

City of Madison

MADISON DEPARTMENT



OF TRANSPORTATION

2020 Annual Operation Report

December 22, 2020



Department of Transportation

Thomas Lynch, PE, PTOE, PTP, AICP, Director of Transportation

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Department of Transportation
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The Covid-19 pandemic affected City services and the transportation system in unprecedented ways. Within weeks all three Transportation Divisions had to revise protocols and programs to keep workers safe while continuing to serve residents. Despite these challenges, each Division made progress in implementing Land Use and Transportation Strategies from the Imagine Madison Comprehensive Plan.

The new work-from-home paradigm will affect City Transportation for decades. It's rare to have an event that forces change, this disruption provides opportunities to rebuild the transportation needed for our future. In 2021 we will seek to capitalize on the opportunities while minimizing the impacts.

The following pages provide a snapshot of Madison transportation trends that happened in 2020. It also provides a report from each Division on Covid-19 response, key 2020 work efforts, and planned 2021 initiatives.

We look forward to serving with you in 2021.

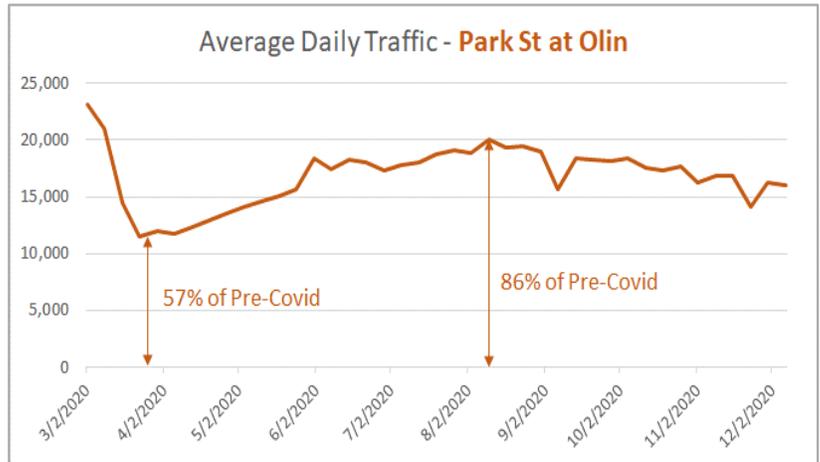
Sincerely,

Thomas W. Lynch, PE, PTOE, PTP, AICP
Director of Transportation
City of Madison

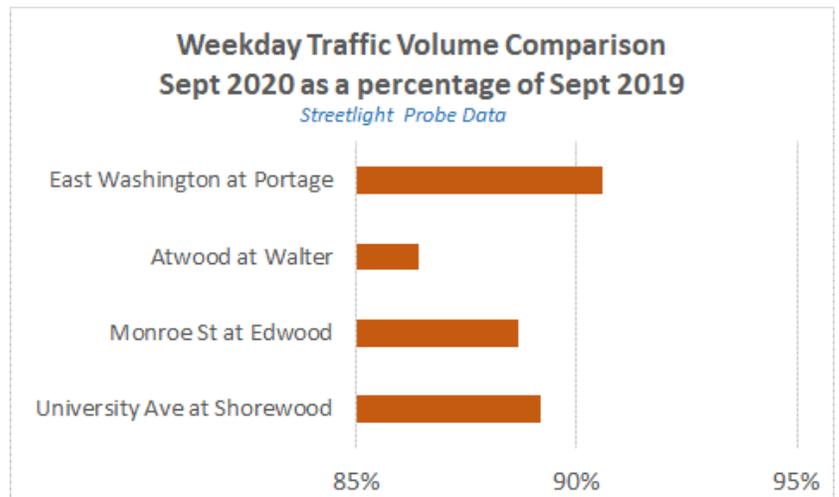
2020 MADISON TRANSPORTATION TRENDS

TRAFFIC

In early April, during the Covid-19 stay-at-home order, motor vehicle traffic volumes dropped to between 40 and 60 percent of normal. As the order expired and through the summer, these volumes recovered to between 70 and 90 percent of normal, with the east side recovering more quickly than the west side. In December of 2020, traffic volumes are dropping slightly, consistent with the winter months.

