

Meeting of the Greater Madison MPO (Metropolitan Planning Organization)¹ Policy Board

January 6, 2021

Virtual Meeting via Zoom

6:30 p.m.

This meeting is being held virtually to help protect our communities from the COVID-19 pandemic.

1. **Written Comments:** You can send comments on agenda items to mpo@cityofmadison.com.
2. **Register for Public Comment:**
 - Register to speak at the meeting.
 - Register to answer questions.
 - Register in support or opposition of an agenda item (without speaking).

If you want to speak at this meeting, you must register. You can register at <https://www.cityofmadison.com/MeetingRegistration>. When you register, you will be sent an email with the information you will need to join the virtual meeting.

3. **Watch the Meeting:** If you would like to join the meeting as an observer, please visit <https://www.cityofmadison.com/clerk/meeting-schedule/watch-meetings-online>
4. **Listen to the Meeting by Phone:** You can call in to the **Greater Madison MPO** using the following number and meeting ID:
 - (877) 853-5257 (Toll Free)
Meeting ID: 942 3854 9465

If you need an interpreter, materials in alternate formats, or other accommodations to access this meeting, contact the Madison Planning Dept. at (608) 266-4635 or TTY/TEXTNET (866) 704-2318.

Please do so at least 72 hours prior to the meeting so that proper arrangements can be made.

Si usted necesita un intérprete, materiales en un formato alternativo u otro tipo de acomodaciones para tener acceso a esta reunión, contacte al Departamento de Desarrollo Comunitario de la ciudad al (608) 266-4635 o TTY/TEXTNET (866) 704-2318.

Por favor contáctenos con al menos 72 horas de anticipación a la reunión, con el fin de hacer a tiempo, los arreglos necesarios.

Yog tias koj xav tau ib tug neeg txhais lus, xav tau cov ntaub ntawv ua lwm hom ntawv, los sis lwm yam kev pab kom koom tau rau lub rooj sib tham no, hu rau Madison Lub Tuam Tsev Xyuas Txog Kev Npaj, Lub Zej Zos thiab Kev Txhim Kho (Madison Planning, Community & Economic Development Dept.) ntawm (608) 266-4635 los sis TTY/TEXTNET (866) 704-2318.

Thov ua qhov no yam tsawg 72 teev ua ntej lub rooj sib tham kom thiaj li npaj tau.

如果您出席会议需要一名口译人员、不同格式的材料，或者其他的方便设施，请与 Madison Planning, Community & Economic Development Dept. 联系，电话是 (608) 266-4635 或 TTY/TEXTNET (866) 704-2318。

请在会议开始前至少 72 小时提出请求，以便我们做出安排。

AGENDA

1. Roll Call
2. Approval of December 2, 2020 Meeting Minutes

¹ Formerly named the Madison Area Transportation Planning Board – An MPO

3. Communications
4. Public Comment (for items **not** on MPO Agenda)
5. MPO 2021 Resolution No. 1 Approving Amendment #2 to the 2021-2025 Transportation Improvement Program for the Madison Metropolitan Area & Dane County
 - Dane County Safe Routes to School Program (advance from 2022 to 2021, cont. in '22)
 - STH 19 (Westmount Drive Intersection), Add Left Turn Lanes, Signal (Advance Project w/ Fed Funding, Const. in '24)
 - STH 19 (Windsor and Bristol Streets) (North St. to Main St.), Mill & Overlay (NEW, Const. scheduled in '27)
 - Gammon Road (Watts Road Intersection), Intersection Safety Improvements (NEW, Const. in '22)
 - W. and E. Main Street (S. Walker Way, Bird, Linnerud Street Intersections), Intersection Safety Improvements (NEW, Const. in '23)
 - STH 19/Windsor St. (N. Thompson Rd. and Davison Dr. Intersections), Intersection Safety Improvements (NEW, Const. in '23)
6. MPO 2021 Resolution No. 2 Approving the 2021 Public Participation Plan for the Greater Madison MPO
7. Discussion Regarding Local Match Funding for MPO's Budget
8. Presentation on Survey of Local Pedestrian and Bicycle Related Infrastructure Requirements
9. Presentation on Analysis of Travel from Environmental Justice Priority Areas to Major Employment Areas
10. Status Report on Capital Area RPC Activities
11. Announcements and Schedule of Future Meetings
12. Adjournment

Next MPO Board Meeting:

Wednesday, February 3, 2021 at 6:30 p.m.
Virtual Meeting

Greater Madison Metropolitan Planning Organization (MPO)¹
December 2, 2020 Meeting Minutes

Virtual Meeting hosted via Zoom

Wood called the meeting to order at 6:32 PM.

1. Roll Call

Members present: Samba Baldeh, Margaret Bergamini, Yogesh Chawla, Steve Flottmeyer, Grant Foster, Patrick Heck, Dorothy Krause, Tom Lynch, Jerry Mandli (joined during item #5), Mark Opitz, Mike Tierney, Doug Wood

Members absent: Paul Esser, Ed Minihan

MPO staff present: Bill Schaefer, Zia Brucaya

Others present in an official capacity: Diane Paoni

2. Approval of November 4, 2020 Meeting Minutes

Tierney moved, Baldeh seconded, to approve the November 4, 2020 meeting minutes. Motion carried.

3. Communications

None

4. Public Comment (for items *not* on MPO Agenda)

None

5. Presentation on East-West Bus Rapid Transit (BRT) Project and Proposed Refinements

Mike Cechvala with the City of Madison Department of Transportation provided a presentation on the status of the East-West Bus Rapid Transit project. The MPO and Common Council adopted the locally preferred alternative (LPA) earlier this year, allowing the city to enter the Small Starts project development phase in August 2020, which puts the project in the pipeline for FTA funding. They are now working on modifications to the LPA. The schedule calls for completion of the environmental analysis in 2021, construction in 2023 and possibly early 2024, and start of operations in fall 2024. The operating plan now calls for running three routes with BRT buses at once, adding a north-south route and one from downtown to Middleton. The overlapping service in the east-west BRT corridor would provide the needed service levels. The city plans to provide a 50% funding match, based on comparable projects in the past five years.

Cechvala said the east-west route will include a mix of center-running, side-running, and mixed traffic lanes. The addition of center running is one of the major proposed changes to the LPA. Center running provides a number of advantages for safety, operations, construction time, and costs. They are looking at removing some left-hand turns on East Washington Ave. and Mineral Point Rd. to fit wider stations, and have received some concerns about that, particularly on Mineral Point Rd. They are also investigating parking and travel lane conversions on Whitney Way and East Washington to accommodate center-running lanes. Plans no longer include a Rosa Road extension to the West Transfer Point. The recommendation at Madison College Truax campus is to use the Mendota Street cut-through to get back to East Washington. The east terminal is now located at East Washington and

¹ Formerly named Madison Area Transportation Planning Board

East Springs Drive instead of on a property within the East Towne Mall, due to ownership complications and redevelopment uncertainties. The total number of station locations has increased from 27 to 31, to provide more uniform spacing. Public engagement is ongoing, including several community meetings.

Baldehy asked about the impact of the new center lanes on trees. Cechvala said that for the most part they will not have to remove trees for center lanes, as construction will only happen at intersections for the stations, which mostly uses the existing left turn lanes. Baldehy asked how the city is keeping track of community feedback and incorporating it into the design. Cechvala stated that Urban Assets is tracking all engagement. They have not heard many major concerns; most of the concerns relate to the west side, including loss of left-hand turns and loss of parking on Whitney Way. They have also heard concerns about the impact to bikes along East Washington, and how this project can help with speeding and reckless driving. The city feels that this project should have a positive impact on that. They have also heard some concerns about pedestrian safety when accessing the median stations. With respect to this, many other cities are using this model, and stations will be wide and located at intersections, which will help with safety and visibility. Center lanes also allow pedestrians to cross only half of the roadway, instead of the entire roadway if they need to switch directions. Baldehy asked about tracking the impacts of BRT to the community and environment if people are driving less. Cechvala noted that it is hard to tie a loss in traffic volume to a new transit project alone. The city's expectation is not to see significant reductions in traffic volume, but rather to accommodate future growth through better options. The pandemic is helping the city feel more comfortable with removing lanes in some areas.

Bergamini asked whether the city has checked in with Madison College about future development plans and class locations, noting that their use of the bus pass program had been diminishing prior to COVID; she wondered whether the Mendota connection is justified in light of that, if it will cause houses to be lost. Cechvala clarified that the Mendota Street connection will not cause the houses to be lost, but rather they would just be on a bus line, whereas previously they were not. The city has talked with Madison College and their plans point to more student consolidation at Truax. If this changes, the city could remove the Mendota Street connection. Opitz asked whether the different BRT routes will always have the same stops and endpoints. Cechvala said the blue and green lines will always be the same, but the yellow line would sometimes have a different pattern, either stopping at the Eau Claire station or heading to Middleton. Schaefer asked whether the public understands that with the current operating plan and center-running lanes, local buses will no longer run in the BRT corridor. Cechvala said the city has been open about this during public engagement and received questions, but has not had a lot of resistance so far. Schaefer asked how the issue of the West Transfer Point will be dealt with between the BRT project and the network re-design study. Cechvala said they are working on a couple of alternatives. One option is to remove the transfer point; another is to relocate it to the Rosa Road BRT station; a third option is to run multiple BRT route patterns, with some routes going to the transfer point and some not. The consultant for the network redesign study is asking the city for an answer, rather than working it out as part of that project.

6. Brief Update on Beltline (USH 12/14/18/151) Dynamic Part-Time Shoulder Use Project

Schaefer stated that the project is proceeding and scheduled to be let on December 8, 2020, with construction beginning in 2021 and operation beginning in late 2021 or 2022. WisDOT will make an announcement within the next few weeks and will continue to provide information after that. They acknowledge that there is less of an immediate need right now from a capacity standpoint, but that it makes sense to do it now in light of other necessary improvements happening in conjunction, and in anticipation of an eventual return to more typical traffic volumes.

7. Presentation on Analysis of Impacts of COVID-19 on Traffic and VMT

Schaefer provided a presentation on the impact of the pandemic on trip distribution, VMT, and bicycle travel in Dane County. StreetLight converts big data to transportation metrics. Traffic volumes have returned fairly close to pre-pandemic levels, but weekday peak volumes have not. The analysis looked at five roadways in the region and compared transportation metrics between April 2019 and April 2020, and September 2019 and September 2020. Staff compared the StreetLight data to continuous counts on the Beltline and Atwood Ave. and found that it was very accurate, only slightly over-estimating volumes during the evening peak. StreetLight's VMT estimates were also very close when compared to WisDOT data. The analysis also included comparisons of VMT by census tract, highlighting significant differences in the impact based on location.

Foster asked for clarification of what is counted for household VMT by census tract, wondering whether the significant reduction in his district could be due to less driving to and from the schools there. Schaefer said that the household count is based on the VMT of residents of that census tract. Lynch said it is concerning to see that some census tracts have experience twenty percent more VMT than last year, and wondered whether this is because the data is better this year. Schaefer noted that most of the areas that show a big increase in household VMT are rural, but that there could be an issue with how the household VMT vs. total VMT is calculated. He agreed that the results appear somewhat suspect and staff is looking into that with StreetLight. Bergamini suggested that there could be a relationship between the areas with higher household VMT and the areas where there was a drop in student bus ridership paired with an introduction of more free parking for students, such as in the Eagle Heights area.

Lynch asked whether the data accounts for people in buses. Schaefer said he believed that bus riders were excluded, but they would check on this. He noted that StreetLight will be coming out with bus/rail transit metrics early next year. Lynch said he asked about how bus passenger trips are treated as the VMT and traffic volume data could help the city understand whether BRT was impacting VMT. Lynch also wondered if the VMT data excludes cyclists based on their speed. Schaefer said yes, noting StreetLight has separate bicycle and pedestrian travel metrics. Foster asked whether the MPO could dig further into what the data is showing in the Lake Edge/Glendale area, which is very similar demographically to the Eastmorland area, but shows a significant decrease while Eastmorland shows a significant increase.

Schaefer moved on to the bicycle data, sharing that between April 2019 and 2020, weekday bike trips dropped and weekend trips increased, indicating more recreational trips. Between September 2019 and 2020, both weekday and weekend trips increased, indicating an overall increase in bicycle trips while VMT stayed down. StreetLight also provides bicycle metrics for trip length, duration, circuitry and speed, and all but speed increased, again indicating more recreational trips. Foster asked whether the MPO has compared StreetLight's bike data to city counts. Schaefer said the MPO wasn't able to do that previously because only 2018 StreetLight bike data was available and the city had issues with their bike counts that year. He said MPO staff would plan to do that now that 2019 and 2020 bike data is available from StreetLight.

8. Review and Discussion of MPO Rebrand Marketing

Brucaya presented on the status of the MPO rebrand rollout and priorities for next steps that were recently identified at a joint committee meeting of MPO and CARPC board members. The rebrand was announced in a variety of ways over the past couple of months. The MPO is now looking ahead to 2021, and considering what materials and activities will be most useful to build the long-term foundation for the new brand. The priorities identified by the rebrand committee include: developing a few succinct introductory materials in coordination with CARPC that profile each agency and

highlight relevant projects; regularly developing press releases that can be paired with a standard media kit to share information about MPO plans and projects; finding specific education opportunities to share in existing forums; and focusing on cultivating relationships with key transportation contacts among local communities and boards. A major goal is to help MPO board and committee members act as ambassadors for the agency, by providing useful tools and resources.

Heck said that these next steps are exciting. As a board member, he understands what staff does to support the board's work, but needs a better understanding of the other services and projects going on with the MPO that the board does not hear about. He hopes that the board can be educated through this process. Schaefer agreed that this is a need and opportunity moving forward. Wood noted that the subcommittee discussed making sure that board members have enough information about what the MPO does so that they can speak intelligently when talking with their local committees and councils. Krause asked whether the MPO would like to get on agendas for local councils and other meetings. Schaefer said yes, but the feedback that we have heard is that it is important for the presentation to have a specific project focus rather than be broadly, "about the MPO." Krause said that considering that teachers are always looking for opportunities, the MPO could build in a youth education component with materials that explain what the MPO does and ask about their interests. Brucaya mentioned that one topic that came up at the joint committee meeting was the importance of clarifying with people what the MPO's powers and authorities are, and how these relate to other agencies within the region, which can be especially confusing for young people. Krause stated that she sees the MPO as helping people see the countywide perspective beyond their individual piece.

9. Discussion Regarding Local Match Funding for MPO's Budget

Schaefer noted in discussing the 2021 budget the board had asked for information on what each municipality's share of local funding would be if all contributed proportionate to their population, as recommended in the MPO agreement. He showed the table with the numbers.

Lynch said he would like to have this discussion, but preferably early in 2021, due to the late hour. He asked why Madison was not included in the list of communities contributing to the MPO's budget. Schaefer said that the city of Madison is responsible for the local match funding per the agreement so he hadn't listed Madison, but would do that when the item is discussed at a future meeting. Opitz said he would like to have a discussion as well in advance of next year's budget discussions. He said Middleton no longer contributes and he believes that more communities should be contributing. Krause agreed. Foster said he would like to discuss this at the next meeting. Opitz agreed. Schaefer said he would include it on the agenda of the next meeting.

10. Status Report on Capital Area RPC Activities

Foster said he couldn't think of anything to report. He said there will be no December meeting.

11. Announcements and Schedule of Future Meetings

Schaefer mentioned that CARPC staff would present to the board early next year on the land use scenario and household and employment forecasts being done for the regional transportation plan update.

12. Adjournment

Opitz moved, Bergamini seconded, to adjourn meeting. Motion carried. Meeting was adjourned at 8:35 p.m.



Wisconsin Department of Transportation
Office of the Secretary
4822 Madison Yards Way, S903
Madison, WI 53705

Governor Tony Evers
Secretary Craig Thompson
wisconsindot.gov
Telephone: (608) 266-1114
FAX: (608) 266-9912
Email: sec.exec@dot.wi.gov

December 14, 2020

Glenn Fulkerson
Division Administrator
Federal Highway Administration
U.S. Department of Transportation
525 Junction Rd, Suite 8000
Madison, WI 53717

Kelley Brookins
Regional Administrator
Federal Transit Administration
U.S. Department of Transportation
200 W. Adams St, Suite 320
Chicago, IL 60606

Dear Mr. Fulkerson and Ms. Brookins:

Under the authority delegated to me by Governor Tony Evers, I am hereby approving the 2021 – 2025 Transportation Improvement Program (TIP) for the Madison Metropolitan Area & Dane County. The Wisconsin Department of Transportation (WisDOT) will reflect by reference the 2021 – 2024 federal aid projects covered by this approval in our 2021 – 2024 Statewide Transportation Improvement Program (STIP), subject to the understandings I have indicated below.

The TIP, as amended by the Greater Madison Metropolitan Planning Organization (MPO) in Resolution No. 6 dated November 4, 2020, represents a cooperative effort between the MPO, local communities, the transit operator and WisDOT, and is designed to meet the objectives and recommendations of the 2050 regional transportation system plan. A copy of the resolution approving the TIP as amended is attached.

Based on our review, we believe that the TIP as amended fulfills the federal transportation and planning requirements (Title 23 U.S.C. 134 and 135 and their implementing regulations 23 CFR 450 as amended) with respect to the inclusion of: 1) a four-year priority list of projects; 2) a financial plan that reflects federal, state and local resources that are reasonably expected to be available during this program period; and 3) both transit and highway projects to be funded with Federal Transit Act and Title 23 funds. Opportunities for public review and comment on the proposed TIP were provided through a public meeting and legal notice requesting citizen input.

