

# ADDENDUM to the 2023 Operational Report

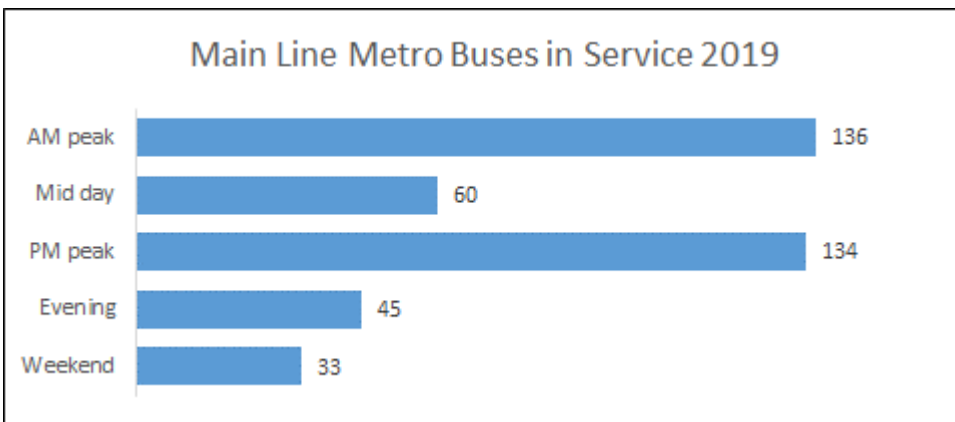
## EQUITY IN TRANSPORTATION

### Metro Transit Network Redesign

#### A. Hours and Extent of Service.

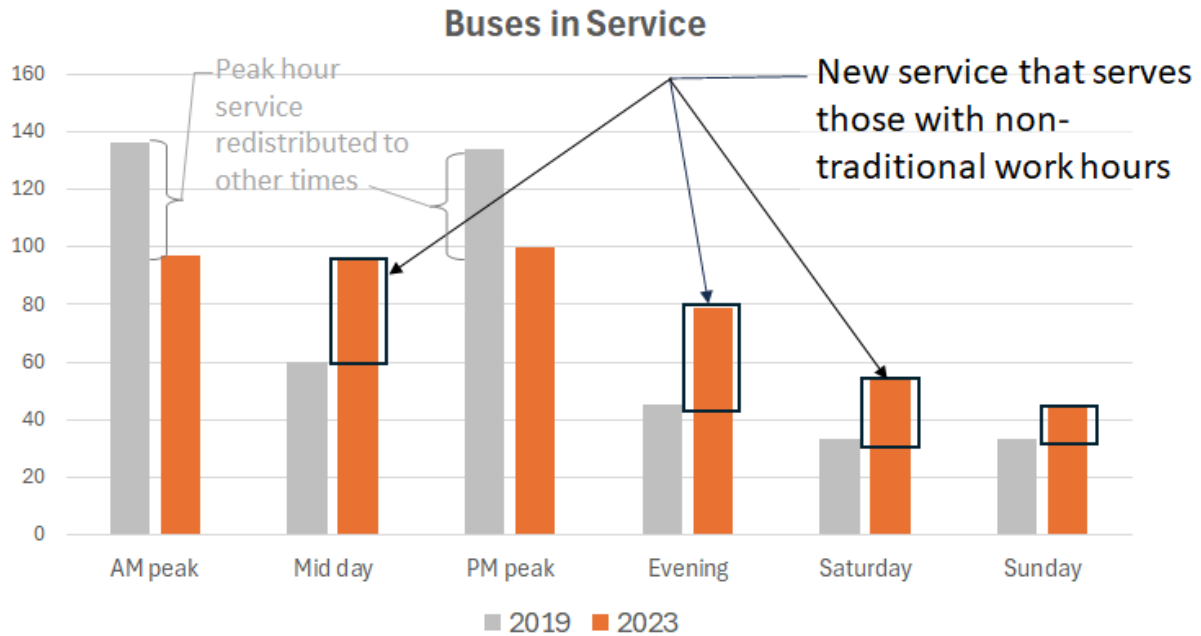
Prior to 2020, Metro Transit service tended to cater to downtown employment centers with traditional work hours. The route structure was built on the previous 1998 Madison Metro Network Redesign which led to the use of transfer points. In the ensuing years, Madison expanded both eastward and westward, which led to areas without transit coverage.

