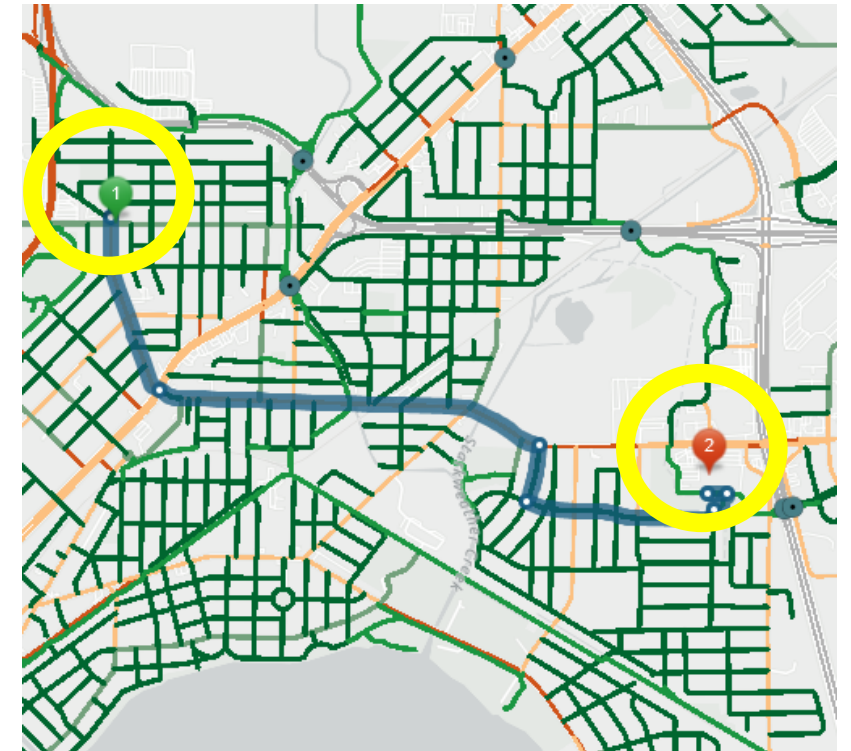
Low
L: LTS 1-2 Only



Medium
M: LTS 1-3 Only



Unrestricted
U: Any Route



Maps and Data

www.greatermadisonmpo.org/maps

Dan Seidensticker – GIS Specialist

dseidensticker@cityofmadison.com

Demo

- On-line Mapping
- GIS Data Access

/



The screenshot shows the homepage of the Greater Madison MPO website. The header features a navigation menu with links: HOME, ABOUT, TRANSPORTATION PLANNING, MEETINGS & COMMITTEES, MAPS & GIS DATA, PERFORMANCE MEASURES, and TDM / RIDESHARE. Below the menu is a banner image of a person on a bicycle with the Greater Madison MPO logo. The main content area includes a search bar, a welcome message, and a section titled 'WHAT'S NEW AT MPO' which contains a 'Something's New!' announcement about the organization's rebranding. The left sidebar contains links to various resources and contact information.

HOME ABOUT TRANSPORTATION PLANNING MEETINGS & COMMITTEES MAPS & GIS DATA PERFORMANCE MEASURES TDM / RIDESHARE

Search

WELCOME TO THE GREATER MADISON MPO

The Greater Madison MPO leads the collaborative planning and funding of a sustainable, equitable transportation system for the Greater Madison region. The MPO is responsible for comprehensive planning and decision making to build agreement on transportation investments that balance roadway, public transit, bicycle, pedestrian and other transportation needs to achieve an exceptional quality of life for all within the region.

WHAT'S NEW AT MPO

FOLLOW US ON  Facebook

Something's New!


CONNECTING PEOPLE, PLACES & OPPORTUNITIES

You may have noticed that our name, logo, and web address have changed. As the newly minted Greater Madison MPO (formerly Madison Area Transportation Planning Board), we are excited to begin celebrating the results of our recent rebranding.

In addition to creating a fresh, accessible new name and logo, we used the rebranding process to dig deep and define a forward-thinking mission and vision for our work in the region. We also worked with the [Capital Area Regional Planning Commission](#), our sister agency focused on regional land use, to improve future public recognition by coordinating our brands.

We learned a lot and we are grateful to everyone who assisted us in this journey. In the coming weeks and months, we look forward to sharing how we are bringing our new identity to life.