Glenn Fulkerson
Kelley Brookins
December 14, 2020
Page 2

In accordance with 23 CFR 450.336, the Wisconsin Department of Transportation (WisDOT) hereby certifies that the metropolitan transportation planning process is addressing major issues facing the State and its urbanized areas, and is being carried out in accordance with the following requirements:

- (1) 23 U.S.C. 134 and 135, 49 U.S.C. 5303 and 5304, and this part;
- (2) In non-attainment and maintenance areas, sections 174 and 176 (c) and (d) of the Clean Air Act, as amended (42 U.S.C. 7504, 7506 (c) and (d)) and 40 CFR part 93;
- (3) Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 CFR part 21;
- (4) 49 U.S.C. 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity;
- (5) Section 1101(b) of the Fixing America's Surface Transportation Act (FAST Act) (P.L. 114-357), and 49 CFR Part 26 regarding the involvement of disadvantaged business enterprises in the US DOT funded projects;
- (6) 23 CFR part 230, regarding implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts;
- (7) The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) and 49 CFR parts 27, 37, and 38;
- (8) The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance;
- (9) Section 23 U.S.C. 324, regarding the prohibition of discrimination based on gender; and
- (10) Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR part 27 regarding discrimination against individuals with disabilities.

The TIP will become effective upon your subsequent approval of WisDOT's 2021 – 2024 STIP.

Sincerely,



Craig Thompson
Secretary

ecc: William Schaefer, Greater Madison MPO
Mary Forlenza, FHWA
Mitch Batuzich, FHWA
Evan Gross, FTA
William Wheeler, FTA
Stephen Flottmeyer, WisDOT SW Region
Jennifer Murray, WisDOT BPED
Chuck Wade, WisDOT BPED



Federal Highway Administration
525 Junction Rd, Suite 8000
Madison, WI 53717-2157

Federal Transit Administration
200 W. Adams Street, Suite 320
Chicago, IL 60606-5232

December 18, 2020

Mr. Chuck Wade, Director
Bureau of Planning and Economic Development
Wisconsin Department of Transportation
4822 Madison Yards Way
Madison, WI 53707

Dear Mr. Wade:

Thank you for your December 7, 2020 letter conveying WisDOT endorsement of the Wisconsin Metropolitan Planning Organizations' 2021 Unified Planning Work Programs and the associated allocation of planning funding to support implementation (enclosed). The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) approve the following 2021 MPO work programs as the basis for federally funded metropolitan transportation planning activities in accordance with 23 CFR parts 420 and 450:

- *Overall Work Program – 2021*, Southeastern Wisconsin Regional Planning Commission, Approved by Resolution No. 2020-11, November 19, 2020;
- *2021 Unified Planning Work Program for the Madison, WI Metropolitan Area*, Madison Area Transportation Planning Board, Approved by Resolution TPB No. 7, November 4, 2020;
- *2021 Transportation Work Program & Budget*, East Central Wisconsin Regional Planning Commission, Adopted by Resolution 34-20 on November 11, 2020 (Appleton MPO and Oshkosh MPO);
- *2021 Transportation Planning Work Program*, Brown County Planning Commission, Green Bay MPO, Approved by Resolution No. 2020-10, October 7, 2020;
- *Urban Transportation Planning Work Program for the Eau Claire Urbanized Area 2021*, Chippewa-Eau Claire Metropolitan Planning Organization, Adopted by Resolution No. 20-10, October 7, 2020;
- *2021 Planning Work Program for the La Crosse Area Planning Committee*, Approved by Resolution 18-2020, November 18, 2020;
- *2021 Sheboygan Metropolitan Planning Area Transportation Planning Work Program*, Bay-Lake Regional Planning Commission, Sheboygan MPO, Approved by Resolution No. 9-2020, October 30, 2020;
- *2021 Unified Planning Work Program, Wausau Metropolitan Planning Organization*, Marathon County Metropolitan Planning Commission, Adopted by Resolution No. 4-20 on November 10, 2020;
- *2021 Work Program, Janesville Area Metropolitan Planning Organization*, Approved by Resolution No. 2020-07, November 9, 2020;

- *2021 Unified Transportation Work Program for the Fond du Lac Urbanized Area*, Fond du Lac MPO, Adopted by Resolution No. 02-20 on October 7, 2020;
- *Stateline Area Transportation Study Metropolitan Planning Organization (SLATS MPO) 2021 Unified Planning Work Program*, Adopted by resolution 2020-7 on October 26, 2020;
- *2021 – 2022 Unified Transportation Planning Work Program and Budget*, Duluth Superior Metropolitan Interstate Council. Adopted by Resolution No. 20-11 on October 21, 2020; and
- *Dubuque Metropolitan Area Transportation Study (DMATS) FY 2021 Transportation Planning Work Program*, East Central Intergovernmental Association, adopted May 14, 2020.

The MPOs are authorized to proceed with activities in the approved work programs beginning January 1, 2021 through December 31, 2021. WisDOT may advance a request for authorization of the corresponding federal funding to be effective on January 1, 2021.

Approval of the MPO work programs is granted subject to the following:

1. Costs incurred by each MPO must be accumulated and accounted to the individual work item level.
2. Prior Federal approval is required when any of the following changes occurs to an approved individual UPWP:
 - Any change which would result in the need for additional Federal funding.
 - Cumulative transfers among separately budgeted projects, elements or activities that exceed or are expected to exceed 10 percent of the total approved work program budget for the individual MPO.
 - Significant change in the scope of work for separately budgeted work elements, including adding or deleting consequential work items.
 - Need to extend the period of availability of funds.
 - Changes in key personnel where specified.
 - Contracting out, sub-granting or otherwise obtaining the services of a third party to perform activities which are central to the purposes of the grant.

Any of the work program changes listed above requires an amendment approved by the individual MPO Policy Board and FHWA.

We look forward to working with WisDOT and the MPOs on another successful year of metropolitan transportation planning. Should you have any questions regarding this approval, please contact Mitch Batuzich of FHWA at (608) 829-7523, or Evan Gross of FTA at (312) 886-1619.

Sincerely,

Sincerely,

Glenn D. Fulkerson
Division Administrator
Federal Highway Administration

Kelley Brookins
Regional Administrator
Federal Transit Administration

Enclosure

ecc: Bill Wheeler, FTA Region V, William.Wheeler@dot.gov
 Evan Gross, FTA Region V, evan.gross@dot.gov
 Kelley Brookins, FTA Region V, Kelley.Brookins@dot.gov
 Mary Forlenza, FHWA
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 Ron Chicka, Duluth-Superior Metropolitan Interstate Commission, rchicka@ardc.org
 Chandra Ravada, Dubuque Metropolitan Area Transportation Study, cravada@ecia.org

MPO Agenda Cover Sheet
January 6, 2021

Item No. 5

Re:

MPO 2021 Resolution No. 1 Approving Amendment #2 to the 2021-2025 Transportation Improvement Program for the Madison Metropolitan Area & Dane County

Staff Comments on Item:

The TIP amendment adds three recently approved federal Highway Safety Improvement Program (HSIP) projects to make intersection improvements at various intersections on STH 19/Windsor St. and W and E Main Streets in the city of Sun Prairie and on Gammon Road in the city of Madison. The amendment also adds a resurfacing project on STH 19 in Sun Prairie and advances the STH 19/Westmount Drive intersection improvement project from 2029 to 2024. In addition, the Dane County Safe Routes to School program project is moved up from '22-'23 to '21-'22 with all funding committed in 2021. Please note this is the second amendment to the TIP as the first amendment (approved in November) updated the appendix to the TIP with the MPO's adopted federal performance measure targets.

Materials Presented on Item:

1. MPO 2021 Resolution No. 1 approving TIP amendment (with attachments)

Staff Recommendation/Rationale: Staff recommends approval

MPO 2021 Resolution No. 1

Amendment No. 2 to the 2021-2025 Transportation Improvement Program for the Madison Metropolitan Area & Dane County

WHEREAS, the Greater Madison MPO (Metropolitan Planning Organization) approved the *2021-2025 Transportation Improvement Program for the Madison Metropolitan Area & Dane County* on October 7, 2020; and

WHEREAS, the Greater Madison MPO adopted MPO 2020 Resolution No. 6 on November 4, 2020, approving Amendment No. 1; and

WHEREAS, the Madison Metropolitan Planning Area transportation projects and certain transportation planning activities to be undertaken using Federal funding in 2021–2024 must be included in the effective TIP; and

WHEREAS, an amendment has been requested by WisDOT SW Region to modify the STH 19/Westmount Drive intersection reconstruction project, advancing the project and adding federal and state construction funding; and

WHEREAS, an amendment is needed to add three federally funded Highway Safety Improvement Program (HSIP) projects and one federally funded state highway mill & overlay project; and

WHEREAS, an amendment is also needed to revise the program schedule for the federally funded Wisconsin Bike Federation Dane County Safe Routes to School (SRTS) Program project; and

WHEREAS, the TIP amendment will not affect the timing of any other programmed projects in the TIP and the TIP remains financially constrained as shown in the attached revised TIP financial table (Table B-2); and

WHEREAS, the MPO's public participation procedures for minor TIP amendments such as this have been followed, including listing the projects on the MPO policy board meeting agenda; and

WHEREAS, the new and revised projects are consistent with the *Regional Transportation Plan 2050 for the Madison Metropolitan Area*, the long-range regional transportation plan for the Madison Metropolitan Planning Area as adopted in April 2017 and amended in December 2019 and in August 2020:

NOW, THEREFORE, BE IT RESOLVED that the Greater Madison MPO approves Amendment No. 2 to the *2021-2025 Transportation Improvement Program for the Madison Metropolitan Area & Dane County*, making the following project revisions and additions as shown on the attached project listing table:

1. **REVISE** the Wisconsin Bike Federation Dane County SRTS project on page 22 of the Pedestrian/Bicycle Projects section, advancing federal and local program funding from 2022 to 2021, continued in '22.
2. **REVISE** the STH 19 (Westmount Drive Intersection) project on page 30 of the Street/Roadway Projects section, advancing the schedule and adding federal NHPP and state construction funding.

3. **ADD** the STH 19 (Windsor Street & Bristol Street) (North Street to Main Street) Mill & Overlay project to page 30 of the Street/Roadway Projects section.
4. **ADD** the Gammon Road/Watts Road Intersection Improvements project to page 38 of the Street/Roadway Projects section.
5. **ADD** the Main Street (Walker Way, Bird St., and Linnerud Dr. Intersections) project to page 44 of the Street/Roadway Projects section.
6. **ADD** the STH 19/Windsor Street (North Thompson Road and Davison Drive Intersections) project to page 45 of the Street/Roadway Projects section.

Date Adopted

Mark Opitz, Chair
Greater Madison MPO

PROJECT LISTINGS FOR AMENDMENT NO. 2 TO THE 2021-2025 TRANSPORTATION IMPROVEMENT PROGRAM

Primary Jurisdiction/ Project Sponsor	Project Description	Cost Type	Jan.-Dec. 2021				Jan.-Dec. 2022				Jan.-Dec. 2023				Jan.-Dec. 2024				Jan.-Dec. 2025				Comments
			Fed	State	Local	Total	Fed	State	Local	Total	Fed	State	Local	Total	Fed	State	Local	Total	Fed	State	Local	Total	
PEDESTRIAN/BICYCLE PROJECTS																							
WISCONSIN BIKE FEDERATION *	DANE COUNTY SRTS County-wide program with targeted outreach to schools with a high proportion of free/reduced price lunches	SRTS	137	34	171	137	Continui	34	174														
111-21-005		TOTAL	137	34	171	137	TA	34	174														
			TA	BF		TA		BF															
STREET/ROADWAY PROJECTS																							
WISDOT *	STH 19 Westmount Drive Intersection Reconstruct intersection; add left-turn lanes in both directions and add signals painted medians. (0.43 mi.)	PE UTIL CONST	72	18	90	Continuing				Continuing				Continuing				Continuing				6085-02-02, -06, -24, -49, -73, -76	
(111-19-008) 111-21-010		TOTAL	72	18	90																	Construction anticipated in 2029. Project is advanceable.	
			NHPP	WI																			
NEW *	STH 19 (WINDSOR STREET & BRISTOL STREET) North Street to Main Street Mill & Overlay	PE UTIL CONST	56	19	75	Continuing				Continuing				Continuing				Continuing				3050-05-02, -72, -73	
111-21-011		TOTAL	56	19	75																	Construction currently scheduled for 2027. Enumerated in 2020 at \$520, incl. \$232 local funds for water main.	
			FLX	WI																			
CITY OF MADISON NEW *	GAMMON ROAD/WATTS ROAD Intersection Improvements Add left-turn lanes and montube traffic signals.	PE UTIL CONST	67		7	74																	5992-07-18, -19
111-21-012		TOTAL	67		7	74	570				63				633								HSIP project
			MS30		M		MS30				M												
CITY OF SUN PRAIRIE NEW *	MAIN STREET Walker Way, Bird St., and Linnerud Dr. Intersections Intersection Improvements. Recondition and widen shoulders.	PE UTIL CONST	181		20	201	Continuing																3996-00-09, -10
111-21-013		TOTAL	181		20	201					881				98				979				HSIP project.
			MS30		SP						MS30				SP								
NEW *	WINDSOR STREET/STH 19 North Thompson Rd. and Davison Dr. Intersections Reconstruct intersections; add left-turn lanes and monotube traffic signals.	PE UTIL CONST	93		10	103	Continuing																6085-02-07, -77
111-21-014		TOTAL	93		10	103					760				84				844				HSIP project.
			MS30		SP						MS30				SP								

¹ Project programming shown in 2025 is for informational purposes only.
(x) = Major project with capacity expansion. (*) = MPO action required. Shading denotes those projects programmed for Federal funding
NOTE: Funds Key page 9.

Table B-2
Summary of Federal Funds Programmed (\$000s) and Those Available in Year of Expenditure Dollars
in the Madison Metropolitan Planning Area

Funding Source		Programmed Expenditures					Estimated Available Funding				
Agency	Program	2021	2022	2023	2024	2025*	2021	2022	2023	2024	2025*
Federal Highway Administration	National Highway Performance Program	15,355	4,550	17,427	834	15,456	15,355	4,550	17,427	834	15,456
	Bridge Replacement and Rehabilitation	83	1,352	847	0	0	83	1,352	847	0	0
	Surface Transp. Block Grant Program - Madison Urban Area	12,886	11,385	12,354	1,369	198	12,886	11,385	12,354	1,369	198
	Surface Transp. Block Grant Program - State Flexibility	11,449	0	0	5,033	6,449	11,449	0	0	5,033	6,449
	Surface Transp. Block Grant Program - Transp. Alternatives	1,480	757	608	0	0	1,480	757	608	0	unknown
	Highway Safety Improvement Program	3,434	8,275	3,378	0	0	3,434	8,275	3,378	0	0
Federal Transit Administration	Section 5307 Urbanized Area Formula Program	7,777	9,843	8,300	8,574	9,222	7,777	9,843	8,300	8,574	9,222
	Sec. 5339 Bus & Bus Facilities	1,433	7,692	1,512	1,554	993	1,433	7,692	1,512	1,554	993
	Sec. 5337 State of Good Repair	869	1,768	900	916	1,009	869	1,768	900	916	1,009
	Sec. 5310 E/D Enhanced Mobility Program	294	0	0	0	0	360	319	326	332	339
	Sec. 5311 Rural Area Formula Program	1,058	1,077	1,096	1,116	1,135	1,058	1,077	1,096	1,116	1,135
	Sec. 5314 NRP, Sec. 5339 Alt. Analysis Program	0	0	0	0	0	0	0	0	0	0

* Fifth year of funding (2025) is informational only.

** Funding shown in calendar year versus state fiscal year.

Note: All state roadway projects using applicable funding sources (e.g., NHPP, STBG State Flexible, BR) are programmed through 2025. Local BR, STBG (BR), and STBG Rural projects are programmed through 2024. HSIP (other than annual small HES program) projects are programmed through 2024. Local STBG -Transp. Alternatives projects are programmed through 2024. Local STBG-Urban (Madison Urban Area) projects are programmed through 2025. Transit funding is not yet programmed and is based on needs and anticipated future funding levels (See also Table B-4 Metro Transit System Projected Expenses and Revenues). Programmed transit funding for 2021 excludes carryover projects for which the Federal funding is already obligated. Roadway and transit inflation rate @ 1.78% per year applied to expenses, except for the STBG-Urban program. The Interstate 39/90 (S. Beltline to Rock County Line) Reconstruction and Capacity Expansion project is not included in the table since it is primarily located in Rock County and/or outer Dane County. Fiscal constraint for this project is being handled at the state level. Fiscal constraint for the Statewide Signage Program and SW Region Pavement Marking project is also being handled at the state level.

MPO Agenda Cover Sheet
January 6, 2021

Item No. 6

Re:

MPO 2021 Resolution No. 2 Approving the 2021 Public Participation Plan for the Greater Madison MPO

Staff Comments on Item:

The MPO must periodically assess its public involvement activities and update its official public participation plan (PPP) for the RTP, TIP, and other planning efforts. The updated 2021 PPP was developed based upon findings of a 2017 re-evaluation of public involvement efforts for the current RTP, feedback received during the rebranding process, and with consideration of the impact of COVID-19 on traditional in-person meetings.

A notice regarding the availability of the [draft 2021 PPP](#) was sent out to the MPO's entire contact list with a 45-day comment period as required prior to approval of the plan. Staff also reviewed the draft plan with the MPO's advisory committees. Feedback from the committees was positive. Other than pointing out some stakeholder organizations that should be added to the list in Appendix B, no other comments were received. The only proposed change is to eliminate the requirement for a public hearing prior to adopting the Public Participation Plan. Federal rules don't require a hearing, and it does not seem necessary. Hearings are held for the RTP and TIP.

Materials Presented on Item:

1. MPO 2021 Resolution No. 2 Approving the Public Participation Plan for the Greater Madison MPO
2. Change sheet, dated 12/23/20

Staff Recommendation/Rationale: Staff recommends approval.