Employment centers downtown resulted in providing system capacity during the morning and evening rush hours, as illustrated by the buses in service during those times. Those going to jobs that started or ended outside of traditional work hours had 1/3 to 1/2 of the service other riders had.



The Pandemic, introduction of remote work, and desire to address known inequities with the transit system led to the Transit Network Redesign (TNR), which was formally implemented in June of 2023. The policy making process associated with the TNR was controversial and exhaustive. The new route system migrated towards less coverage, more frequency, and distributing transit service to areas of the city that had none. The route system also redistributed some of the peak hour service to mid-day, evenings, and weekends.

This redistribution of service from peak hours to mid-day, evenings, and weekends is illustrated in the following graphic that compares buses in service between the system in place in 2019 vs the new system in 2023. Some of the service from 9 to 5 downtown jobs was redistributed to off peaks, helping those with non-traditional work hours. People using transit during these hours often are shift workers, and sometimes may not have access to a motor vehicle. While ridership is generally smaller, less off-peak transit service can disproportionately affect these riders. The Transit Network Redesign helped balance transit service throughout the week which helped address this inequity.



Similarly, on weekdays most areas of the City had some type of transit service. But on weekends, in addition to having less frequency, parts of the city on the periphery had no service. This was perhaps most acute east of Interstate 39/90/94, but also occurred in southwest Madison near McKee Road. These areas did not have transit to get to services, shopping, etc. Again, this lack of service has a disproportionate effect on those without access to a motor vehicle.

The following graphic illustrates where new weekend service is provided (in red) overlaid on where households of color reside (orange dots). The Transit Network Redesign provides access to areas east of the Interstate, areas in southwest Madison, and Sun Prairie.

Note that some areas (in light blue) are not served as well with the Transit Network Redesign. The Transit Network Redesign had to serve additional areas and time periods within the same number of service hours. Consequently, some residents need to walk further to access transit during weekdays and on weekends. This has a greater effect on riders that have mobility challenges.