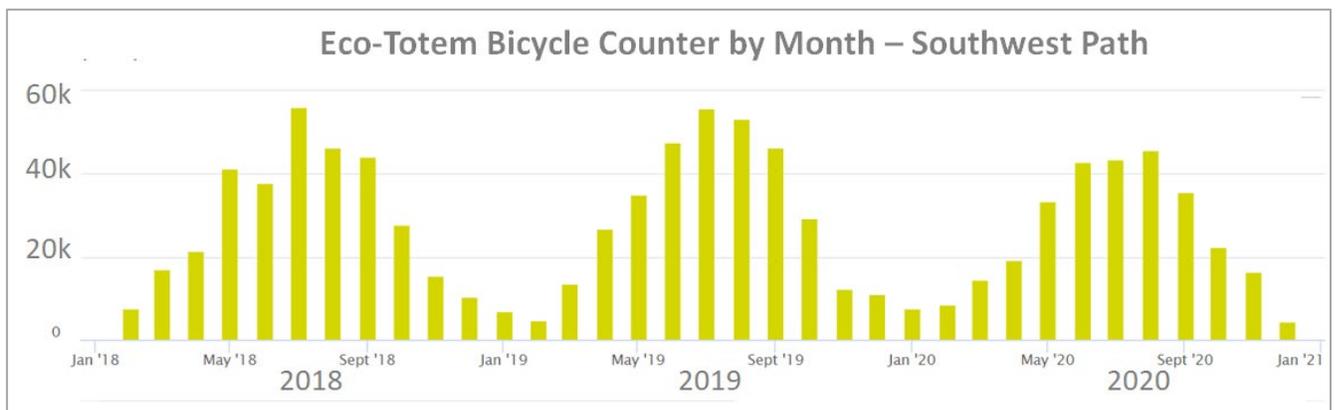


At the pandemic's onset, transit usage dropped to 10 percent, as Metro transported essential workers. Transit ridership has recovered more slowly than motor-vehicle traffic. This is in large part due to the high percentage of government, university, school and central employer riders that are currently working and/or studying from home.



While motor vehicle volumes are at 90 percent of normal, active transportation, such as cycling, has remained relatively constant or

increasing. Monthly bicycle counts on the Southwest path show similar monthly volumes as in 2018 and 2019. Streetlight data for Dane County, obtained from probe data (cell phones), show a 30 percent increase in weekend bike riding in September of 2020 compared with September of 2019.