MPO 2021 Resolution No. 2
Approving the 2021 Public Participation Plan
for the Greater Madison MPO

WHEREAS the Fixing America's Surface Transportation (FAST) Act (Pub. L. 114-357) and U.S. Department of Transportation (DOT) regulations (23 C.F.R. Parts 450 and 500, 49 C.F.R. Part 613) require that Metropolitan Planning Organizations (MPOs) develop and use a collaborative and comprehensive public participation plan that outlines the process for providing citizens, affected agencies, transportation providers and users, and other important stakeholders with reasonable opportunities to be involved in the metropolitan transportation planning process; and

WHEREAS, the Greater Madison MPO is the designated metropolitan planning organization for the Madison, Wisconsin Metropolitan Area with responsibilities to perform metropolitan transportation planning; and

WHEREAS, an approved public participation plan is a requirement for receiving various Federal and state planning financial assistance; and

WHEREAS, this updated 2021 public participation plan was developed to build upon past procedures and strategies, making use of lessons learned to improve the public involvement process and make use of new techniques, including use of social media, email newsletters, web-based mapping and public comment tools, and visualization tools; and

WHEREAS, the plan is designed to meet all federal requirements, including seeking out and considering the needs of those traditionally underserved by the existing transportation system, such as minority and low-income households, who may face challenges accessing employment and various services; and

WHEREAS, a public comment period of 45 days was provided on the draft plan and a notice of availability of the draft plan was sent out to the MPO's entire contact list:

NOW, THEREFORE, BE IT RESOLVED that the Greater Madison MPO approves the Draft 2021 Public Participation Plan incorporating the changes listed in the Change sheet, dated 12/23/20, which eliminate the requirement for a public hearing on the Public Participation Plan; and

BE IT FURTHER RESOLVED that the MPO Transportation Planning Manager is authorized and directed to submit the 2021 Public Participation Plan to the Wisconsin Department of Transportation, Federal Highway Administration, and Federal Transit Administration; and

BE IT FURTHER RESOLVED, in accordance with 23 CFR 450.334(a) the MPO hereby certifies that the metropolitan transportation planning process is addressing major issues facing the metropolitan planning area and is being conducted in accordance with all applicable requirements of:

1. 23 U.S.C. 134 and 49 U.S.C. 5303, and this subpart;
2. Title VI of the Civil Rights Act of 1964, as amended (42 USC 2000d-1) and 49 CFR part 21;
3. 49 USC 5332, prohibiting discrimination on the basis of race, color, creed, national origin, ex, or age in employment or business opportunity;
4. Section 1101(b) of the Fixing America's Surface Transportation (FAST) Act (Pub. L. 114-357) and 49 CFR Part 26 regarding the involvement of disadvantaged business enterprises in the US DOT funded projects;

5. 23 CFR part 230, regarding the implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts;
6. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 *et seq.*) and 49 CFR Parts 27, 37, and 38;
7. The Older Americans Act, as amended (42 U.S.C 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance;
8. Section 324 of title 23, U.S.C regarding the prohibition of discrimination based on gender; and
9. Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR 27 regarding discrimination against individuals with disabilities.

Date Adopted

Mark Opitz, Chair

**2021 Greater Madison MPO Public Participation Plan
Addition/Change Sheet**

Pg. 8- Removed public hearing as a primary public engagement method for the Public Participation Plan

Pg. 20- Under “**Public Notice and Comment on the Public Participation Plan**” subheading removed reference to holding a public hearing prior to adoption of Public Participation Plan

Appendix B- Added several new stakeholder groups to MPO contact list, including school districts, additional environmental protection organizations, local engineering and planning consulting firms, and area law offices that specialize in local governance.

MPO Agenda Cover Sheet

January 6, 2021

Item No. 7

Re:

Discussion Regarding Local Match Funding for MPO's Budget

Staff Comments on Item:

During discussion of the MPO's 2021 budget, the board asked staff to bring back to the board information on what each communities' share of the local match funding would be if all contributed to the MPO's budget proportionate to population. The original 1999 agreement redesignating the MPO (when the MPO function was separated from the RPC) and subsequent 2007 agreement (which modified the structure of the policy board, but maintained the same structure for funding and staffing of the MPO) call for the city of Madison to be ultimately responsible for the local share funding of the MPO's budget, but the agreement states that "other local units of government are strongly encouraged to make proportionate contributions [based on their population] to cover a share of the local costs in support of the MPO."

A letter was sent out to all municipalities seeking contributions for the MPO budget when the original redesignation occurred and then at least two times following the 2007 redesignation, which brought a number of new municipalities into the MPO planning area. The most recent letter seeking contributions to the MPO budget, which is attached, was sent out in 2012 for the 2013 budget. The letters did not result in any additional contributions, and the practice was stopped.

The attached table shows what each municipality's contribution to the MPO budget should be based on estimated 2020 population, what each municipality is expected to contribute this year (if anything), and the difference. Three of the four suburban communities that contribute (Fitchburg, Monona, McFarland) have been contributing for many years. The city of Sun Prairie started contributing two years ago. The city of Middleton contributed for 2 or 3 years, but stopped a couple years ago. For the municipalities that have contributed, MPO staff has kept the amount invoiced the same for most years despite small annual increases in the budget.

Dane County also contributes \$5,000 towards the MPO budget. This is paid per agreement with the MPO for general specialized transportation planning/coordination services the MPO has historically provided. The MPO now uses these funds as matching local funds to its federal funds for this work.

Staff invites discussion by the board on how they would like to handle this issue moving forward.

Materials Presented on Item:

1. Table showing proportionate share of local funding by municipality for MPO 2021 budget compared to what is actually paid
2. Letter sent out in 2012 seeking contribution to 2013 MPO budget

Staff Recommendation/Rationale:

For information and discussion purposes only.

**Estimated Share of MPO Budget Based On
Est. 2020 Population¹ of Municipalities in the Madison Area MPO Planning Area**

Municipality	2020 Population Within MPO Planning Area	% of 2020 Pop. Within MPO Planning Area	2021 Budget Estimated Share Local Participation	Actual Anticipated 2021 Local Participation	Percent of Share Paid For	Amount Paid Compared to Share
C. Madison	257,197	53.0%	\$88,557	\$150,907	170.4%	\$62,350
C. Fitchburg	30,391	6.3%	\$10,464	\$8,156	77.9%	-\$2,308
C. Middleton	21,050	4.3%	\$7,248	\$0	0.0%	-\$7,248
C. Monona	7,920	1.6%	\$2,727	\$2,545	93.3%	-\$182
C. Stoughton	12,954	2.7%	\$4,460	\$0	0.0%	-\$4,460
C. Sun Prairie	35,895	7.4%	\$12,359	\$3,000	24.3%	-\$9,359
C. Verona	12,737	2.6%	\$4,386	\$0	0.0%	-\$4,386
Small Cities Total	120,947	24.9%	\$41,644	\$13,701	32.9%	-\$27,943
V. Cottage Grove	6,716	1.4%	\$2,312	\$0	0.0%	-\$2,312
V. Cross Plains	4,010	0.8%	\$1,381	\$0	0.0%	-\$1,381
V. DeForest	10,624	2.2%	\$3,658	\$0	0.0%	-\$3,658
V. Maple Bluff	1,285	0.3%	\$442	\$0	0.0%	-\$442
V. McFarland	8,952	1.8%	\$3,082	\$2,544	82.5%	-\$538
V. Oregon	10,270	2.1%	\$3,536	\$0	0.0%	-\$3,536
V. Shorewood Hills	2,363	0.5%	\$814	\$0	0.0%	-\$814
V. Waunakee	12,097	2.5%	\$4,165	\$0	0.0%	-\$4,165
V. Windsor (part) (76.5%)	6,304	1.3%	\$2,171	\$0	0.0%	-\$2,171
Villages Total	62,621	12.9%	\$21,561	\$2,544	11.8%	-\$19,017
T. Berry (part) (24.9%)	290	0.1%	\$100	\$0	0.0%	-\$100
T. Blooming Grove	1,616	0.3%	\$556	\$0	0.0%	-\$556
T. Bristol (part) (72.4%)	3,147	0.6%	\$1,084	\$0	0.0%	-\$1,084
T. Burke	3,303	0.7%	\$1,137	\$0	0.0%	-\$1,137
T. Cottage Grove (part) (81.9%)	3,185	0.7%	\$1,097	\$0	0.0%	-\$1,097
T. Cross Plains (part) (30.9%)	1,239	0.3%	\$427	\$0	0.0%	-\$427
T. Dunkirk (part) (65.1%)	1,243	0.3%	\$428	\$0	0.0%	-\$428
T. Dunn (part) (89.8%)	4,357	0.9%	\$1,500	\$0	0.0%	-\$1,500
T. Madison	6,228	1.3%	\$2,144	\$0	0.0%	-\$2,144
T. Middleton	6,614	1.4%	\$2,277	\$0	0.0%	-\$2,277
T. Oregon (part) (45.2%)	1,464	0.3%	\$504	\$0	0.0%	-\$504
T. Pleasant Springs (part) (65.1%)	2,085	0.4%	\$718	\$0	0.0%	-\$718
T. Rutland (part) (36.2%)	728	0.1%	\$251	\$0	0.0%	-\$251
T. Springfield (part) (50.5%)	1,482	0.3%	\$510	\$0	0.0%	-\$510
T. Sun Prairie (part) (66.9%)	1,594	0.3%	\$549	\$0	0.0%	-\$549
T. Verona (part) (80.8%)	1,334	0.3%	\$459	\$0	0.0%	-\$459
T. Vienna (part) (67.7%)	1,042	0.2%	\$359	\$0	0.0%	-\$359
T. Westport	4,038	0.8%	\$1,390	\$0	0.0%	-\$1,390
Towns Total	44,699	9.2%	\$15,390	\$0	0.0%	-\$15,390
Total for MPO Planning Area	485,464		\$167,152	\$167,152		

¹ January 1, 2020 Estimate by WisDOA, Demographic Services Center

August 7, 2012

«GreetingLine»

The purpose of this letter is to request the «Municipality»'s participation in financially supporting the work of the Madison Area Transportation Planning Board (TPB) – A Metropolitan Planning Organization (MPO) in 2013.

The May 2007 MPO redesignation agreement modified the composition of the MPO Policy Board to increase the representation of the smaller cities and villages so that all communities within the MPO Planning Area are now represented on the Board in proportion to population. Almost all of the cities and villages also have staff representatives on the MPO's Technical Coordinating Committee (TCC). Staff from all communities are welcome to attend and participate in TCC meetings.

The work of the MPO benefits all communities within the MPO Planning Area. The MPO provides an important forum for decision making on regional transportation issues. Maintaining an MPO to lead the cooperative interagency regional transportation planning and programming processes is a condition of receiving Federal surface transportation funding. This includes the direct allocation to the MPO of \$6 million per year in STP Urban funding for local projects within the Urban area. In 2012, a total of \$69 million in Federal roadway and transit funding was programmed for projects in the MPO Planning Area. These transportation projects foster economic development and improve the quality of life of all of the region's residents. MPO staff also provides planning assistance to local communities, such as providing traffic forecasts for neighborhood development plans.

The 2007 agreement maintained the same structure as the original 1999 redesignation agreement for staffing and funding the MPO. The City of Madison is responsible for providing staff for the MPO and the local matching contribution generating the Federal and state funding the MPO receives. However, the agreement states that “other local units of government are strongly encouraged to make proportionate contributions [based on their population] to cover a share of the local costs in support of the MPO.” Three communities (Fitchburg, McFarland, Monona) currently contribute to support the MPO, and that support is greatly appreciated.

As part of preparation of the 2013 budget, the MPO Policy Board is again respectfully requesting each local unit of government within the Metropolitan Planning Area that is represented by the Board to contribute a portion of the local share financing based on the community's proportionate share of the population within the Planning Area. The

estimated local share of the 2013 MPO budget is \$130,969. Attached is a table which shows the 2010 Census population of each unit of government within the Planning Area and the proportionate share of the local match funding which would be attributed to the municipality.

The MPO Policy Board would very much appreciate your including \$«M_2013_Est_Contrib» in your 2013 operating budget to support the MPO. Thank you in advance for your consideration of this request.

If you have any questions, please contact Bill Schaefer, the MPO's Transportation Planning Manager (phone: 266-9115; e-mail: wschaefer@cityofmadison.com).

Sincerely,

Al Matano, MPO Board Chair

Enclosure

Cc: William Schaefer, MPO Transportation Planning Manager
«cc_1_Name», «cc_1_Title»
«cc_2_Name», «cc_2_Title»
«cc_3_Name», «cc_3_Title»

MPO Agenda Cover Sheet
January 6, 2021

Item No. 8

Re:

Presentation on Survey of Local Pedestrian and Bicycle Related Infrastructure Requirements

Staff Comments on Item:

MPO staff completed a survey of local community requirements related to street design, sidewalks, and bicycle facilities. Staff also reviewed national guidelines such as the NACTO Urban Street Design Guide in order to make recommendations for best practice on such requirements. This is the type of thing that local officials and staff said during the rebrand process would be helpful for local communities since local staff don't have the time to do this sort of research. A similar survey had been conducted and reported on in a previous RTP.

Materials Presented on Item:

1. PowerPoint presentation slides summarizing local requirements and recommendations
2. Table with summary of requirements by most cities and villages in the MPO area

Staff Recommendation/Rationale: For information and discussion purposes only.

An aerial photograph of a road and waterway, overlaid with a teal color. The road curves along the edge of a body of water, with several cars visible. The surrounding area is lush with green trees and vegetation.

Local Pedestrian & Bicycle Related Infrastructure Requirements (2020)

Ben Lyman, Transportation Planner

Infrastructure Design Affecting Pedestrian & Bicycle Networks

Streets

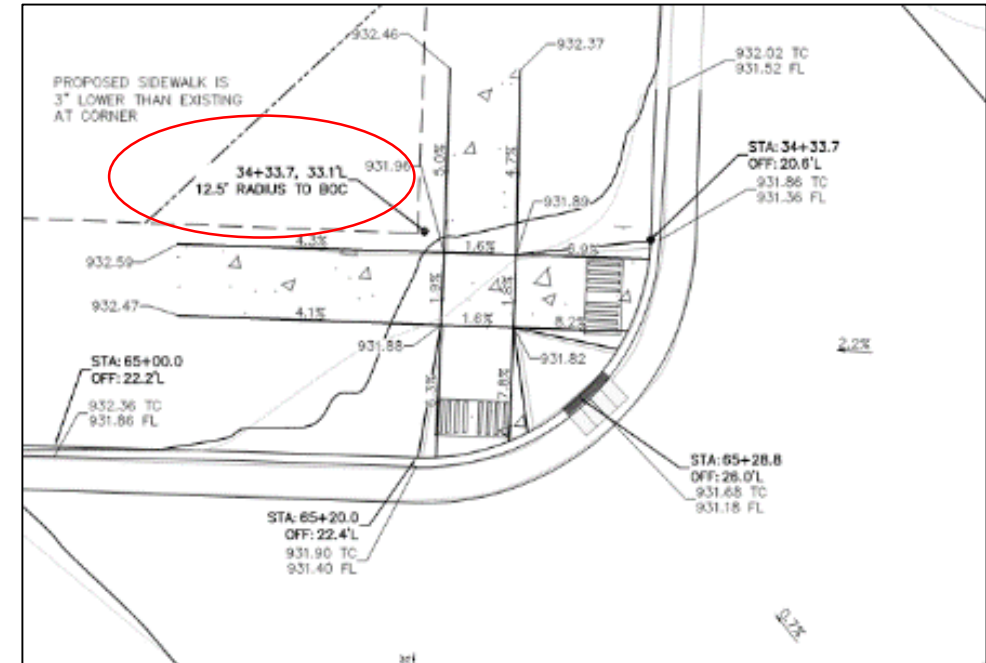
- Block Length
 - Local: Generally 500-600' min., 1000-1600' max.
 - All communities require mid-block connections for long blocks (900'; Fitchburg 800')
 - Recommended: $\leq 400'$, 600' max.
- Cul-de-sacs
 - Local: Generally limited in length (500-1000' max.), sometimes restricted in frequency
 - Recommended: Restrict frequency/only allow due to topography or other site constraints, require bike/ped connections to other ROWs when feasible



Infrastructure Design Affecting Bicycle & Pedestrian Networks

Streets

- Street Width (curb-to-curb)
 - Local*: Generally 28-36', range from 22-36'
 - Collector*: Range from 32-48', upper limit of range generally only when bike lanes & parking will be provided
 - Recommended: Base on context, not strictly on Functional Class; consider likely parking occupancy, bike traffic, traffic calming effect of narrower street. See 24' Dean Av. Option 1 (next slide).
- Curb Radius (directly impacts ped. crossing distance and turning vehicle speeds)
 - Local: Generally 15-20', range from 12.5-30'
 - Recommended: As small as possible, 15' max.
- Radius of Curvature
 - Local: Generally 100-150', range from 70-200'
 - Consider design speed; adjust radius of curvature and super-elevation accordingly (see slide, follows)



Parkside Heights Reconstruction (Middleton)