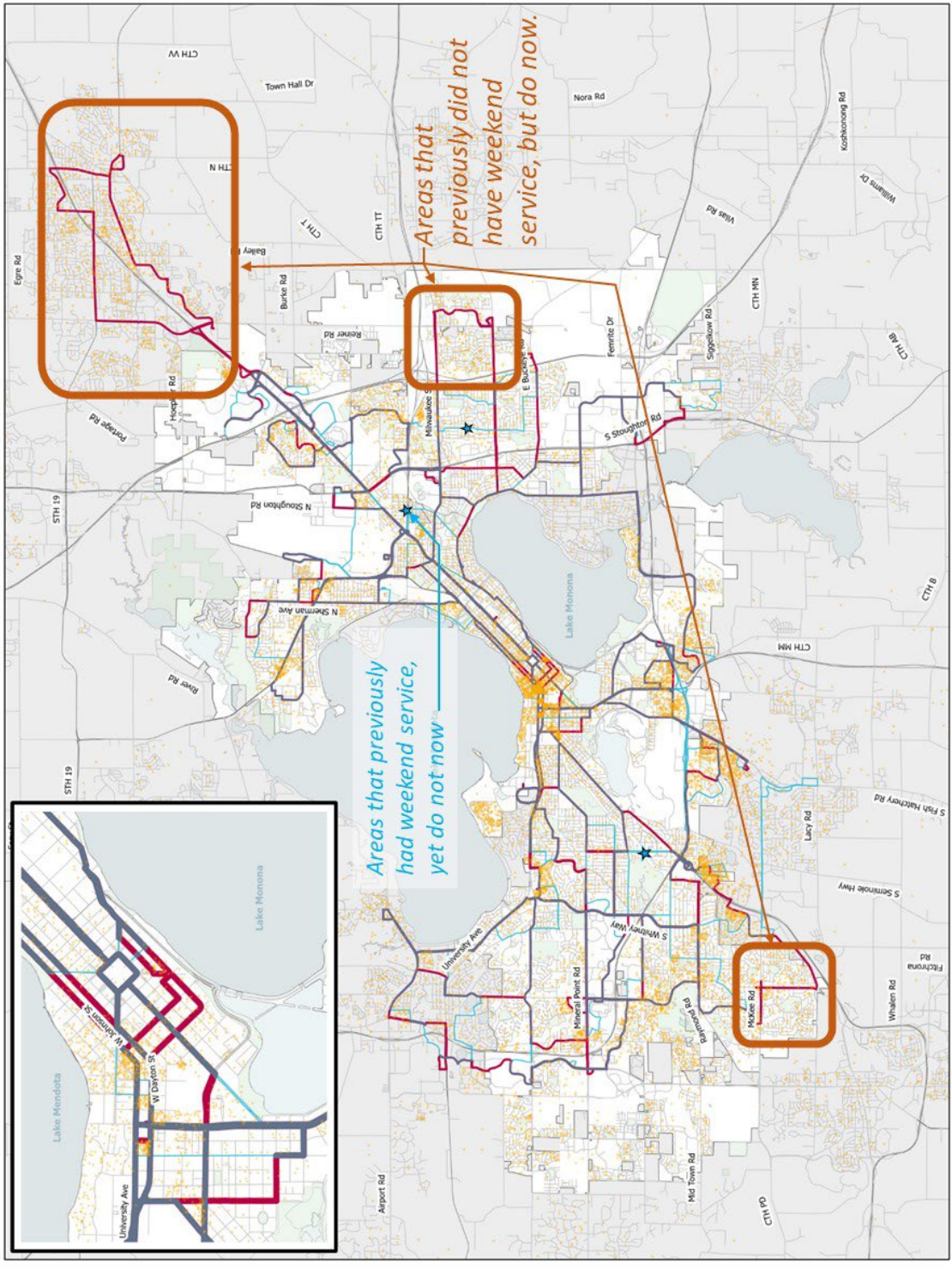
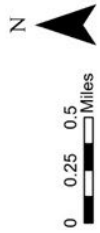
# BUS ROUTE OVERLAY MAP

2023 VS 2018 ROUTES WEEKENDS

## Legend

- Persons of Color  
1 Dot = 10 Households
- Route Overlay
- 2023 Coverage
- 2018 Coverage
- Parks
- Lakes and Rivers
- City Boundary

\*Persons of Color include the following fields in a summation calculate field from 2020 Census Data.  
 Black or African American alone  
 American Indian and Alaska Native alone  
 Asian alone  
 Native Hawaiian and Other Pacific Islander alone  
 Some other Race alone  
 Population of two or more races:  
 The dots are placed randomly within each census block



## B. Transfers and Trip Duration

Under the previous transit network, riders in the peripheral metro areas had more transfers and longer duration trips with the Transfer Point system. For instance, a rider along Thomson Drive on the east side would first travel to the East Transfer Point on Milwaukee St before traveling onto centrally located employment areas. This system affected different riders differently. A 2015 Onboard survey showed that African American riders transferred three times more frequently than white riders, and low-income riders twice as much as middle income riders. Similarly, African American riders had travel times greater than 45 minutes 2.5 times more frequently than white riders. Some discrepancy is expected because low-income riders will tolerate longer, less convenient trips because they don't have a car as an alternative. Still, Metro's goal is to minimize this inequity to the extent possible by providing faster, more direct trips with fewer, and easier transfers.