[Press Release – MPO and CARPC Announce Joint Rebrand.](#)

Due to COVID-19, the office is currently closed to the public. Staff are available by email or phone.

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Madison, WI 53703
Tel: (608) 266-4336
Fax: (608) 261-9967
Email: MPO





On-line Mapping

Interactive Maps and Applications

Bicycling

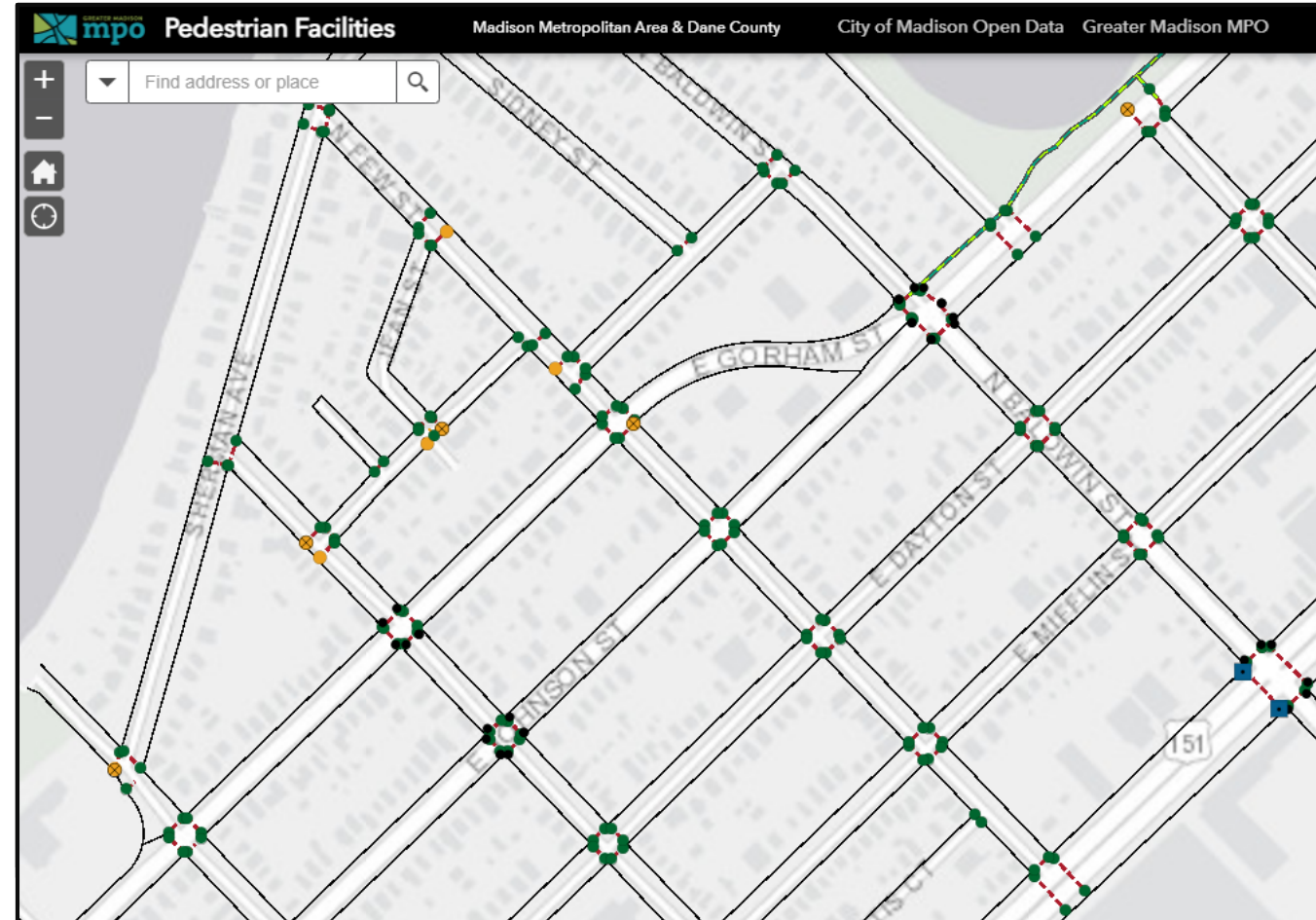
- Low-Stress Bike Route Finder