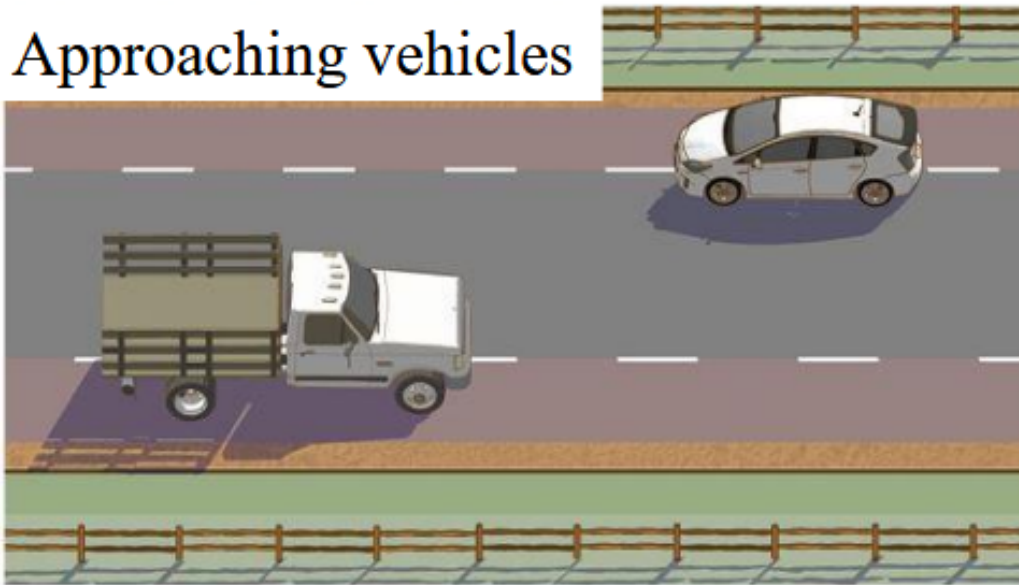
*Local standards for Local or Collector street classifications



Dean Ave. Option 1

- Preferred option of N'Hood & Transportation Commission
- Advisory bike lanes
 - Functions similarly to typical local street
 - Provides greater awareness to use of street by cyclists
 - Vehicles use center lane; 2 approaching vehicles move over to pass
 - Yield to cyclists, if present

Approaching vehicles



Cyclists with one vehicle

Radius of Curvature (Horizontal Radius)

Directly impacts safe travel speeds

Most important on roads with infrequent controlled intersections (rural roads, urban collectors & arterials)

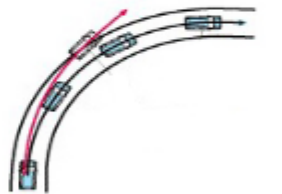
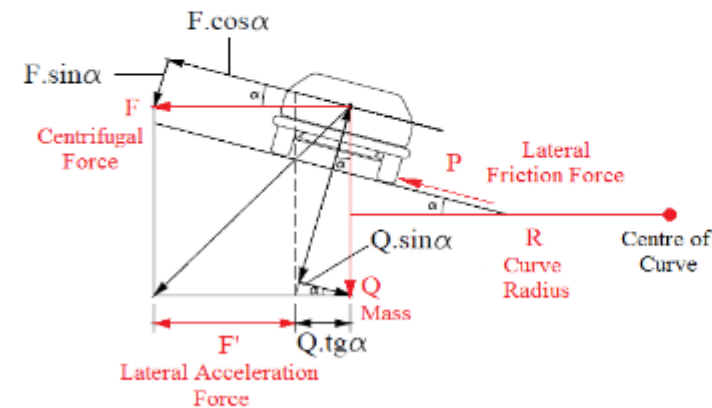
Introduction

- Horizontal and vertical curves used in transportation systems are the critical sections on the alignment.
- On the horizontal curve, lateral acceleration formed by centrifugal force adversely affects the road safety and reduces vehicle travel comfort.
- Evaluation criterion of the alignment geometry in terms of comfort is Jerk.
- During the curve design, to take into account of Jerk criterion is extremely important.



Minimum Horizontal Curve Radius based on the Limit Value of Lateral Acceleration

- The vehicles entered horizontal curve from the linear section of the road move under the influence of various forces. These forces are;



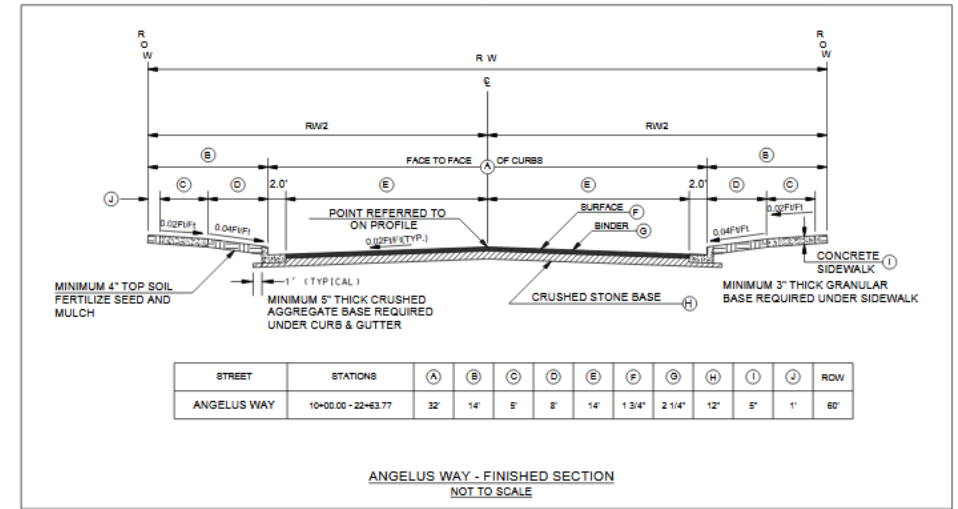
Determination of Minimum Horizontal Curve Radius Used in the Design of Transportation Structures, Depending on the Limit Value of Comfort Criterion Lateral Jerk, Kiliñç/Baybura



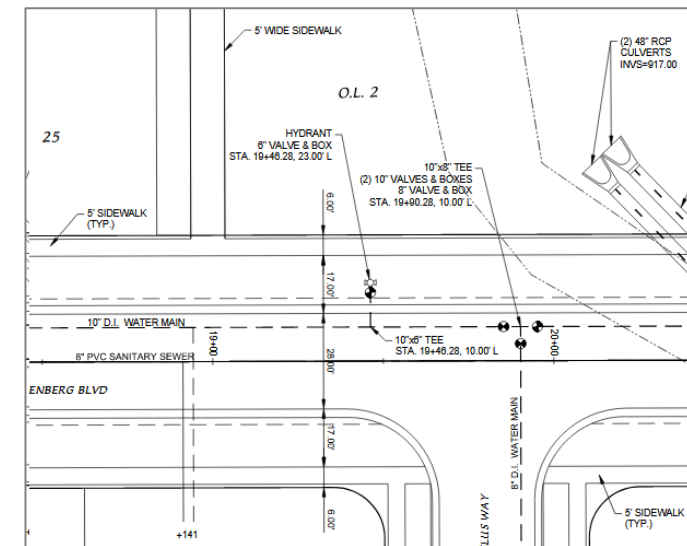
Infrastructure Design Affecting Pedestrian & Bicycle Networks

Sidewalks

- Width
 - Local: Generally 5' required, range of 4'-6'
 - Recommended: 5' absolute minimum, 6' recommended minimum
- None, One, or Both Sides
 - Local: Generally both sides required
 - Recommended: Both sides required
- Snow Removal Ordinance
 - Local: Universal
 - Recommended
- Other Network/Circulation Standards
 - Local: Rare, limited to large developments or particular permit types, when extra-wide sidewalks may be required around development perimeter
 - Recommended



Creek Crossing (Cross Plains)



Sidewalk Funding Policies

100% Adjacent Property Owner

City of Middleton
Village of Maple Bluff
Village of Oregon
Village of Waunakee

50%/50% Municipality/Adjacent Property Owner

City of Fitchburg
City of Madison
City of Stoughton
Village of Cottage Grove

100% Municipality

City of Monona
City of Sun Prairie
City of Verona
Village of Cross Plains
Village of DeForest
Village of Windsor



Equity Concerns

Requiring Owners to Finance New Sidewalks in Existing Development

- Poor transportation network access may negatively impact property values & rents, keeping neighborhoods affordable by limiting their desirability
- Improving transportation network access can increase risk of displacement & gentrification
- Placing burden of paying for improvements on adjacent property owners may have disproportionate impact – Special Assessment + Increased Valuation & Taxation
- Combination of factors may result in opposition to new sidewalks regardless of potential safety improvements

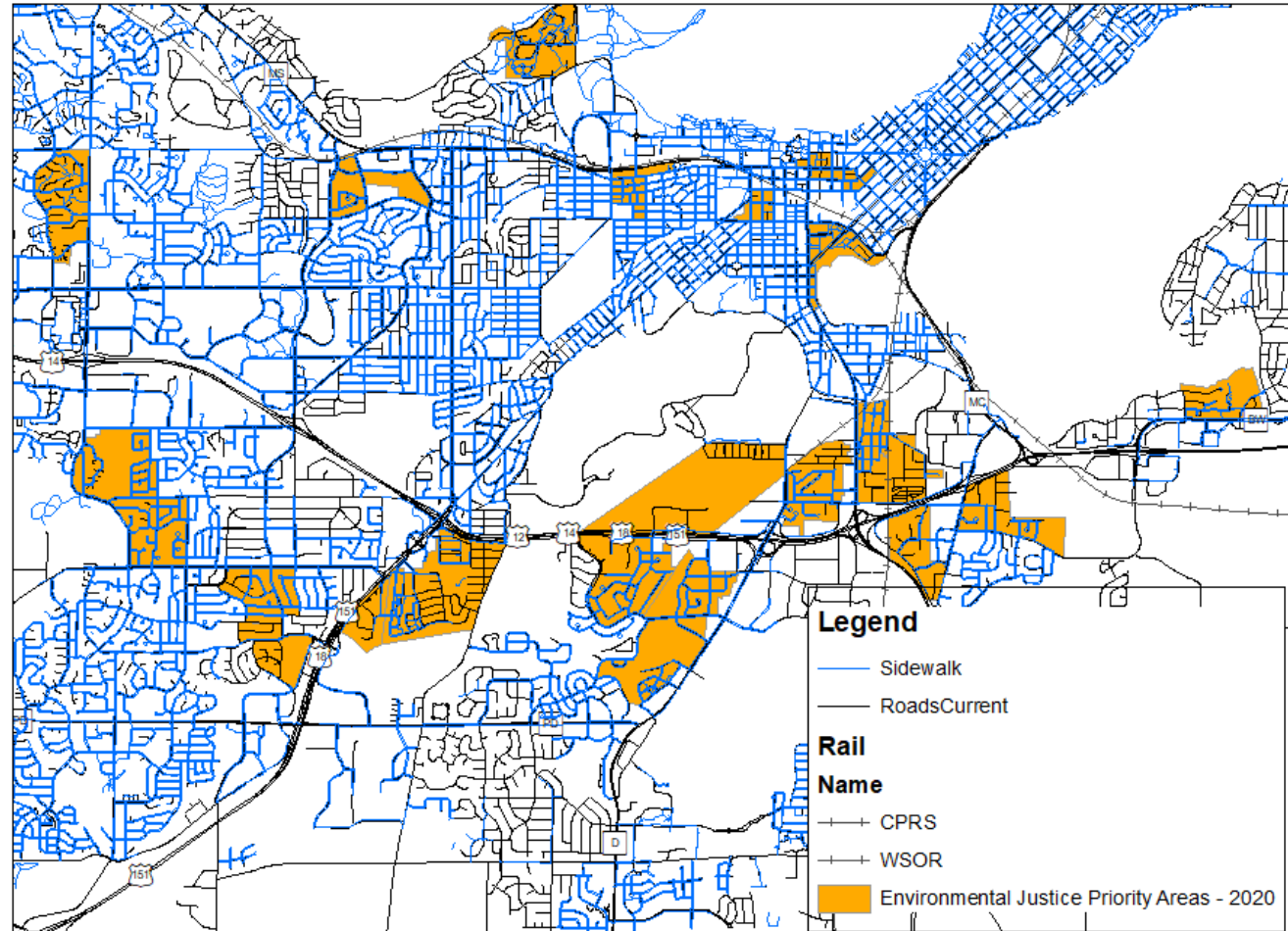
Walk Score is widely used in the Real Estate market – and is owned by a Real Estate Company



Equity Concerns

EJ Priority Areas with limited or no sidewalks - Southwest:

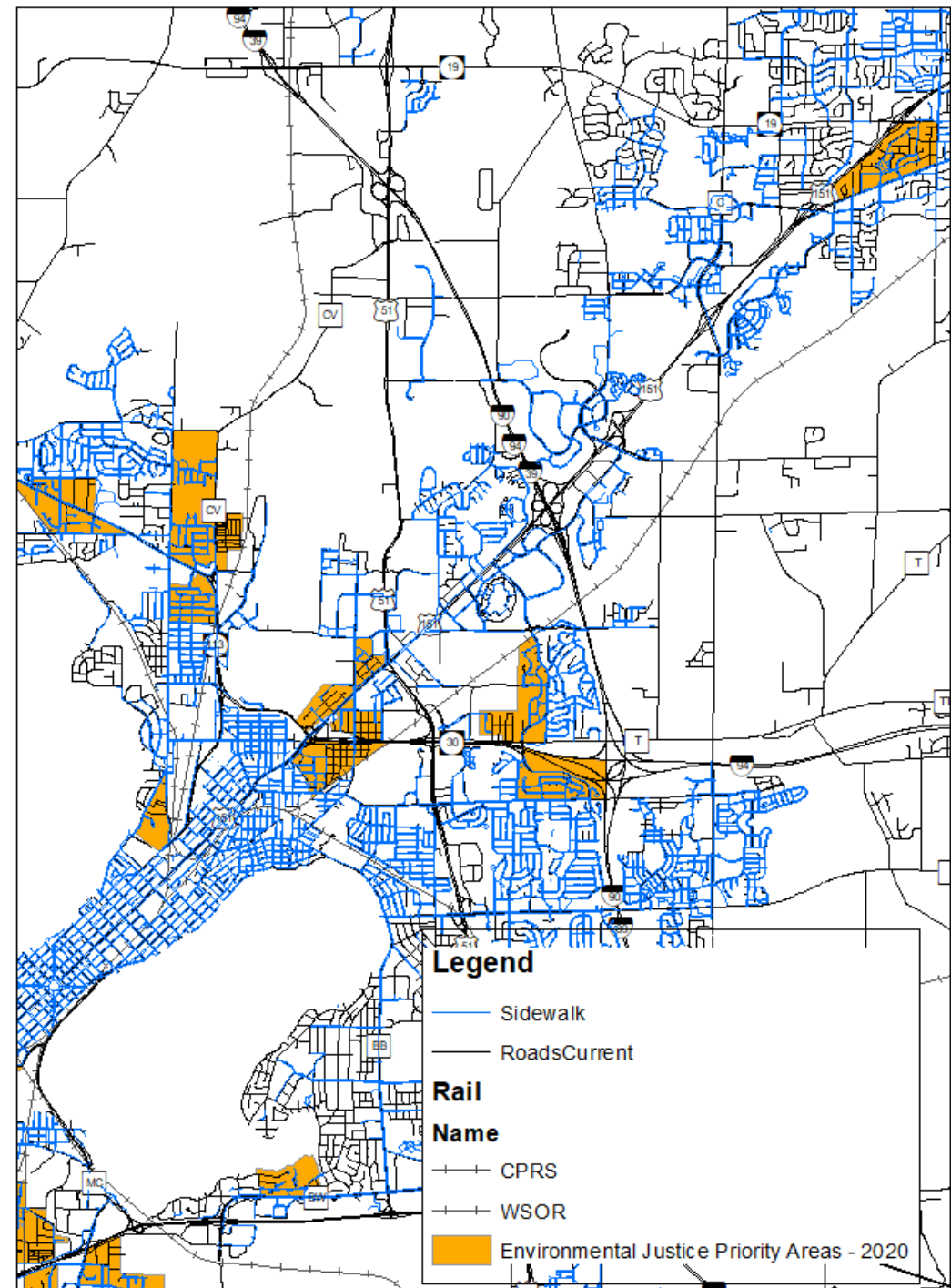
- Wexford Ridge/Walnut Grove
- Jamestown
- Chalet Gardens
- Allied/Belmar
- Dunn's Marsh
- Arbor Hills
- Arboretum
- Burr Oaks - North
- Capitol View Heights
- Moorland/Rimrock
- Southdale
- Bridge/Lakepoint



Equity Concerns

EJ Priority Areas with limited or no sidewalks - Northeast:

- Vera Court/Kennedy Heights
- Majestic Oaks
- Carpenter-Ridgeway
- Truax
- Hawthorne
- Worthington Park
- Burke Heights
- Central Sun Prairie



Equity Concerns

Improving Network Connectivity is Important – But so are Residents

- Sidewalks and safe non-motorized transportation networks are important to everyone, and the more connected they are, the more everyone benefits;
- Assessing improvement costs to adjacent property owners is politically expedient, and “fair” in that each property value considers the walkability of the neighborhood (theoretically); however,
- Requiring adjacent property owners to pay for improvements ignores the larger benefit to the entire community, and disproportionately impacts lower-income property owners and renters

For more on displacement, see: [Equitable Development in Madison](#), Madison Planning Division



Infrastructure Design Affecting Pedestrian & Bicycle Networks

Bike Lanes

- Bike Lane Width:
 - Local: Generally Context-Specific, few established width specifications
 - Recommended: 6 ft. (incl. gutter pan) min., 7 ft. preferred, esp. if higher traffic volumes and speeds. For bike/parking ln., 13-14 ft.
 - Consider narrowing roadway to reduce vehicle speeds, and to provide space for stormwater facilities, street trees, street furniture, utilities, etc.
 - Consider Advisory Bike Lanes and other innovative designs to achieve project goals



Infrastructure Design Affecting Bicycle & Pedestrian Networks

Bike Lanes, Protected Bike Lanes, Buffered Bike Lanes, or Separated Paths?