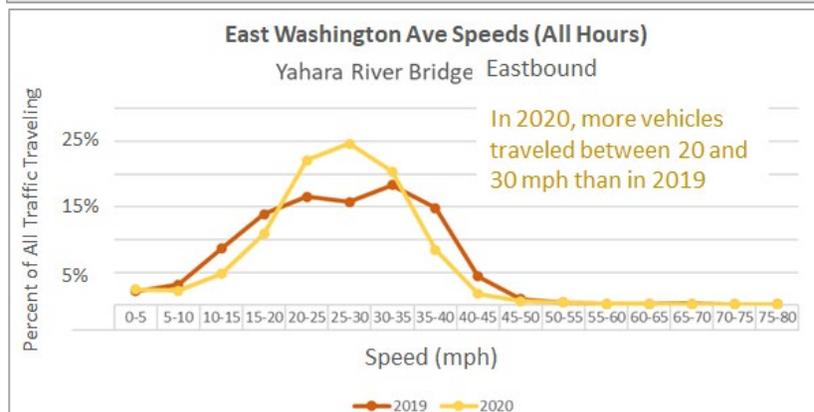
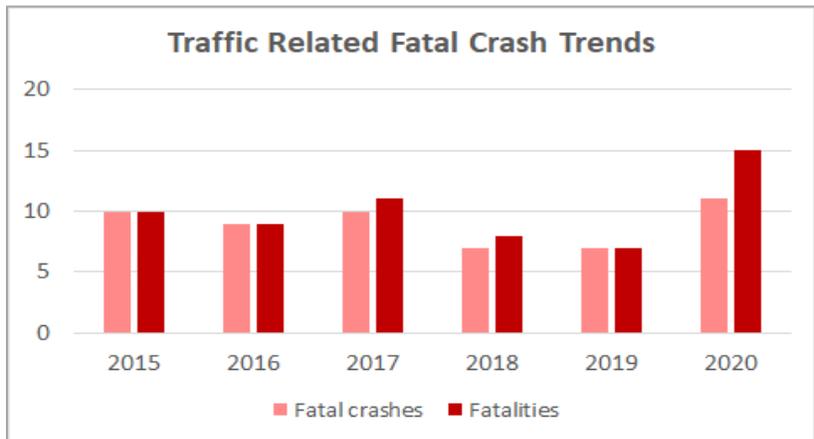
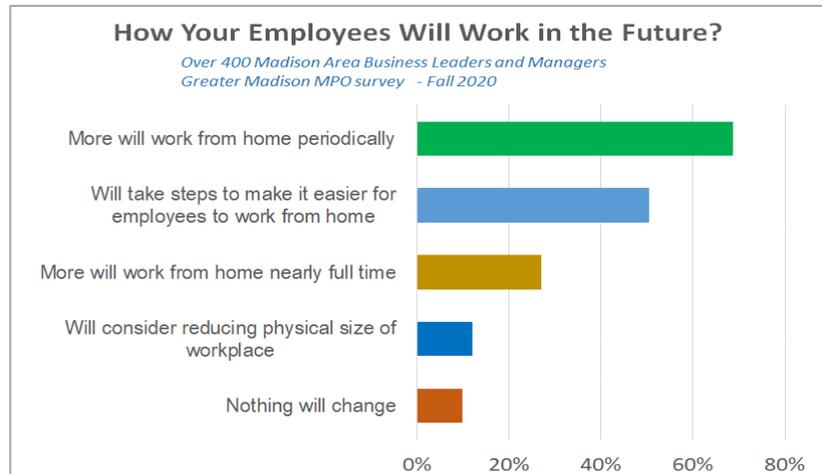
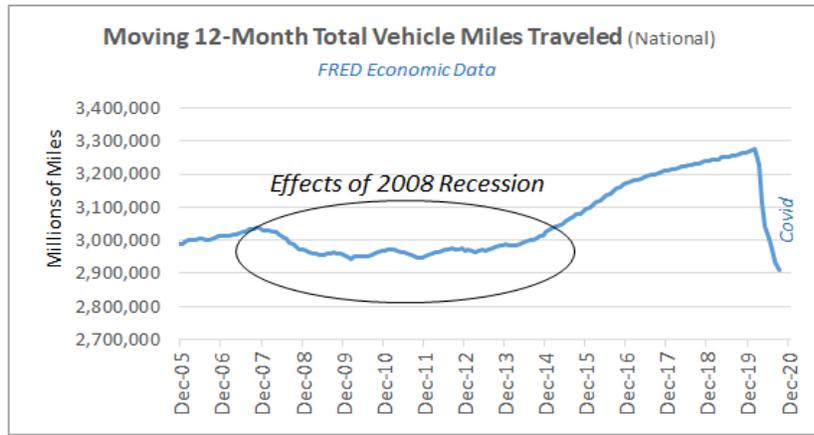


Typically the effects of a recession on economic activity leads to reduced vehicle miles traveled (VMT). The 2008 recession's effects could be seen for almost 7 years. The current Covid-19 crisis and ensuing recession has the potential to impact VMT for much longer.