Roadways

- Transportation Improvement Program

Pedestrian

- Pedestrian Facilities



GIS Data Access

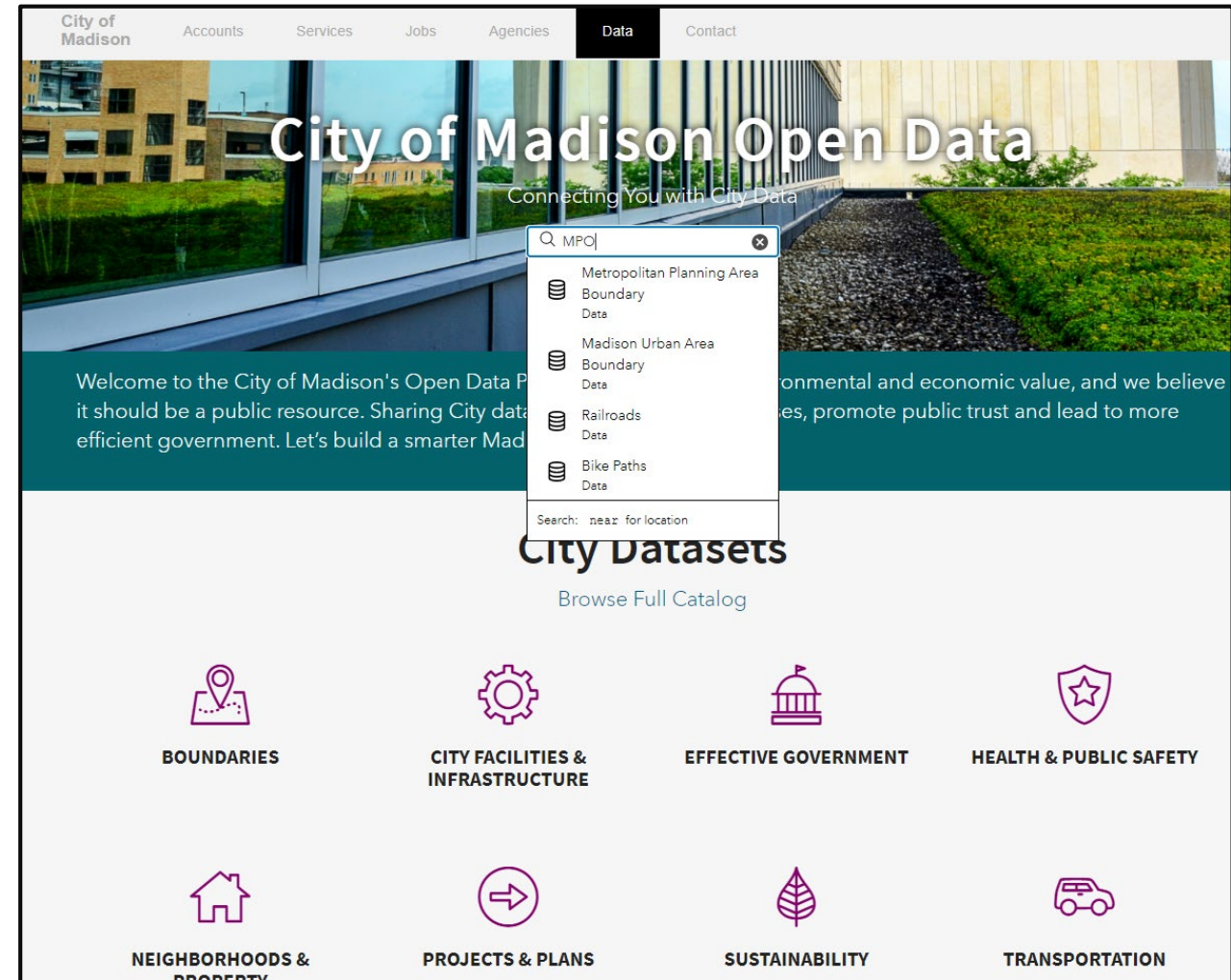
Sources

City of Madison Open Data Portal

- Free download
- All data used in Interactive Maps
- Search “MPO”

ArcGIS Online

- Search, add data directly into maps





Demos



Poll 3

What data sources do you want to learn more about?





Thank You!

Questions?