- Local: Some communities require ROW dedication and separated path or bike lane construction by developers when shown on adopted plans; some require adjacent or “benefitting” properties owners to contribute to new path construction (see slides on Equity Concerns for sidewalk funding)
- Recommended: Require at least ROW dedication, preferably construction, for paths/trails identified in adopted plans when they cross new development
- Base facility type on expanding the All Ages and Abilities Network, closing gaps and extending the AAA network

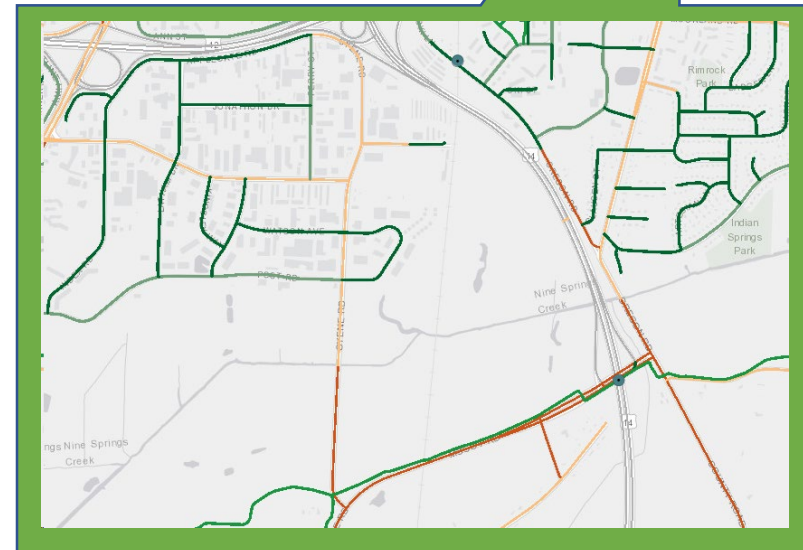
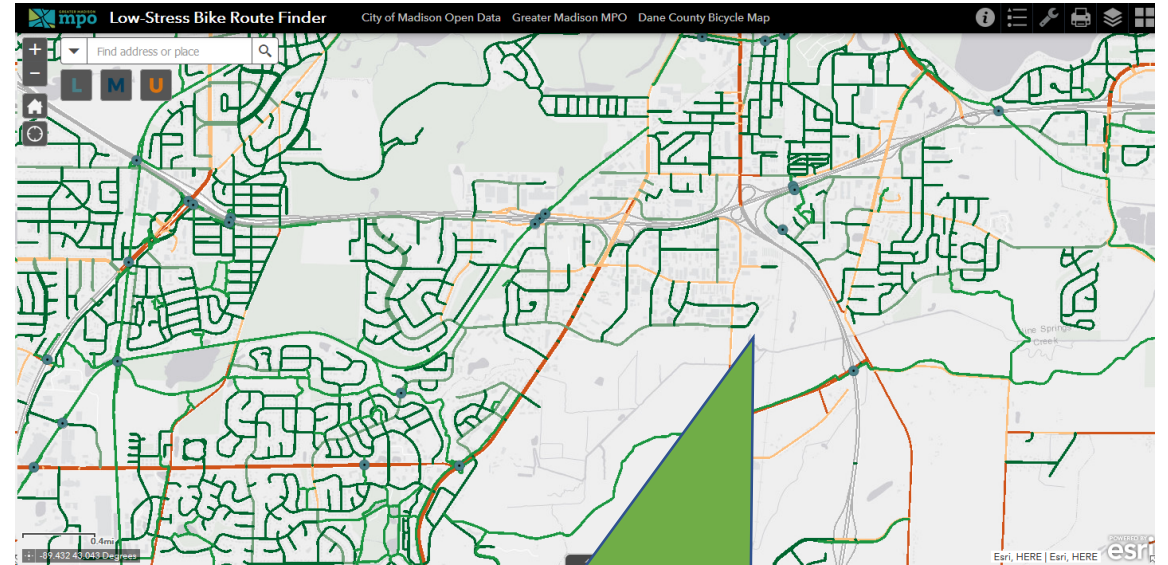
Contextual Guidance for Selecting All Ages & Abilities Bikeways				
Roadway Context				All Ages & Abilities Bicycle Facility
Target Motor Vehicle Speed*	Target Max. Motor Vehicle Volume (ADT)	Motor Vehicle Lanes	Key Operational Considerations	
Any		Any	Any of the following: high curbside activity, frequent buses, motor vehicle congestion, or turning conflicts [†]	Protected Bicycle Lane
< 10 mph	Less relevant	No centerline, or single lane one-way	Pedestrians share the roadway	Shared Street
≤ 20 mph	≤ 1,000 – 2,000		< 50 motor vehicles per hour in the peak direction at peak hour	Bicycle Boulevard
≤ 25 mph	≤ 500 – 1,500	Single lane each direction, or single lane one-way	Low curbside activity, or low congestion pressure	Conventional or Buffered Bicycle Lane, or Protected Bicycle Lane
	≤ 1,500 – 3,000			Buffered or Protected Bicycle Lane
	≤ 3,000 – 6,000			Protected Bicycle Lane
	Greater than 6,000	Multiple lanes per direction		Protected Bicycle Lane, or Reduce Speed
Greater than 26 mph [†]	≤ 6,000	Multiple lanes per direction	Low curbside activity, or low congestion pressure	Protected Bicycle Lane, or Reduce to Single Lane & Reduce Speed
	Greater than 6,000	Any	Any	Protected Bicycle Lane, or Bicycle Path
High-speed limited access roadways, natural corridors, or geographic edge conditions with limited conflicts		Any	High pedestrian volume	Bike Path with Separate Walkway or Protected Bicycle Lane
			Low pedestrian volume	Shared-Use Path or Protected Bicycle Lane



Infrastructure Design Affecting Bicycle & Pedestrian Networks

Bike Lanes, Protected Bike Lanes, Buffered Bike Lanes, or Separated Paths?

- MPO Recommendations:
 - Use Level of Traffic Stress (LTS) to identify, prioritize, and design projects to enlarge the AAA and low-stress networks (See [MPO Low-Stress Bike Route Finder](#))
 - MPO is investigating refinements to LTS criteria
 - Design streets to meet AAA guidelines where possible
 - Require developer to dedicate adequate/separate ROW for appropriate facility at a minimum; preferred to require construction by developer when facility is shown on adopted plans or as required by local body (Council or Board). Separated paths should be constructed with streets, prior to buildings



DRAFT**Comparative Table of Local Pedestrian Facility Requirements and Policies and Street Standards**

Local Requirement Comparison Table		City of Fitchburg	City of Madison	City of Middleton	City of Monona
Streets	Block Length & Street Network Connectivity (All include requirement for mid-block pedestrian way for blocks longer than 900'; Fitchburg 900')	Residential blocks 500-1000'; use of cul-de-sacs limited, 600' max, w/ped. connection to ROW where feasible.	250' centerline separation	600' min.	NA
	Street Width (Local)	32-36'	28-36'	32'	33'
	Curb Radius (Local)	20'	20'	12.5'	15-20'
	Radius of Curvature (Local)	70'	150'	200'	NA
Cost Sharing Policy (New Sidewalk in Existing Development Only)(Local%/Owner%)		50%/50%	50%/50%	0%/100%	100%/0%
Sidewalks, Separated Paths, & Bike Lanes	Width	5' Sidewalks	5' Sidewalks	4' Sidewalks	5' Sidewalks
	Requirements	Both Sides	Both Sides	Both Sides; Paths may be required	NA
Pedestrian Access / Circulation Standards		NA	General	NA	General

Local Requirement Comparison Table		City of Stoughton	City of Sun Prairie	City of Verona	Village of Cottage Grove	Village of Cross Plains
Streets	Block Length & Street Network Connectivity (All include requirement for mid-block pedestrian way for blocks longer than 900'; Fitchburg >900')	Residential blocks 400-1200'; cul-de-sacs 600' max.	500-1200'	500-1200'; cul-de-sacs 1000' max.	Residential blocks 600-1500'; cul-de-sacs 500' max.	600-1500'
	Street Width (Local)	28-34'	33'	36'	28-36'	28'
	Curb Radius (Local)	NA	20' generally, may be 15'	Per WisDOT standards; Minimize	25-30' generally	NA
	Radius of Curvature (Local)	100'	150'	175'	100'	150'
Cost Sharing Policy (New Sidewalk in Existing)		50%/50%	100%/0%	100%/0%	50%/50%	100%/0%
Sidewalks, Separated Paths, & Bike Lanes	Width	5' Sidewalks	5' Sidewalks	5' Sidewalks	4' Sidewalks	5-6' Sidewalks
	Requirements	Both Sides	Both Sides	Both Sides	Both Sides	As required by Village Board
Pedestrian Access / Circulation Standards		Large developments only	Large developments only	NA	Large developments only	NA

Local Requirement Comparison Table		Village of DeForest	Village of McFarland	Village of Oregon	Village of Waunakee	Village of Windsor
Streets	Block Length & Street Network Connectivity (All include requirement for mid-block pedestrian way for blocks longer than 900'; Fitchburg >800')	600-1600'; use of cul-de-sacs limited, 500' max.	400-1500'; cul-de-sacs 800' max.	Residential blocks 600-1500'; cul-de-sacs 500' max.	Residential blocks 500-1500'	Residential blocks 500-1200'; use of cul-de-sacs limited
	Street Width (Local)	32'	32'	38'	28-32'	22-28'
	Curb Radius (Local)	20'	20' generally	15' generally	15-20' generally	25'
	Radius of Curvature (Local)	150'	100'	100'	130'	150'
Cost Sharing Policy (New Sidewalk in Existing		100%/0%	Per Village Board	0%/100%	0%/100%	100%/0%
Sidewalks, Separated Paths, & Bike Lanes	Width	4-5' Sidewalks	5' Sidewalks	5' Sidewalks	4-5' Sidewalks	5' Sidewalks
	Requirements	Generally Both Sides; Paths required where shown on adopted plans	As required by Village Board	Both Sides	Generally Both Sides; Paths may be required where shown on adopted plans	Both Sides
Pedestrian Access / Circulation Standards		NA	By zone or development type	NA	By development type	General

MPO Agenda Cover Sheet
January 6, 2021

Item No. 9

Re:

Presentation on Analysis of Travel from Environmental Justice Priority Areas to Major Employment Areas

Staff Comments on Item:

MPO staff conducted an analysis of travel from identified environmental justice priority areas and to major employment areas to inform planning efforts such as the transit network design study, Transit Development Plan, and to identify priority bike facility improvements that would benefit these areas. This information will be incorporated into the long-range transportation plan update.

Materials Presented on Item:

1. PowerPoint presentation slides

Staff Recommendation/Rationale: For information and discussion purposes only.



EJ Priority Areas to Employment Centers: StreetLight O-D Analyses

Ben Lyman, Transportation Planner

Environmental Justice (EJ) Priority Areas to Employment Centers: StreetLight O-D Analyses

Purpose

To better understand journey-to-work and other travel by people residing in Environmental Justice (EJ) Priority Areas, in order to identify transportation system improvement needs that will benefit the residents of these Priority Areas



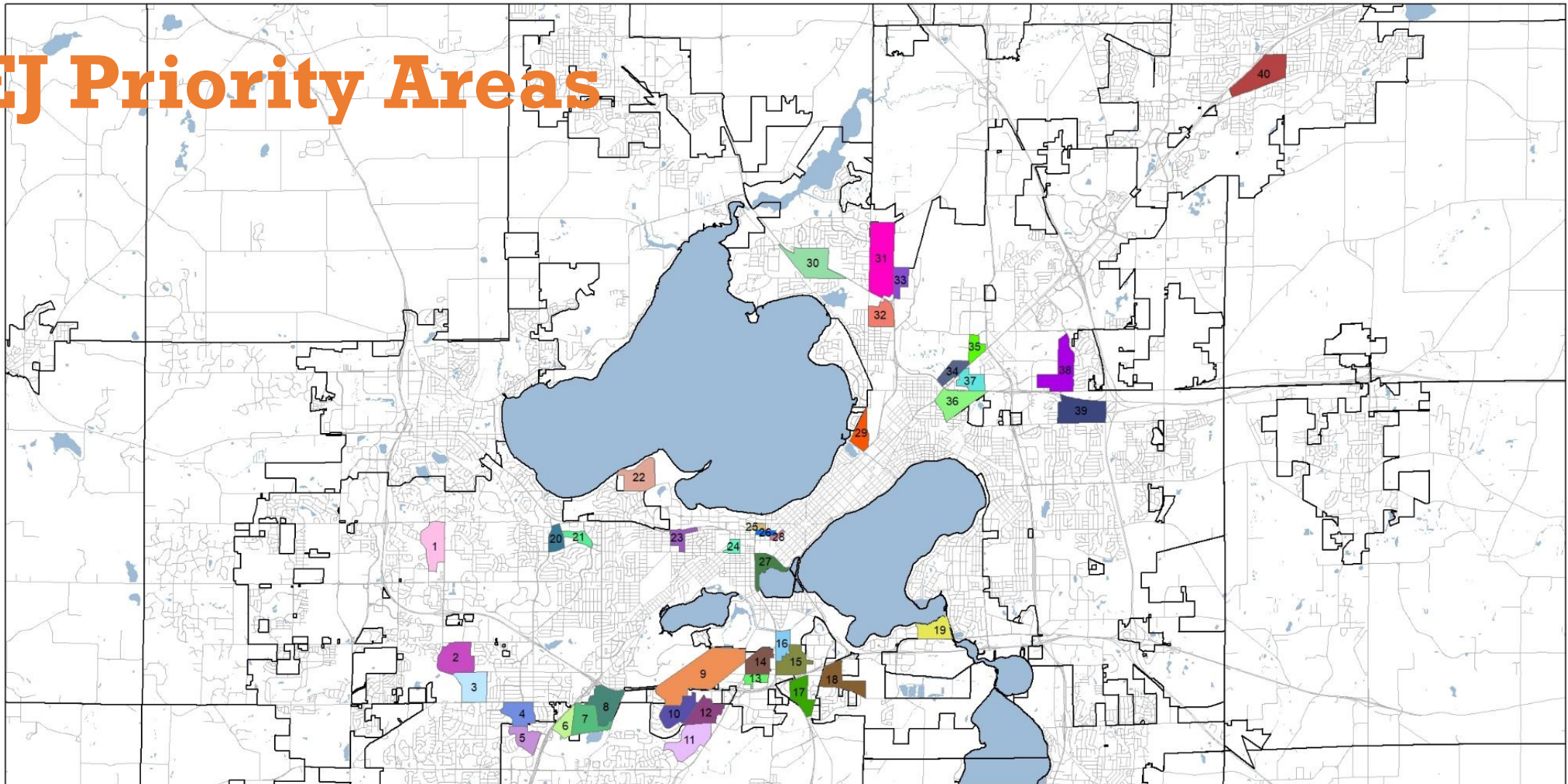
Environmental Justice (EJ) Priority Areas to Employment Centers: StreetLight O-D Analyses

Use Streetlight Analysis Tools to:

- Identify where EJ Populations Work
- Identify where they take other Home-Based Other Trips
- Determine whether transit service and the bicycle network are adequate for the O-D pairs



EJ Priority Areas



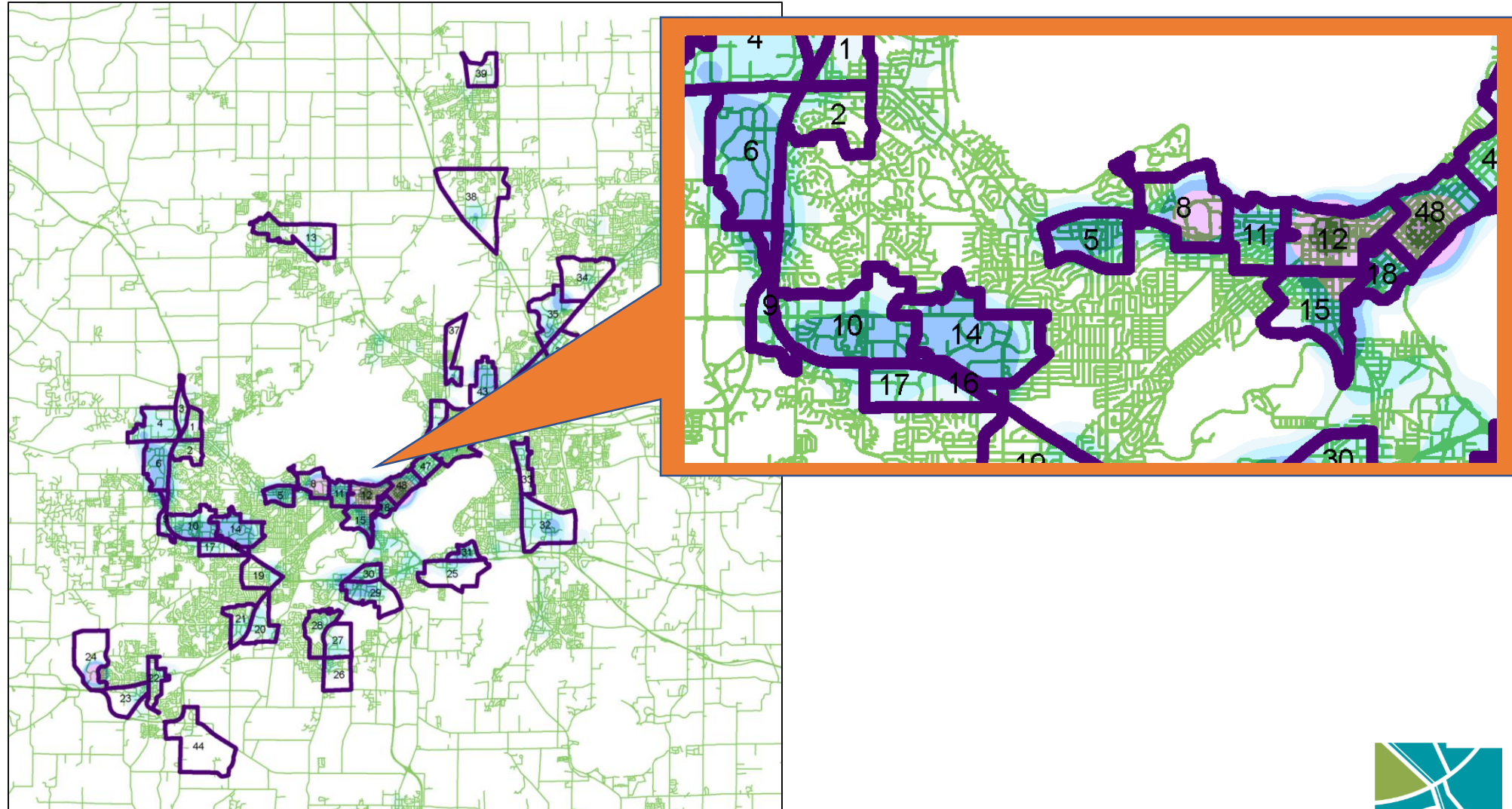
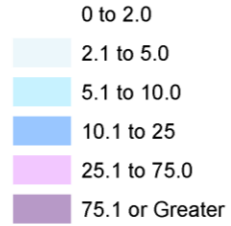
EJ Priority Areas