A survey performed by the Greater Madison Metropolitan Planning Organization in fall of 2020 showed a greater willingness from business leaders and managers to allow their employees to work from home in the future. Working from home just one day a week has the potential to dramatically decrease traffic volumes during rush hour, when roadway capacity is most constrained.

2020 saw more fatal crashes with more fatalities than previous years. Many of these fatal crashes have been speed related. Both Traffic Engineering's radar boards and MPD have measured extremely high speeds of over 100 mph on arterials such as East Washington. Complaints regarding speeding and cruising on weekend nights have also increased. Decreased congestion associated with the Covid crisis may aid this behavior, as well as the absence of other entertainment venues.

Despite observations of isolated speeding, Streetlight probe (cellphone) data seem to indicate overall, speeds have been lower in 2020. The adjacent graph illustrates that actually more people traveled between 20 and 30 mph in 2020 than in 2019.



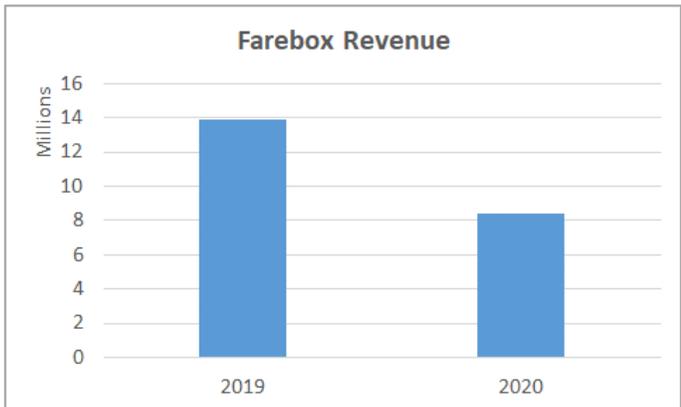
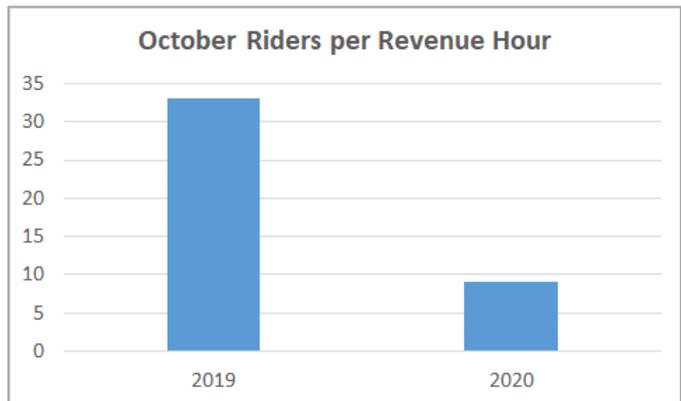
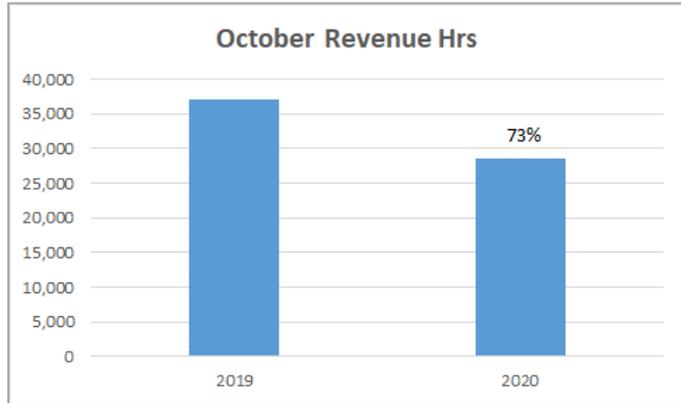
TRANSIT

The effects of Covid-19 on transit across the nation have been profound. As an essential service, Metro provided transportation to essential workers and transit dependent residents. With decreased ridership and increased cleaning demands, Metro reallocated staff and schedules. In October Metro’s revenue hours were about 73 percent of what they were in 2019. Riders per revenue hour in October of 2020 is about a third of what it was in October 2019, but again these riders are largely essential workers.