The transit network redesign sought to reduce both transfers and travel times by providing direct routes from peripheral areas in Madison and eliminating the transfer points. For example, Routes A, B, C, D, E, and F travel directly to central Madison without the need to transfer. In 2023/24 the Greater Madison MPO conducted another on-board survey. The data has not been fully normalized, yet the raw data suggests that despite efforts to provide more direct routes without transfers, inequalities may still exist for riders of color and low-income riders. More information will be provided once it becomes available.

## Safe Streets Madison

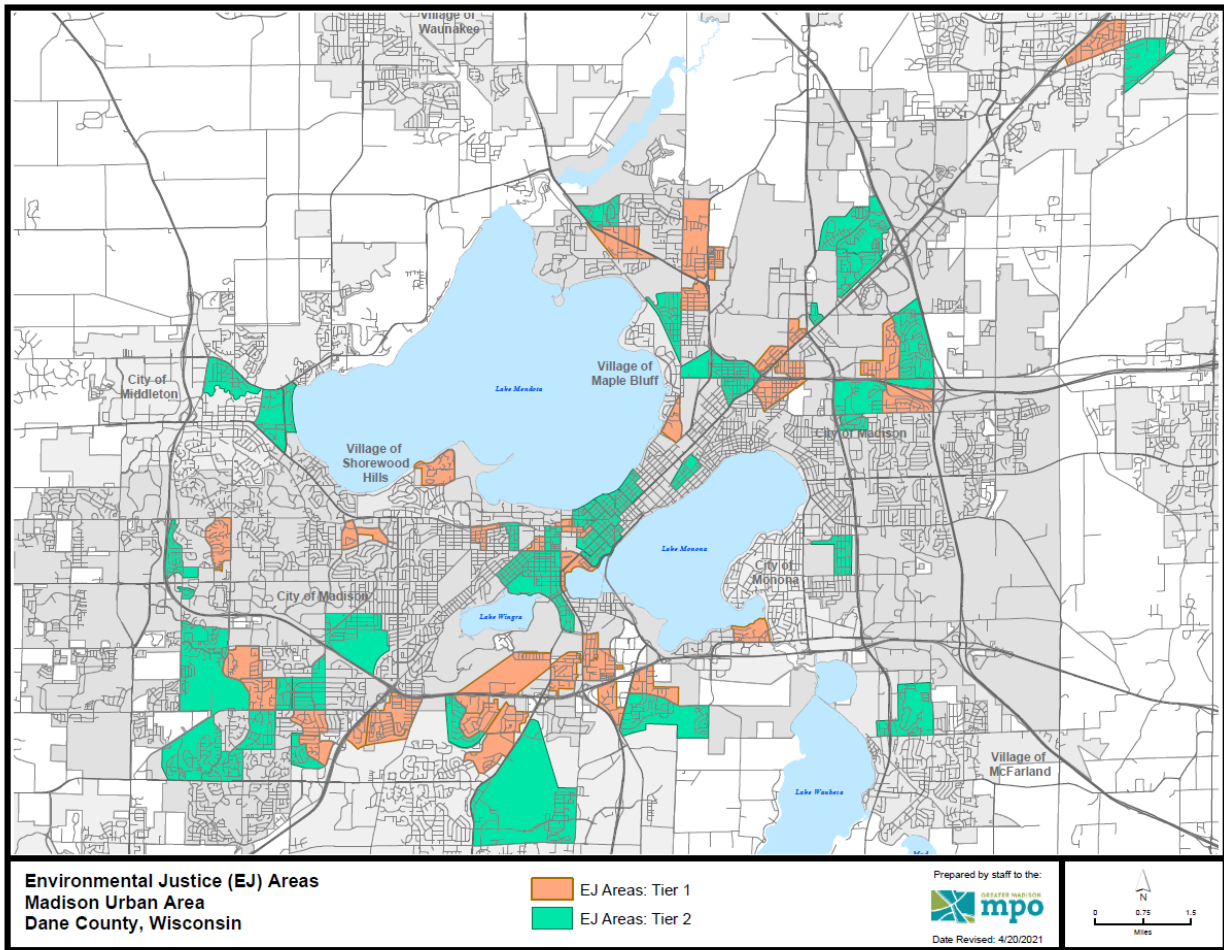
### A. Scoring Criteria

Safe Streets Madison receives an annual allotment of approximately \$1.6 million to address known safety deficiencies on Madison's Street network. The program prioritizes distribution by using a point system that considers the high injury network, pedestrian network gaps, and bicycle network gaps. The factors are weighted by the effectiveness of the proposed solution and multiplied by their impact on Environmental Justice (EJ) populations. Environmental Justice is considered in every project candidate, with those projects having greater benefits to EJ communities receiving higher scores. The rating can be seen in the equation below.

$$\left\{ \begin{array}{l} \text{High Injury} \\ \text{Network?} \\ (0-10 \text{ pts}) \end{array} \times \begin{array}{l} \text{Expected} \\ \text{Impact on} \\ \text{Safety} \\ (0-100\%) \end{array} \right\} + \left\{ \begin{array}{l} \text{Pedestrian} \\ \text{Gap?} \\ (0-10 \text{ pts}) \end{array} \times \begin{array}{l} \text{Expected} \\ \text{Impact on} \\ \text{Ped Gap} \\ (0-100\%) \end{array} \right\} + \left\{ \begin{array}{l} \text{Bike Gap?} \\ (0-10 \text{ pts}) \end{array} \times \begin{array}{l} \text{Expected} \\ \text{Impact on} \\ \text{Bike Gap} \\ (0-100\%) \end{array} \right\} \times \text{EJ Impact} \\ (100\%, 115\%, 130\%)$$