1. Wexford Ridge-Walnut Grove	7. Allied-Belmar	14. Burr Oaks - North	21. Sheboygan - East	28. Miffland	35. Truax
2. Greentree-Gammon Lane	8. Dunn's Marsh	15. Capital View Heights	22. Eagle Heights	29. Sherman Terrace/Lakewood Gardens	36. Worthington Park
3. Prairie Hills	9. Arboretum	16. Bram's Addition	23. Regent-Old University	30. Vera Court/Kennedy Heights	37. Hawthorne
4. Meadowood	10. Arbor Hills	17. Southdale	24. South Campus	31. Whitetail Ridge/Berkley Oaks	38. Burke Heights/Ridgewood
5. Jamestown	11. Leopold - South	18. Moorland-Rimrock	25. Library Mall	32. Sherman	39. Swanton
6. Chalet Gardens	12. Leopold - North	19. Bridge-Lakepoint	26. University Square	33. Majestic Oaks	40. Central Sun Prairie
	13. Burr Oaks - South	20. Sheboygan - West	27. Monona Bay	34. Carpenter-Ridgeway	Municipal Boundaries - 2019



Employment Centers

Jobs per Acre (2016)



Considerations/Limits to Data

Trip Chaining & Trip Purpose

Mixed Uses in O-D Zones

Lack of Differentiation between O and D



Trip Chaining & Trip Purpose

Streetlight Trip Purpose Categories:

- “Home-Based Work (HBW): Travel between home and work in either direction.
- “Home-Based Other (HBO): Travel to or from home, to anywhere other than work.
- “Non-Home Based (NHB): All travel not to or from home (i.e. all travel other than the above)”¹

“Devices...are assigned a probable home and work location based on where they appear to spend evenings and weekday working hours. Devices can have a number of potential home and work locations and will be weighted accordingly based on where they spend the most time throughout a calendar month.”²

¹ <https://support.streetlightdata.com/hc/en-us/articles/360038070332-Trip-Purpose>

³ <https://support.streetlightdata.com/hc/en-us/articles/360018550852-How-does-a-trip-start-and-end->



Trip Chaining & Trip Purpose

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These categories of Trip Purpose do not address “trip chaining”, or making multiple stops along a route. E.g. a device may travel directly from home to work in the morning, but may run errands on the way home. If the stops along the way home are long enough (device does not move more than 5 meters in 5 minutes³), the legs between work and grocery store, child care, etc. are listed as NHB. The last leg of this multi-stop trip would be to home, so that last leg shows up as HBO even though the real origin of the trip was work.

¹ <https://support.streetlightdata.com/hc/en-us/articles/360038070332-Trip-Purpose>

³ <https://support.streetlightdata.com/hc/en-us/articles/360018550852-How-does-a-trip-start-and-end->





Mixed Uses in O-D Zones

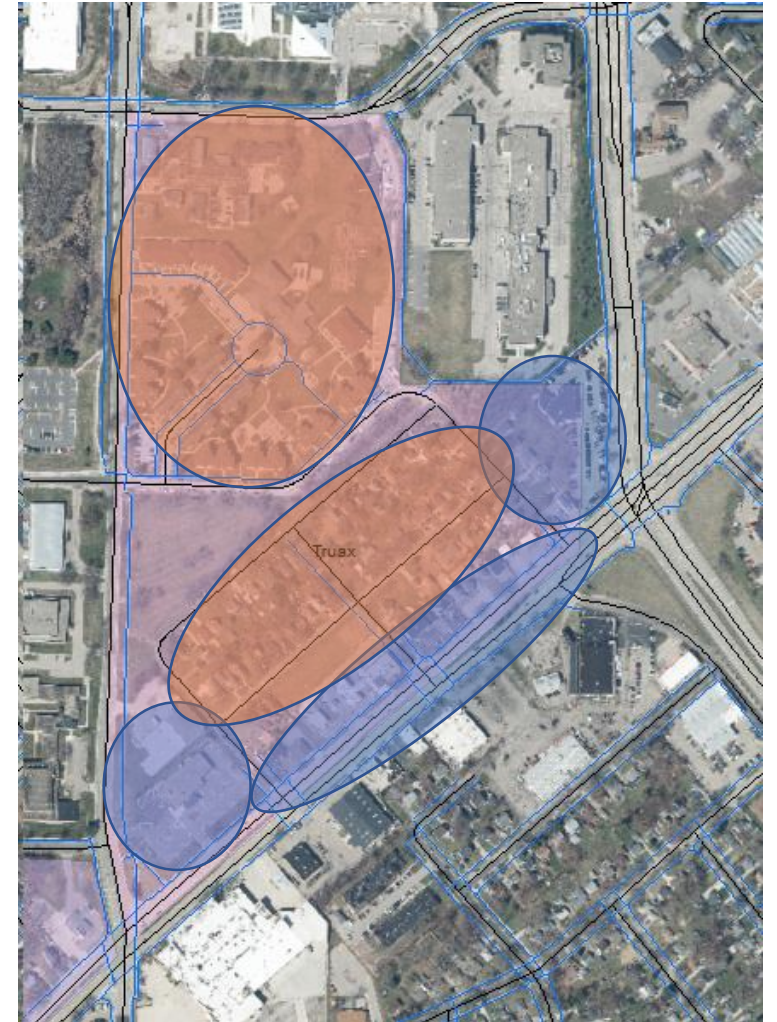
Mixed Uses in O-D Zones

MPO Staff made efforts to exclude high-income residential and non-residential areas from EJ Priority Areas, as well as to exclude residential areas from Employment Centers

This process had limits, and some areas were included which likely confound the analysis.

(e.g Truax, at right, and other EJ Priority Areas along East Washington Ave which include the non-residential properties fronting on both E. Wash and major intersecting streets)

-  Residential Areas
-  Non-Residential Areas



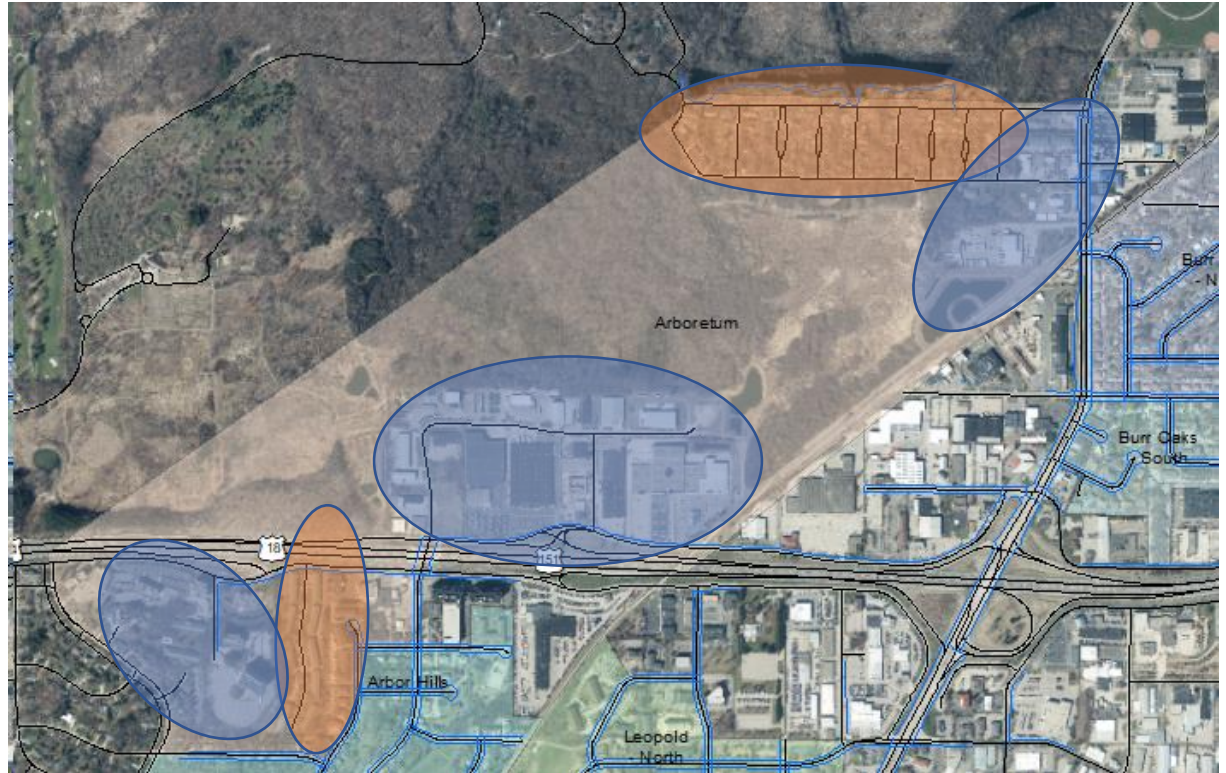
Mixed Uses in O-D Zones



Mixed Uses in O-D Zones

Additionally, Census Block Group geographies occasionally combine areas which are physically separated by features such as open water, undeveloped land, or major highways.

Data for these areas does not differentiate between areas which are physically isolated from each other by these features. (e.g. Arboretum, at right, which includes areas on both the north and south of the Beltline)

Data for these areas may be further confounded by the inclusion of non-residential areas. (e.g. Arboretum, which includes non-residential areas along Fish Hatchery Rd., as well as on both sides of the Beltline)



-  Residential Areas
-  Non-Residential Areas



Trip Chaining & Trip Purpose

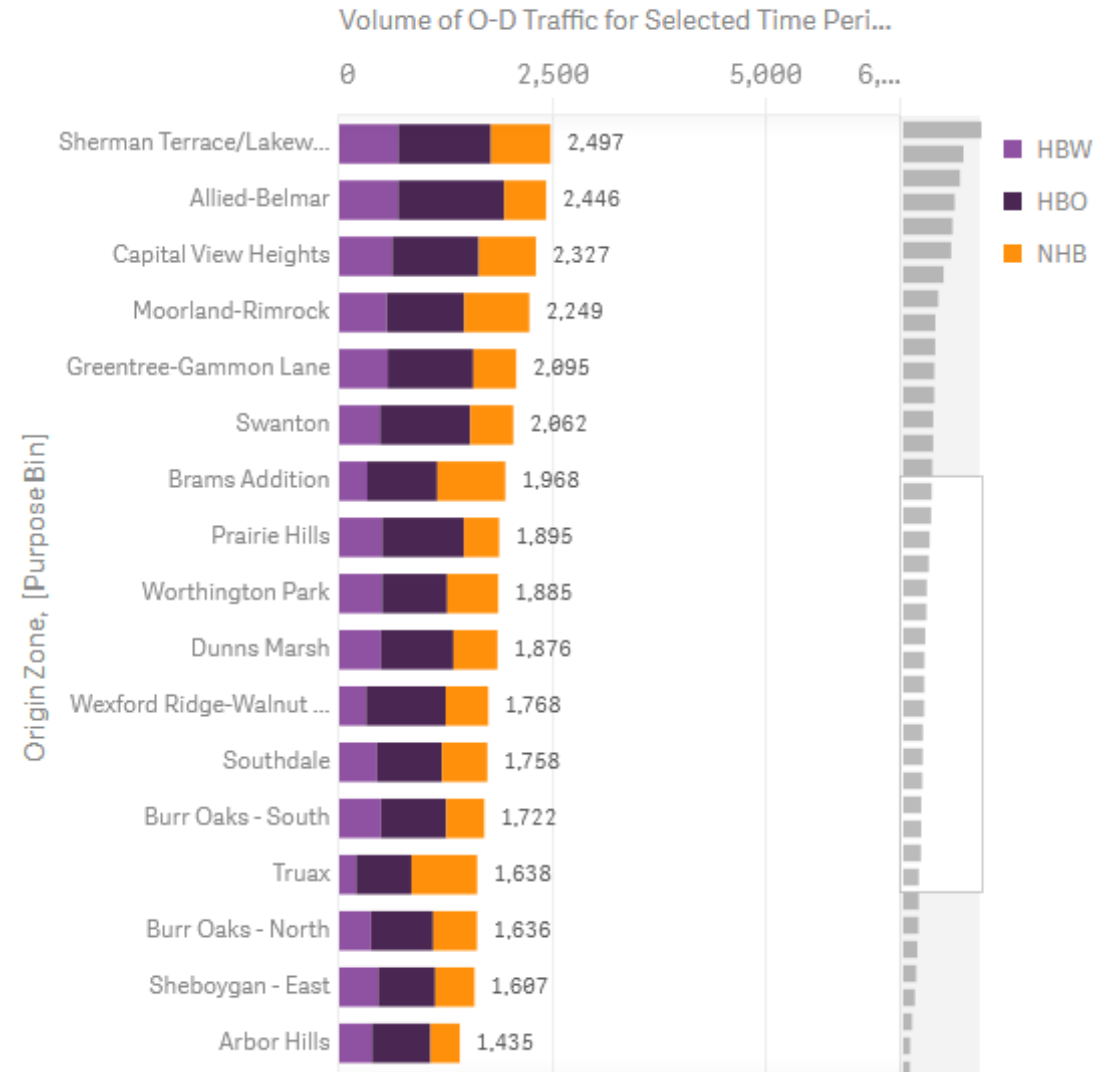
Lack of Differentiation between O and D

In an O-D analysis, StreetLight does not differentiate between which end of the trip occurs in a given zone. All one-way trips between any Origin and any Destination are counted:

It is reasonable to presume that $\frac{1}{2}$ of all trips in the estimate are originating in the zone, and $\frac{1}{2}$ are destined for the zone, *but the exact distribution is not known*, since trips with an O or D outside of the analyzed zones are not included.

Trips with a predicted Home location at one end will be classified as HBW or HBO, regardless if Home is the Origin or Destination.

O-D Traffic Volume by Purpose



On to the Analyses...

EJ Priority Areas to Employment Centers

1) Single EJ Priority Area to Individual Employment Centers

Generally very low STL volumes between O-D pairs (e.g. Chalet Gardens, at right)

2) Grouped EJ Priority Areas to Grouped Employment Centers

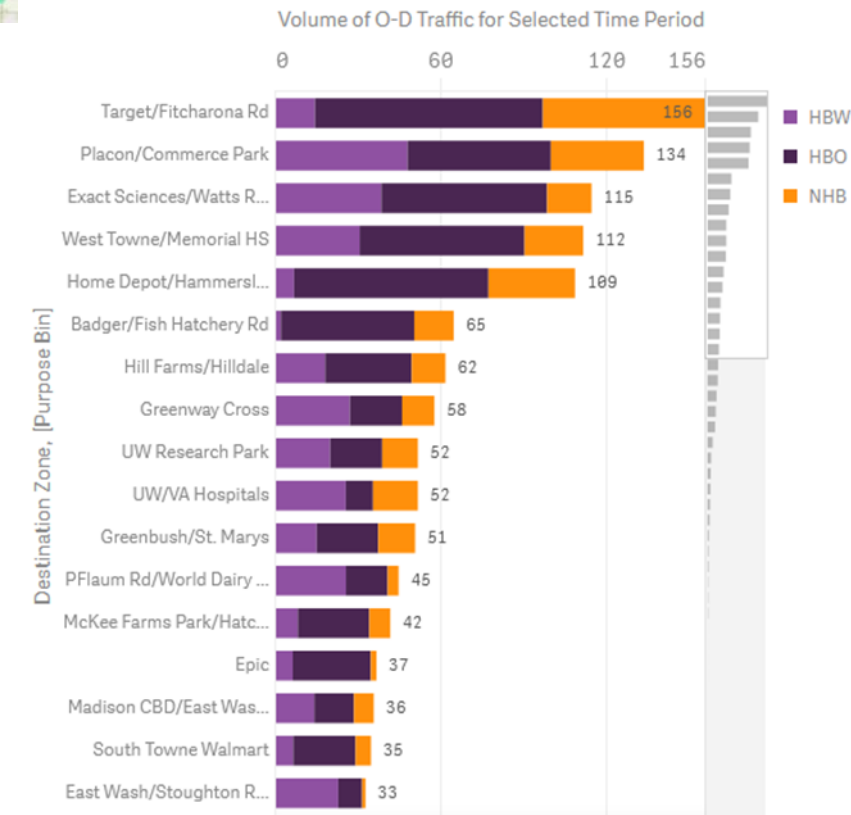
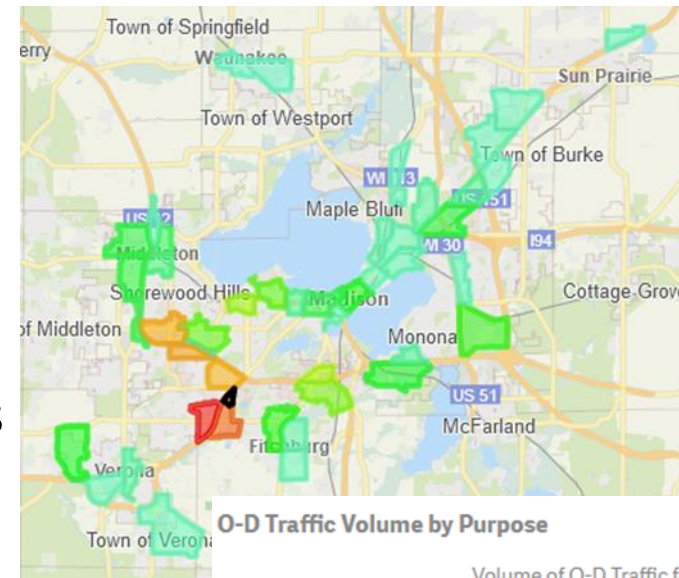
Significant STL volumes for some O-D pairs