In normal years, Metro’s ridership has large components of government, University and school riders. In 2020 these riders have largely been working and studying remotely. Consequently, Metro ridership has not recovered as much as transit agencies that serve more transit dependent riders. We expect this trend to reverse itself in the coming year. Although fare revenue is down by about \$5.5 million from 2019 (about 10% of the budget), Metro has not suffered as greatly as other transit agencies because of the components of the operating budget and the structure of our fare revenue agreements. Funding from the CARES act has helped Metro weather this storm.

Strategically, transit is still a key transportation mode serving Madison’s future. Our geography prevents us from adding capacity of streets that serve our residents and businesses. We simply cannot meet our projected transportation demand without increased reliance on transit.

The Covid-19 crisis presents opportunities in expanding transit’s impact and effectiveness. The crisis is prompting a review of service patterns and levels in a more critical and extensive way than would probably occurred without a major disruption. Also, the reduced traffic volumes provides breathing room to proactively meet future travel demand, rather than reactively patching problems. The reduced traffic volumes provides the City the opportunity to reallocate space towards our needed transit system backbone.

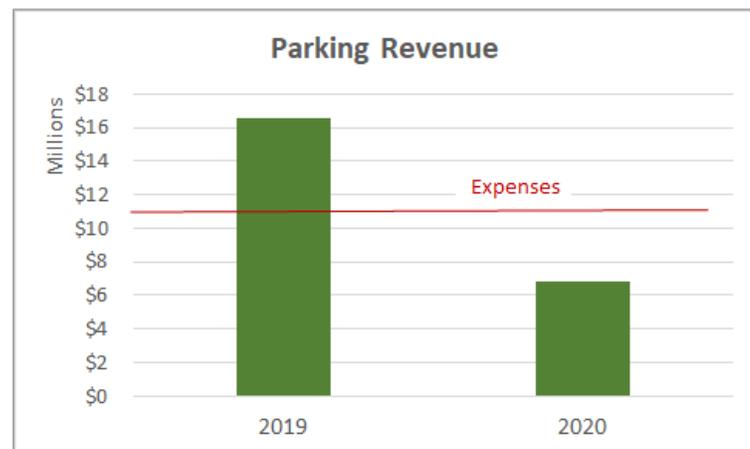
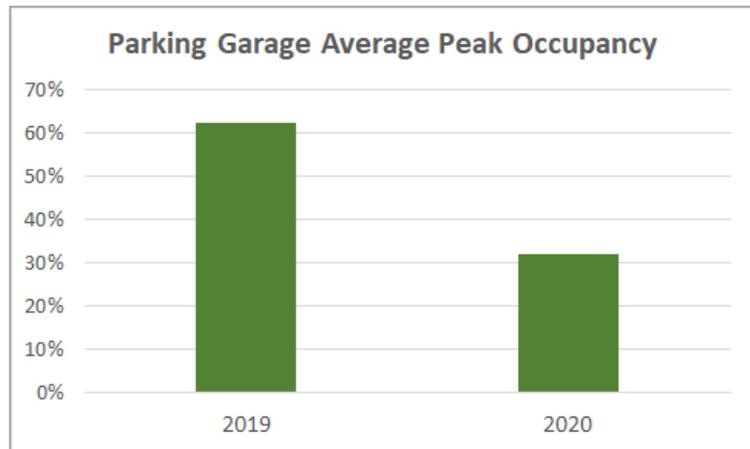


PARKING

The effects of the Covid pandemic on the Parking Division largely mimic the effects to Madison's employment and retail establishments. The stay-at-home order along with work-from-home policies of downtown employers has substantially reduced both parking occupancy and parking revenues. Average peak parking occupancy is slightly less than half of what it was in 2019. 2020 parking revenues have a worse trajectory, being less than a third of what they were in 2019. Instead of making \$4 to \$6 million in net revenue, the Parking Division has had to draw \$6 million from its reserve fund to cover 2020 operating costs. This is consequential since Parking Division revenues fund not only Parking Division operations, but also capital repair and replacement expenses for garages, and more recently Parking Enforcement operations.