Project Cost

The EJ, or Equity Impact, is determined by whether the project lies within the Greater Madison MPO Tier 1 or 2 Environmental Justice Areas. This is available on their [website](#) and is shown in the map below.



Author: plms

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Date Printed: 4/20/2021

### B. Approved Safe Street Madison for 2023

Based on this scoring system, Safe Streets Madison approved 79 projects, of which 39 (roughly half) were within the MPO EJ areas. The following table lists the Safe Streets Madison projects approved in 2023, with those in EJ areas highlighted in yellow.

Location	Issue/Concern	Proposed solution	EJ Area / Social Vulnerability Impact	Total benefit of project	Total estimated cost of project	Overall benefit score/cost
Citywide Top Crash Intersections	Rear-end crashes	Add retroreflective backplates to traffic signal heads for better signal visibility	100%	240	\$2,000	120
Hoepker Rd path crossing	Uncontrolled path crossing	Install RRFB shared with Sun Prairie	100%	1176	\$15,000	78
John Nolen Dr at Rimrock Rd	Difficult bike path crossing of Rimrock	Add island nose to provide more protection to path crossing	100%	180	\$3,000	60
Muir Field Rd at Cimarron Trl	Speeding, crashes around curve	Construct two islands on Muir Field at Cimarron Trl intersection to slow traffic around curve	115%	1082	\$20,000	54
Cottage Grove Road and Acewood	Turning movement crashes. No pedestrian median refuge	Replace signal poles and arms and add signal heads over each lane. Add protected left turn phase for Cottage Grove Rd. Extend island noses through crosswalks on Cottage Grove Rd	100%	1600	\$40,000	40
Seminole Hwy - south of Beltline	Speeding; bike lane, no sidewalk	Driver Speed Feedback Board	115%	736	\$20,000	37