3) Grouped EJ Priority Areas to Grouped Employment Centers & Remainders (Super TAZs)

Significant STL volumes for some O-D pairs

4) Census Block Groups (CBGs) to Grouped Employment Centers

Generally similar patterns to (3), with exceptions



2) Grouped EJ Priority Areas to Grouped Employment Centers

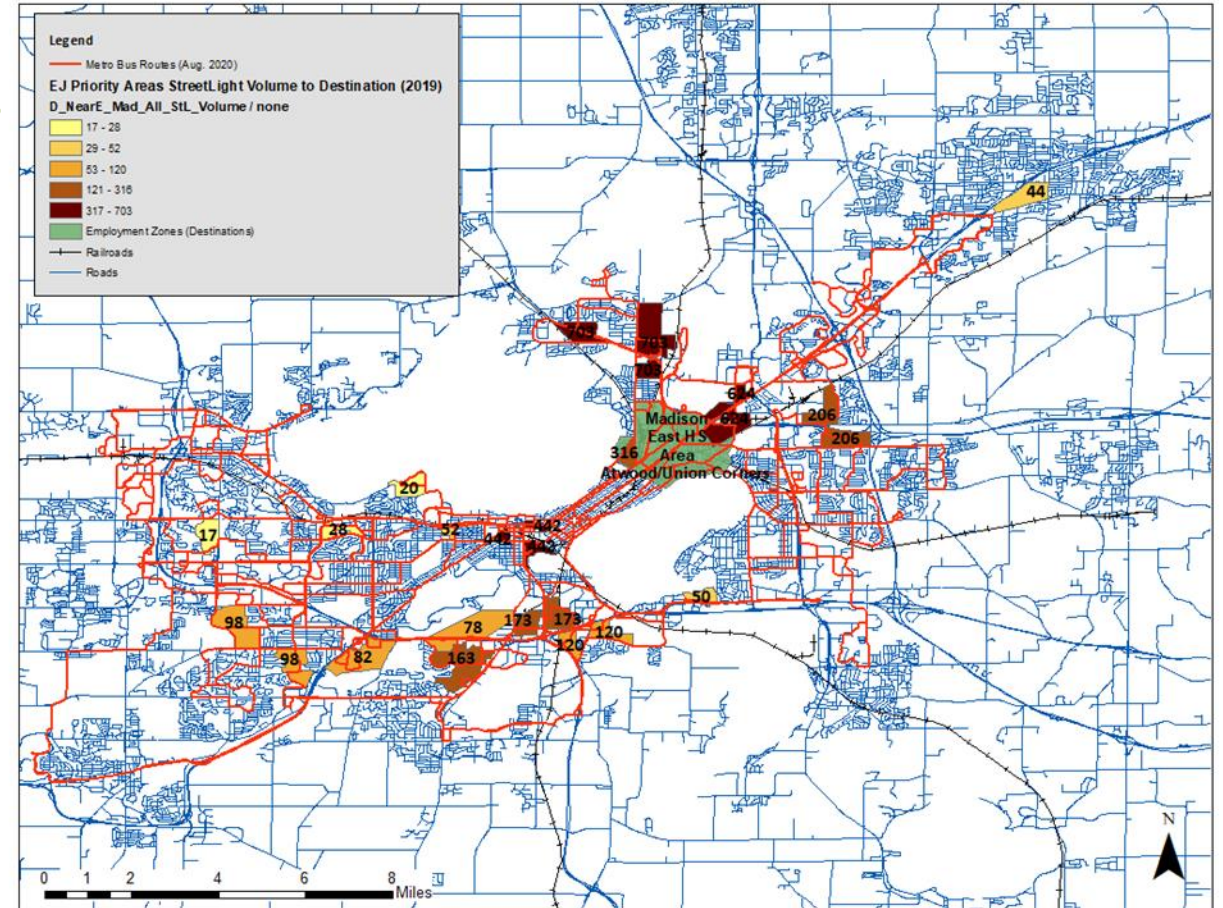
Groups Enhance Visibility of Patterns

A single EJ Priority Area may have a relatively low volume of trips to/from an Employment Center (e.g. 100 STL vol)

Grouping neighboring EJ Priority Areas and Employment Centers has a multiplier effect:

$3 \text{ EJPA's} \times 100 \text{ STL vol} \times 3 \text{ ECs} = 900 \text{ STL vol}$

This allows consideration of the total number of trips being made between moderately-sized geographic areas



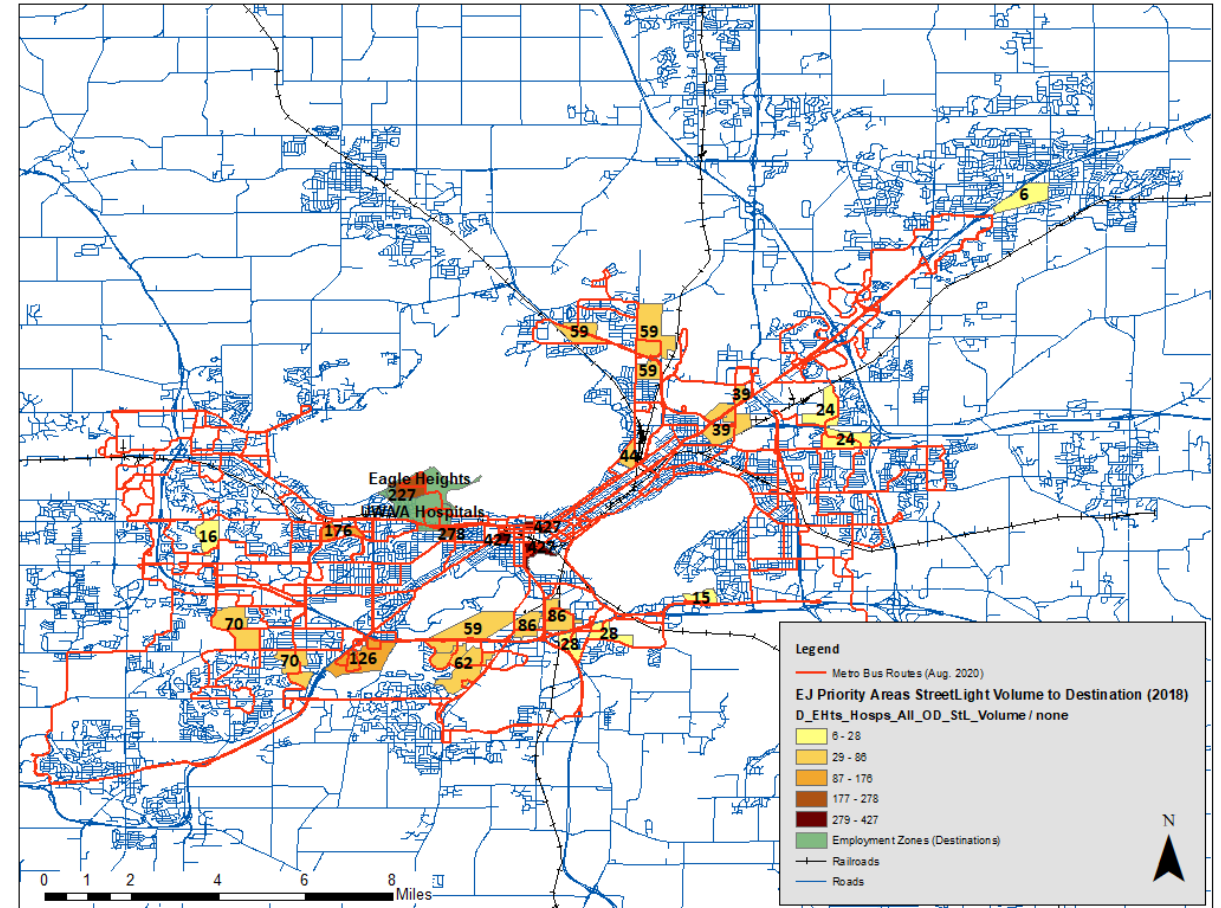
2) Grouped EJ Priority Areas to Grouped Employment Centers

Destination: UW/VA Hospitals & West UW Campus

Although the UW-Madison Campus is generally well-served by transit, trips to this central Employment Center can take much longer from EJ Priority Areas than they would be car.

Destination: VA Hospital for 9:00 AM Weekday Arrival
Origin: Leopold

	Total Est. Travel Time	Transfers	Est. Walk Time	% of Auto Time
Bus	49-64 min.	1-2	6-9 min.	204-533%
Auto	12-24 min.			100%
Bike	28-38 min.			117-317%



2) Grouped EJ Priority Areas to Grouped Employment Centers

Destination: South Madison

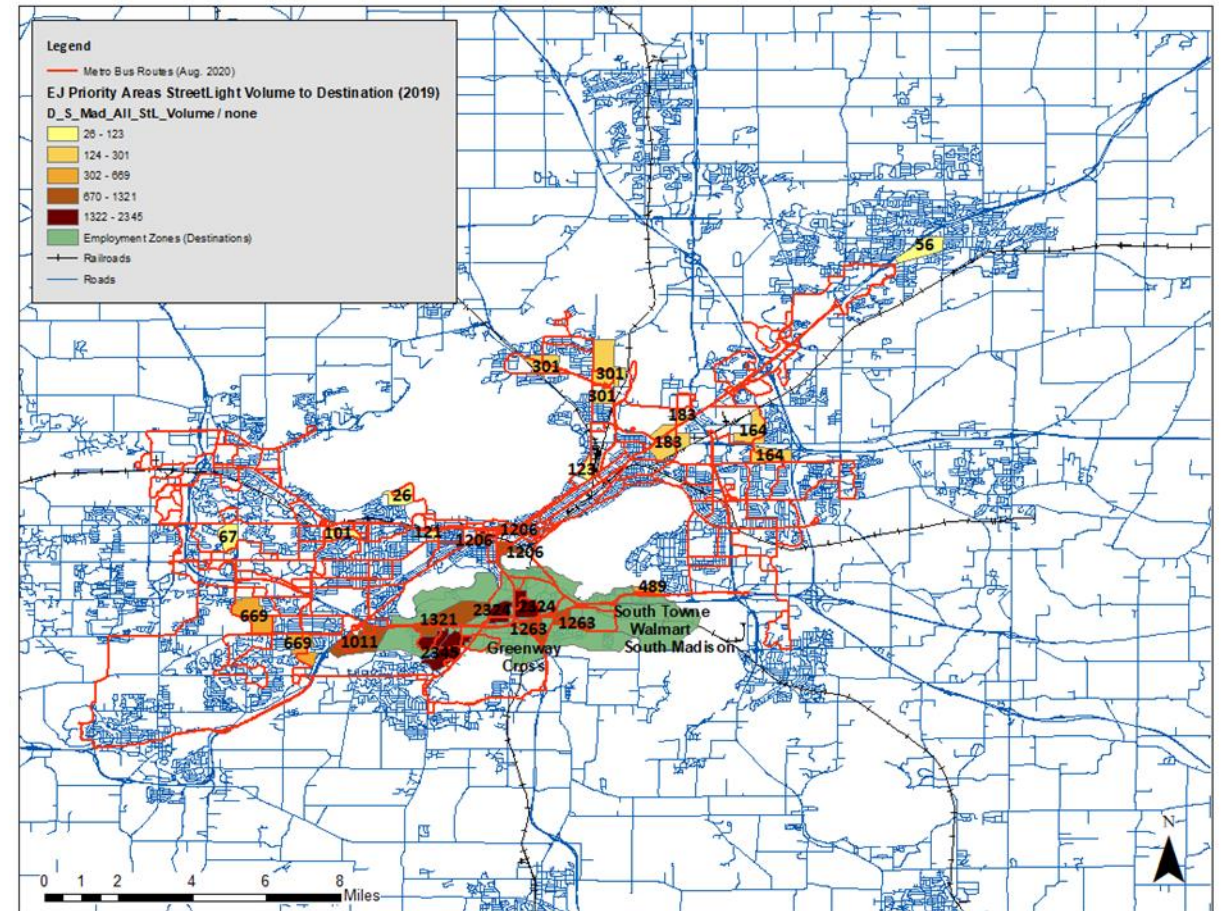
The South Madison Super TAZ is bisected by the Beltline (E-W), and largely isolated from areas to the north and south by lakes, wetlands, and open space. There are few E-W routes connecting segments of this area other than the Beltline, which is a barrier for both transit and non-motorized transportation. Travel times from outside this area into it are generally *proportionally* better than intra-area trips.

Destination: Greenway Cross @ Bryant Rd for 9:00 AM Weekday Arrival
Origin: Vera Court

	Total Est. Travel Time	Transfers	Est. Walk Time	% of Auto Time
Bus	76-82 min.	1-3	8-25 min.	190-373%
Auto	22-40 min.			100%
Bike	56-57 min.			140-259%

Origin: Greentree

	Total Est. Travel Time	Transfers	Est. Walk Time	% of Auto Time
Bus	46-83 min.	0-2	14-31 min.	383-1186%
Auto	7-12 min.			100%
Bike	21-25 min.			175-357%



3) Grouped EJ Priority Areas to Grouped Employment Centers & Remainders (Super TAZs)



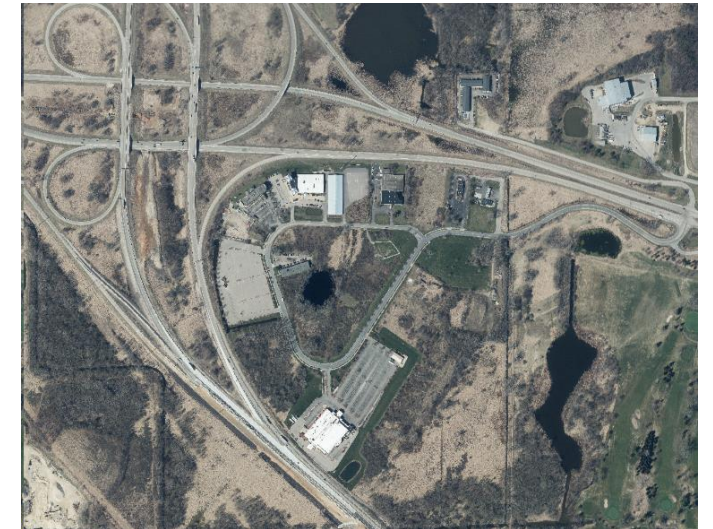
Capturing trips to other Destinations

Employment Centers are based on job density, and exclude many jobs in low-density industries, including warehousing, construction/fabrication, and other land-intensive employers.

Other small or narrow employment areas, such as Monona Dr. (left) and the Ho-Chunk Casino area (top right) do not have the job density to be classified as Employment Centers, but contain many jobs.

Non-work trips, such as those to child care, health care, or shopping are critical to quality of life and are likely to have one trip end outside of Employment Centers.

For these analyses, TAZ Super-Groups or “Super TAZs” have Employment Centers cookie-cut from them (e.g. Town of Burke, bottom right).



3) Grouped EJ Priority Areas to Grouped Employment Centers & Remainders (Super TAZs)

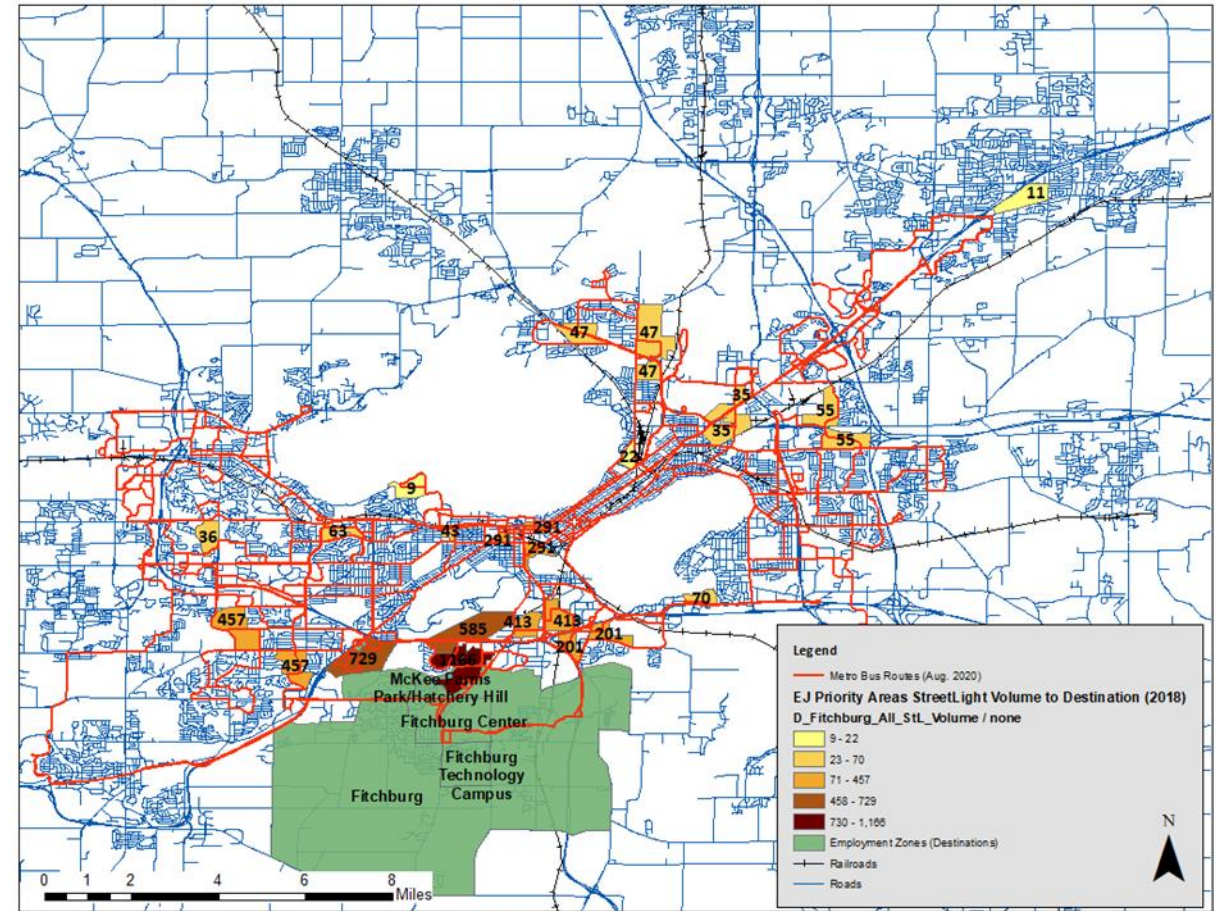
Destination: Fitchburg Area

Although most trips from EJ Priority Areas and destined for the Fitchburg area originate within just a few miles of the destination, with high concentrations of trip origins in South and Southwest Madison/North Fitchburg, many of these trips are poorly served by transit. The non-motorized network serves these trips reasonably well.