This reduction in revenues may affect planned capital improvements. Capital garage replacement and redevelopment projects, such as the State Street Campus garage and inter-city bus terminal likely will face delays.

Recovery of parking occupancy and revenue is anticipated to take several years, as downtown employees slowly return to offices and special events (a significant revenue generator) return to normal.



EQUITY

Common among many crisis, communities of color and low income households are disproportionately affected. Some of these residents are employed in the hard hit service industries and serve the rest of the city as front line essential workers.

Traffic effects of the Covid-19 crisis largely affected all populations equally. The reduction in Metro service times and routes, particularly at the beginning of the crisis, made it difficult for some workers to access jobs, particularly near the hospitals. Some adjustments to the service times were made to address this deficiency.

Riders positively commented on the suspension of Metro fare collection from March to August, which helped riders trying to make ends meet. This unplanned experiment will contribute to Metro's evaluation of fares in 2021. Similar comments have been made regarding the reduction of parking fees in downtown Madison.

TRAFFIC ENGINEERING COVID – 19 RESPONSE

In the months ensuing the initial Covid-19 stay-at-home order, Traffic Engineering responded to the reduced traffic volumes and increased pedestrian bicycle volumes by:

- Posting shared use paths for 6-foot social distancing.
- Modifying signal timing to provide automatic pedestrian recall (without having to push a button to call the walk signal). And shortening cycle length to reduce wait time for pedestrians and traffic on side streets.
- Developing procedures and protocols for field staff to work independently without office contact and group gathering.
- Implementing almost 4 miles of shared streets and travel lanes, where bikes and pedestrians get priority over cars.
- With the Parks division, helping to widen almost a mile of the Capital City Trail near the Monona Terrace.
- Partnered with Madison Police Department to install temporary traffic control, meant to address excess speed.
- Assisted the Division of Economic Development in developing standards and permitting Streateries. This initiative expanded restaurant seating to public right of way to increase seating capacity of restaurants.
- Assisted the closure of State Street on weekends to further restrict motor vehicular traffic.
- Allowed additional lane closure restrictions for public works and private utility projects to facilitate the construction work with reduced traffic volumes.
- Collaborated with Parking Utility and Parking Enforcement on accommodating curbside pickups in areas such as peak hour traffic lanes, for grocery stores and restaurants.
- Assisted Planning Division in the physical distance art project, which placed spacing stencils on bike paths and sidewalks.