Location	Issue/Concern	Proposed solution	EJ Area / Social Vulnerability Impact	Total benefit of project	Total estimated cost of project	Overall benefit score/cost
Mineral Point Rd at NB Beltline On-Ramp	Unsafe bike path crossing	Install "Turning Vehicles Yield to Pedestrian" signs	100%	10	\$300	33
Regent St corridor (Monroe to Park)	Poor crosswalk visibility	Convert existing crosswalks to continental crosswalks	130%	910	\$30,000	30
Milwaukee St bridge over I-90	Pedestrian gap / no sidewalk on bridge	Install new pavement markings to provide designated pedestrian space within street	130%	702	\$25,000	28
Williamson Street	Overall safety / poor crosswalk visibility	Convert existing, worn, colored crosswalks to continental crosswalks	115%	805	\$45,000	18
Moorland Rd	Ped crossing difficulty/speeding	Convert existing crosswalks to continental crosswalks	130%	494	\$30,000	16
W Johnson St--UW Campus area (Randall to Marion)	Poor crosswalk visibility	Convert existing crosswalks to continental crosswalks	130%	702	\$55,000	13
Aberg Ave at Packers SB Ramps	Pedestrian crossing for bus stops	Continental Crosswalks	100%	110	\$10,000	11
Buick St	Sidewalk gap on south side at bus stop, slow cars, connection from The Village on Park to planned bike boulevard on Fisher St	Narrow road to build sidewalk on south side and calm traffic; accessible ramps, new crosswalks	130%	1118	\$120,000	9
Langdon St	Poor pedestrian crossing visibility	Add curb bumpouts on north side at Henry St and Carroll St	115%	265	\$30,000	9
Hanson Rd at Manufacturers Dr	Bus stop near new Metro facility & visibility needed for crosswalk	Add crosswalks crossing Hanson Rd	100%	30	\$4,000	8
Tennyson Lane	Lack of marked crosswalks	Continental crosswalks at bus stops	130%	39	\$6,000	7
Citywide School zone speed limit updates	Many school zones marked as 20mph or not marked so people aren't aware they should drive 15mpmh	Reduce posted school speed limit from 20 to 15 and post signs reinforcing 15mph speed in school zones	115%	23	\$5,000	5
Todd Drive	Poor crosswalk visibility & new NB bus route starting in June 2023	Convert existing crosswalks to continental crosswalks	130%	39	\$10,000	4
Eastpark Blvd	Substandard crosswalks at new bus stops	Continental Crosswalks	100%	140	\$41,000	3
Citywide Speed Limit Reductions	Existing posted speed limit is too high	Reduce speed limit with new signing	100%	40	\$20,000	2
Cottage Grove Rd--East of Interstate	Substandard crosswalks at new bus stops	Add continental Crosswalks	100%	60	\$25,000	2
Meadowlark Dr at Kennedy Elementary	Speeding/pedestrian crossing safety at Kennedy Elementary. Meadowlark	Install 3 Speed Humps at school	100%	60	\$50,000	1
Gammon Rd/Mineral Point Rd	Safety for students crossing at lunch time to Mall area	Add island nose to provide more protection to path crossing	130%	910	\$8,000	114
W Main St--Proudfit to Brittingham	Bike gap	bike boulevard	100%	150	\$2,000	75
Leopold NRT Requests	speeding & ped safety	Speed humps	130%	1495	\$32,000	47
Delaware Blvd - 1500 block	Speeding, crashes, ped crossing at Esch	Westbound speed humps	100%	1170	\$28,000	42
Odana Rd - Grand Canyon Dr to Tokay Blvd	People pass in turn lane - safety of peds crossing and bikes	8 Concrete Islands - Gammon to just east of Grand Canyon; evaluate impact & consider funding remaining islands in 2023	100%	1872	\$50,000	37
N Sixth St Bike Blvd including E Washington & Packers crossing	Consideration of improvements to create Bike Blvd to connect Union Corners/Demetral/ Pennsylvania	Sharrows on 6th St; Signing	100%	440	\$12,000	37