Destination: Fitchburg Technology Campus for 9:00 AM Weekday Arrival

Origin: Greentree

	Total Est. Travel Time	Transfers	Est. Walk Time	% of Auto Time
Bus	80-105 min.	1-2	5-13 min.	444-875%
Auto	12-18 min.			100%
Bike	28-31 min.			155-258%



3) Grouped EJ Priority Areas to Grouped Employment Centers & Remainders (Super TAZs)

Destination: Monona, SE Madison, & S. Town of Blooming Grove

Served by Monona Lift/Express, Metro, or no transit service. Trip origins are common from North, East, Central, Southwest, and South Madison; fragmented and relatively low service levels (60-minute headways) result in very long travel times by transit.

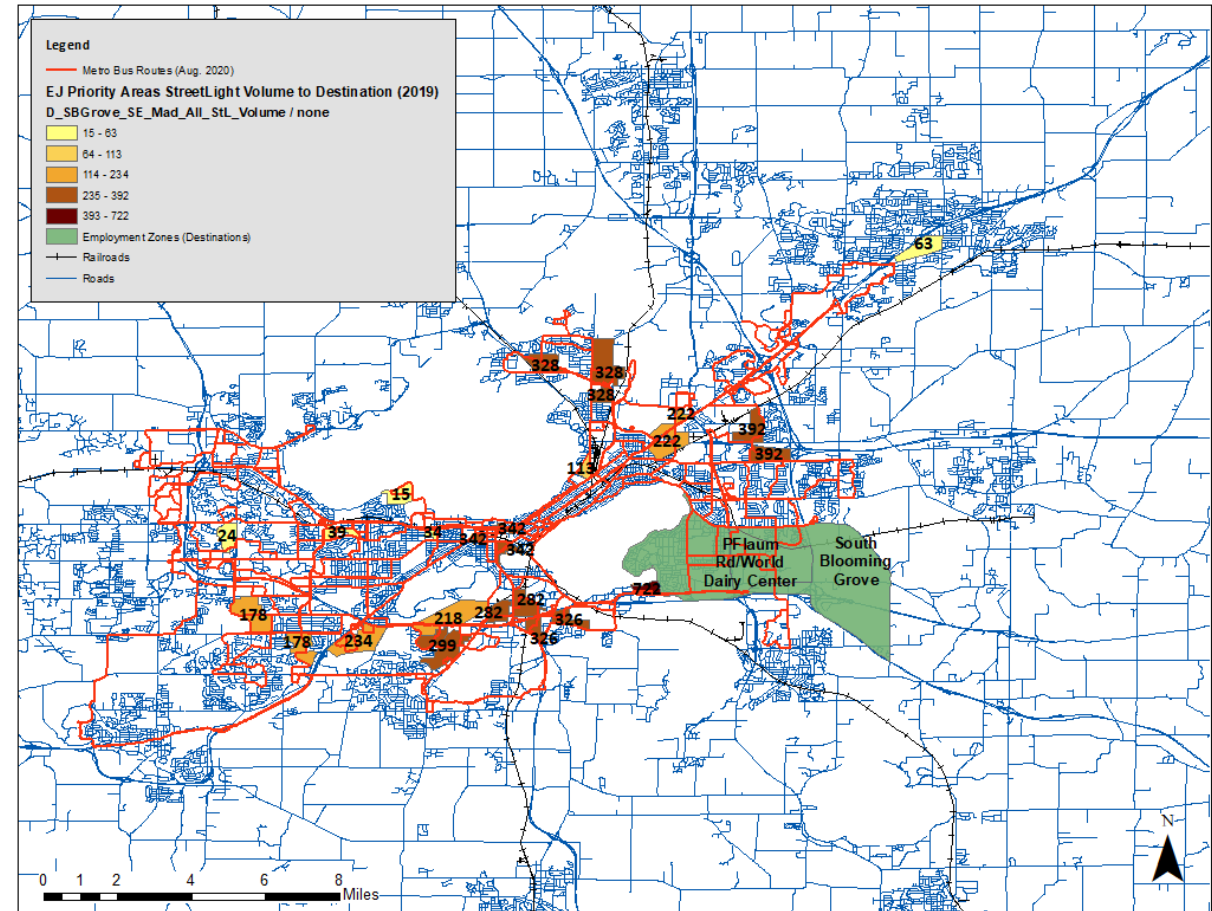
Destination: World Dairy Dr @ Dairy Dr for 9:00 AM Weekday Arrival

Origin: Vera Court

	Total Est. Travel Time	Transfers	Est. Walk Time	% of Auto Time
Bus	53-57 min.	1-2	4-6 min.	189-407%
Auto	14-28 min.			100%
Bike	53-55 min.			189-393%

Origin: Leopold

	Total Est. Travel Time	Transfers	Est. Walk Time	% of Auto Time
Bus	60-75 min.	1	3-21 min.	272-833%
Auto	9-22 min.			100%
Bike	39-48 min.			177-533%

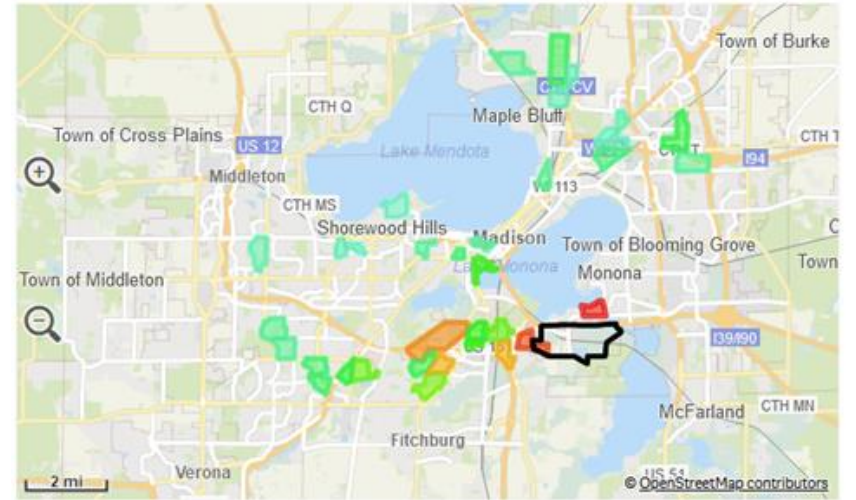


Distinct Patterns

- 1) Trips beginning or ending in EJ Priority Areas usually have the other end in a relatively proximate zone (4 miles or less);
- 2) Many of these trips, although short in distance, are poorly served by transit, require one or more transfers, and often take at least 400% (4x) as long to complete by transit than by private vehicle; and
- 3) A large number of trips beginning or ending in EJ Priority Areas travel generally along the E/W Beltline corridor in South Madison, and are particularly poorly served by transit.

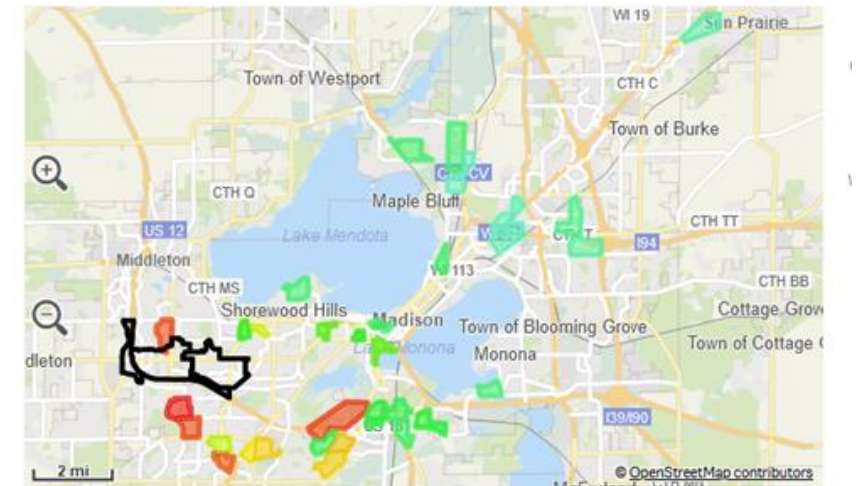
Heatmap of O-D Traffic

Colors indicate the O-D Traffic from each origin Zone during the selected time period.



Heatmap of O-D Traffic

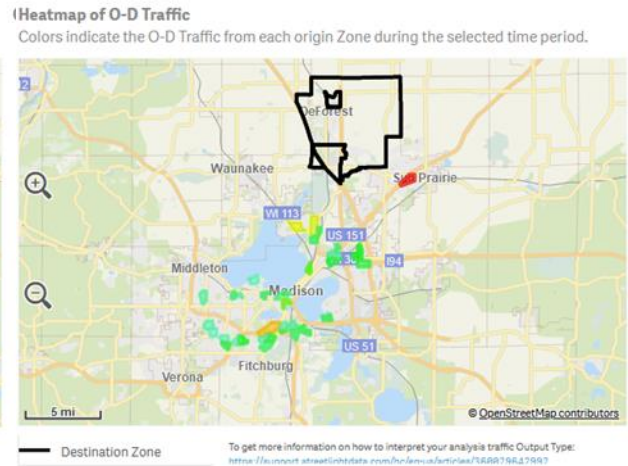
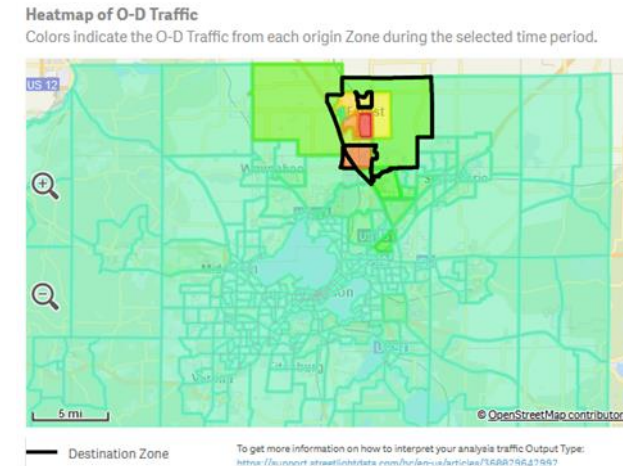
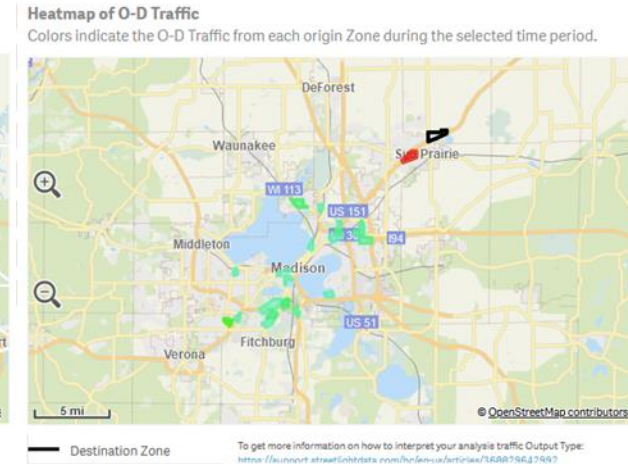
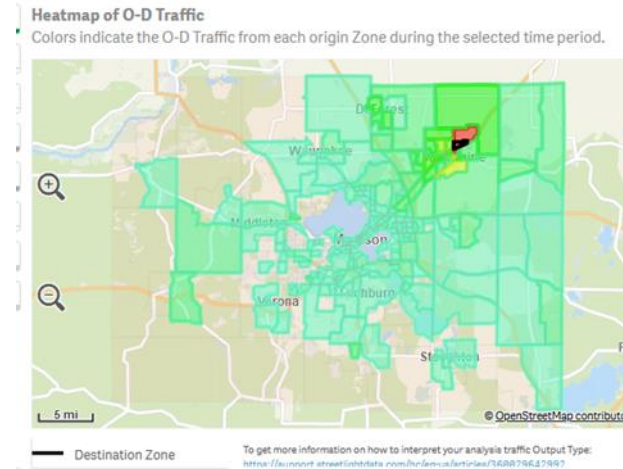
Colors indicate the O-D Traffic from each origin Zone during the selected time period.



Distinct Patterns, cont. – and Exceptions

- 4) Most O-D patterns are similar between EJ Priority Areas and all CBGs: primary trip origins are generally close to trip destinations in both data sets; STL volumes decrease with distance from the destination (e.g. Sun Prairie Business Park: from all CBGs (top left) and from EJ Priority Areas (top right)).

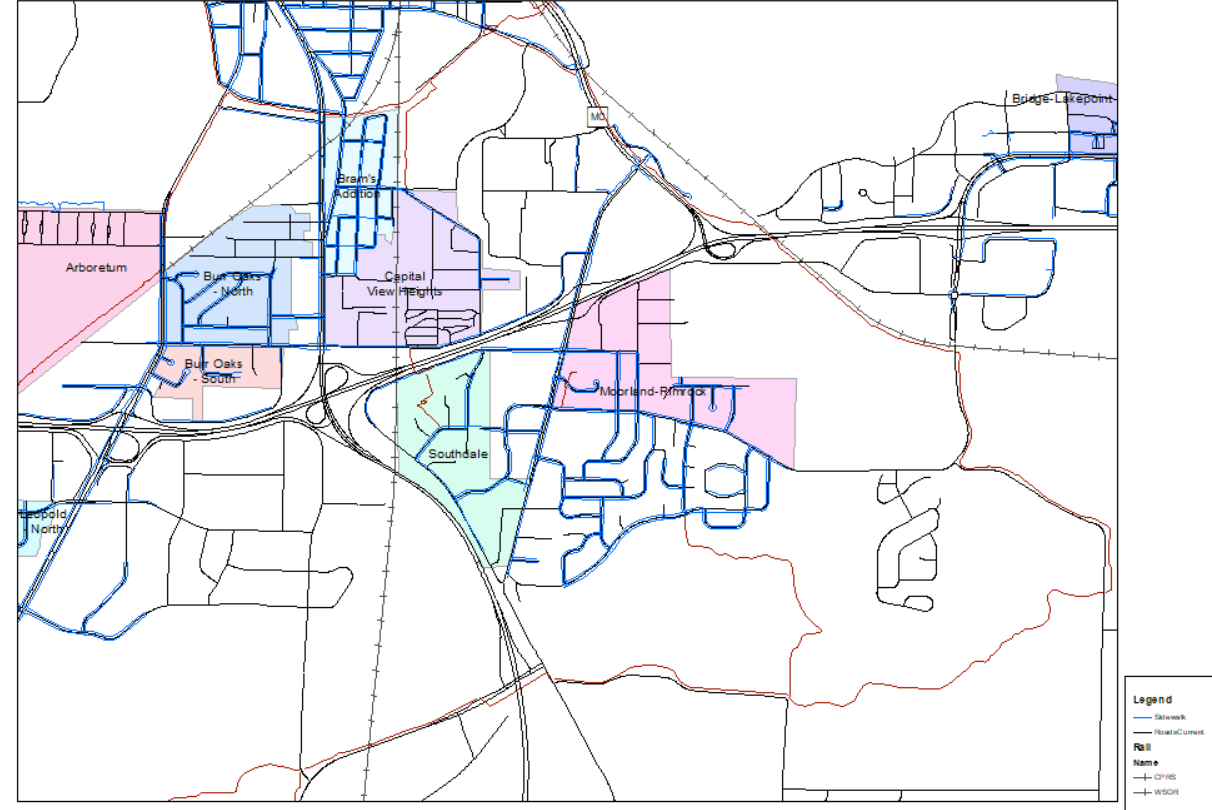
But: When no transit service is available to Employment Centers this pattern becomes less pronounced and may have outliers (e.g. Windsor/DeForest: from all CBGs (bottom left) and from EJ Priority Areas (bottom right) where the Arboretum EJPA is a major Origin and is not proximate to the destination).



Bicycle & Pedestrian Network & Critical Gaps

Connecting Isolated Neighborhoods

- Lack of connectivity by roads other than the Beltline
- Lack of sidewalks and pedestrian crossings of barriers
- Bike routes aligned/routed through natural areas do not serve trips between proximate neighborhoods



Recommendations/Next Steps

Turning Data into Plans & Implementation

- Consider analyses in Transit Development Plan
- Consider analyses in Metro Network Design Study
- Bicycle network & gaps analysis
- Identification of barriers