Location	Issue/Concern	Proposed solution	EJ Area / Social Vulnerability Impact	Total benefit of project	Total estimated cost of project	Overall benefit score/cost
School Rd at Mendota Elementary	Speeding at school crossing	Raised crossing / speed humps	130%	390	\$15,000	26
Rosa Rd--Old Sauk Rd to Mineral Point Rd	Speeding; request for speed limit reduction	Reduce posted speed limit from 30 to 25	100%	52	\$2,000	26
Donald Dr at Sandburg Elementary	ped crossing safety	Bumpouts at midblock crossing	100%	510	\$25,000	20
Wisconsin Ave at Gorham St & Johnson St	Driver confusion regarding dual left turns; Failure to Yield crashes both ped and MV turning on Johnson	Rebuilding/widening center concrete islands, and upgrading all signal heads and adding a median signal pole; signal cabinet upgrades	115%	1311	\$130,000	10
Odana Rd at Parman/Gately	Difficult ped/bike crossing	Bumpouts to shorten crosswalks & continental crosswalk and ped ramps/sidewalk; RRFB	100%	600	\$70,000	9
Owl Creek NRT Requests	speeding & ped safety	Islands and marked crosswalks at the park	130%	169	\$30,000	6
Tompkins near Henderson Elementary	Speeding; safety of kids walking/biking to school	3 speed humps	100%	90	\$24,000	4
Milky Way - 400 to 600 blocks	Speeding; N/S cut-through route alternative to North Star Drive	4 speed humps	100%	20	\$32,000	1
Packers/Starkweather Creek Path	Improve intersection for bike travel on Starkweather Creek Path and Packers westside on/off ramps -	Extend EB bike lane from Everett St to SB Packers on-ramp	115%	1725	\$3,300	523
6th St and E Johnson St	Multiple crashes at intersection; new crash in late July 2023	Spin Alert Reflector on Stop signs	100%	120	\$300	400
Milwaukee St and Swanton Rd	Overall Safety, Speeding	RRFB	130%	2018	\$10,000	202
South Point Rd at Valley View Rd	Southbound driving through stop sign/intersection and off road	LED blinking Stop sign	100%	392	\$2,000	196
Hovde Rd and Troy Dr	Speeding; no sidewalk	RRFB	130%	1136	\$10,000	114
E Johnson St at N Pinckney St	Pedestrian crossing safety. Request for RRFB.	RRFB	115%	2217	\$20,000	111
N Baldwin St	Speeding, ped/bike safety, overall safety; concerns at E Mifflin, E Dayton & other locations	Remove on-street parking, add bike lanes	100%	1260	\$18,000	70
Moorland Rd	Missing bike and ped connections some sidewalk gaps in former Town area; high number of single vehicle MV crashes	Refuge island & RRFB at Dunwoody, DFB on Moorland	130%	2431	\$35,000	69
W Dayton St at N Mills St	Unsafe bike lane through intersection	Add green bike lane dashes through intersection for W Dayton St	115%	207	\$3,000	69
W Dayton St at N Charter St	Unsafe bike lane through intersection	Add green bike lane dashes through intersection for W Dayton St	115%	207	\$3,000	69
W Dayton St at N Orchard St	Unsafe bike lane through intersection	Add green bike lane dashes through intersection for W Dayton St	115%	207	\$3,000	69
Demetral Path at N Second St	Bike crossing safety	Green markings	100%	390	\$6,000	65
Fish Hatchery Rd at High St	Difficulty for residents to cross, request for an RRFB from a resident with a disability who finds that vehicles do not yield	RRFB	100%	1270	\$20,000	64

Location	Issue/Concern	Proposed solution	EJ Area / Social Vulnerability Impact	Total benefit of project	Total estimated cost of project	Overall benefit score/cost
Speedway at Hammersley Ave	Ped/bike crossing safety; more people going to The Glen and crossing at this location, cars not yielding	RRFB	100%	1270	\$20,000	64
Milwaukee St at Meadowlark Dr	Difficult pedestrian crossing	RRFB	130%	632	\$10,000	63
Old Sauk Rd and Blue Ridge Pkwy	Speeding, pedestrian safety; sidewalk only on one side of Old Sauk Rd in this location; Blue Ridge Pkwy no sidewalk on northside	Curb bumpout, add ped ramp, RRFB & continental crosswalk	100%	1670	\$30,000	56
S Baldwin St	lack of bike facilities connecting to bike boulevard	Add bike lanes, temp curb bumpout at E Wilson St intersection	115%	978	\$18,000	54
Portage Rd at Tomscot Trl	Safety at crossing as serves as route to school, dangerous to cross and drivers try to pass in bike lane when a driver does yield	RRFB	115%	1014	\$20,000	51
Portland Pkwy	Transition from overpass to street needs improvement; crossing Milwaukee St to 2024 Autumn Ridge Path	RRFB	115%	1014	\$30,000	34
W Dayton St at N Lake St	EBLT crashes with WB bikes	Bike lane green dashes through intersection	100%	90	\$3,000	30
E Washington Ave at Schmedeman Ave	Pedestrian crossing safety of E Washington Ave at Kwik Trip & new grocery store	RRFB	115%	734	\$25,000	29
University Ave at N Blackhawk Ave	Difficult to cross at this location but is connection to Blackhawk Path for neighborhood	New crossing configuration with no left turns onto University	100%	1576	\$60,000	26
Mineral Point Rd at Racine	Difficult ped crossing; school bus stop; long distance to next signalized crossing	RRFB	100%	588	\$25,000	24
Post Rd at Connonball Path	Bike crossing safety	Green markings	130%	299	\$13,500	22
Ontario St, Buckingham Ln, Dawes St	Gap in bike network; pedestrian crossing safety	Convert streets to Bike Boulevard	100%	1100	\$53,000	21
Dempsey Rd path crossing	Unsafe path crossing. Drivers will drive around yielding vehicles	Green crossing	100%	90	\$5,000	18
N Randall Ave & Dayton St	Unsafe bike lane through intersection	Add green bike lane dashes through intersection for N Randall Ave	115%	23	\$1,500	15
S Brearly St at Cap City Trail	Bike crossing safety	Green markings	100%	150	\$10,000	15
Midvale Blvd from Mineral Point Rd to University Ave	Missing bike connection; pedestrian crossing concerns near Hilldale	Remove on-street parking, add marked bike lanes, improve several pedestrian crossings	100%	1380	\$104,000	13
N Randall Ave & Monroe St	Unsafe bike lane through intersection	Add green bike lane dashes through intersection for N Randall Ave	115%	23	\$2,000	12
S Livingston St at Cap City Trail	Bike crossing safety	Green markings	100%	110	\$11,500	10
Martha Ln Vernon Ave to Topaz Ln	Speeding	speed humps	100%	200	\$20,000	10
N Randall Ave & W Johnson St	Unsafe bike lane through intersection	Add green bike lane dashes through intersection for N Randall Ave	115%	23	\$3,000	8
Carling Dr at SW Commuter Path	Bike crossing safety	Green markings	130%	91	\$13,500	7



Location	Issue/Concern	Proposed solution	EJ Area / Social Vulnerability Impact	Total benefit of project	Total estimated cost of project	Overall benefit score/cost
N Randall Ave & Engineering Dr	Unsafe bike lane through intersection	Add green bike lane dashes through intersection for N Randall Ave	115%	23	\$3,500	7
S Paterson St at Cap City Trail	Bike crossing safety	Green markings	100%	70	\$11,000	6
Drake St - Grant St to S Mills St	Slow traffic throughout; ped safety esp near zoo/park; improve bike route & ped crossings throughout;	2 Speed Humps at Zoo parking area (Grant St to Randall Ave) & islands and RRFB at S Orchard St	115%	138	\$30,000	5
Drake St - S Mills St to S Park St	MPD raised concern over visibility issues at Brooks/Drake which makes it difficult for all modes to cross Drake St.	Curb bumpouts on Drake St at Brooks Street to shorten pedestrian crossing and improve visibility for drivers on Brooks St	115%	242	\$60,000	4
N Randall Ave at SW Commuter Path	Bike crossing safety	RRFB & Green markings	130%	143	\$37,000	4
Nob Hill Rd	Bike crossing safety	Green markings	100%	30	\$10,000	3