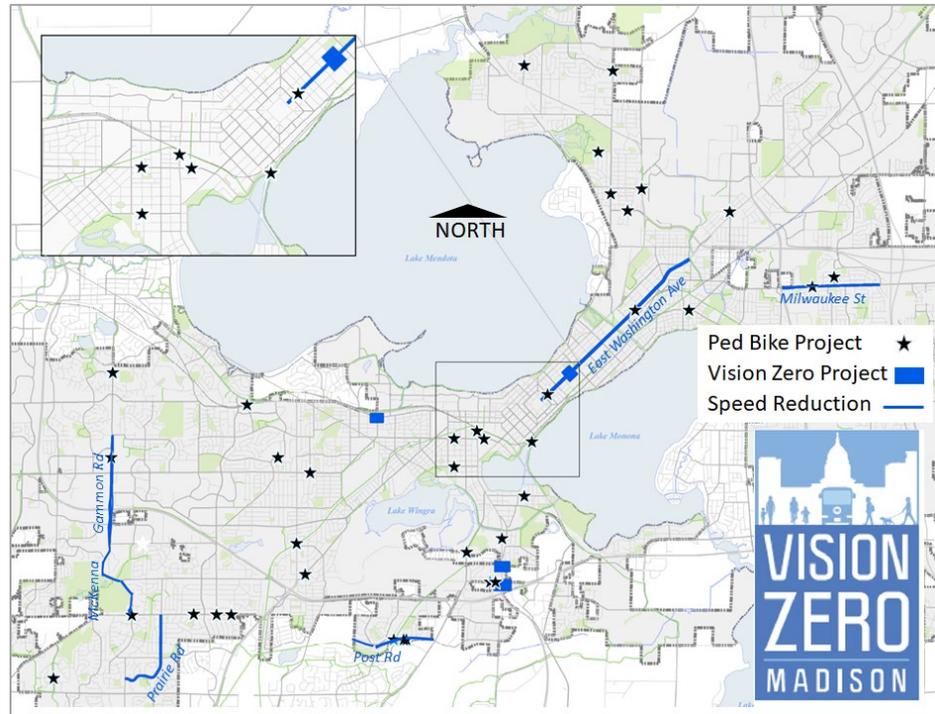


2020 TRAFFIC ENGINEERING EFFORTS

Despite the challenges associated with Covid-19, Traffic Engineering continued maintaining the City's transportation network while concurrently advancing key initiatives.

Vision Zero

In 2020 Madison became a Vision Zero City. Vision Zero is a strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility. Key TE efforts associated with Vision Zero involved:



- Working with the Mayor's office, Common Council, and other agencies to officially launch the Vision Zero initiative.
- Reducing the speed limit on OVER 9 miles of City Arterials, to reduce the severity of crashes that do happen.
- Constructing 4 standalone safety projects focused on pedestrian crossing safety.
- Submitted a successful grant application to the Federal Highway Administration (FHWA) for an HSIP grant to address deficiencies at one of Madison's most dangerous intersections.
- Developing the database necessary to identify Madison's high injury network. These streets make up just 10 percent of Madison roads, yet experience 70 percent of Madison's fatal and critical injury crashes.
- Partnered with WisDOT on plans to grade separate the County AB/US 12/18 intersection, 2019's second most dangerous intersection in the City.
- Forming a Steering Team and Stakeholder Task Force, while working with the Transportation Planning and Policy Board, to begin developing the City's Vision Zero Action Plan.

Complete Green Streets – *Imagine Madison Land Use and Transportation Strategy 8*

Traffic Engineering enlisted the services of Toole Design Group to investigate a Complete Streets study. Key objectives of the study include:

- Identifying gaps in the bicycle and pedestrian networks.
- Establishing a modal hierarchy.
- Developing street typologies – which prioritize modes for different street types.
- Developing a decision framework for the allocation of street right of way between pedestrians, bikes, motor vehicles, and green infrastructure.

Improved and Expanded Pedestrian Bike Facilities – *Imagine Madison Land Use and Transportation Strategy 8*

Traffic Engineering continued to partner with City Engineering in expanding/improving the City's pedestrian and bicycle network. Projects substantially completed in 2020 include:

- Anderson St
- Drake St
- W Badger Rd
- N Orchard St
- Madison College/Metro Transfer Pt
- Packers Ave
- N Ingersoll
- City View Dr.
- Wisconsin Ave
- Post Road
- Demetral Path
- West Towne Path
- 12 new RRFB
- Southwest Path resurfacing
- Distributed green pavement markings

Radio Communications

Traffic Engineering maintains the City's radio infrastructure. While somewhat invisible to the public, it is an extremely important service that is critical to Madison and Dane County emergency responders and the City's public works and transportation agency users. This year Traffic Engineering:

- Relocated the west side tower from UW to the Black Hawk water tower.
- Relocated the radio shop to the new fleet building on Nakoosa Trail
- Entered into a \$5.5 million agreement to maintain and update the system as well as build a backup system.

TRAFFIC ENGINEERING 2021 INITIATIVES

Vision Zero

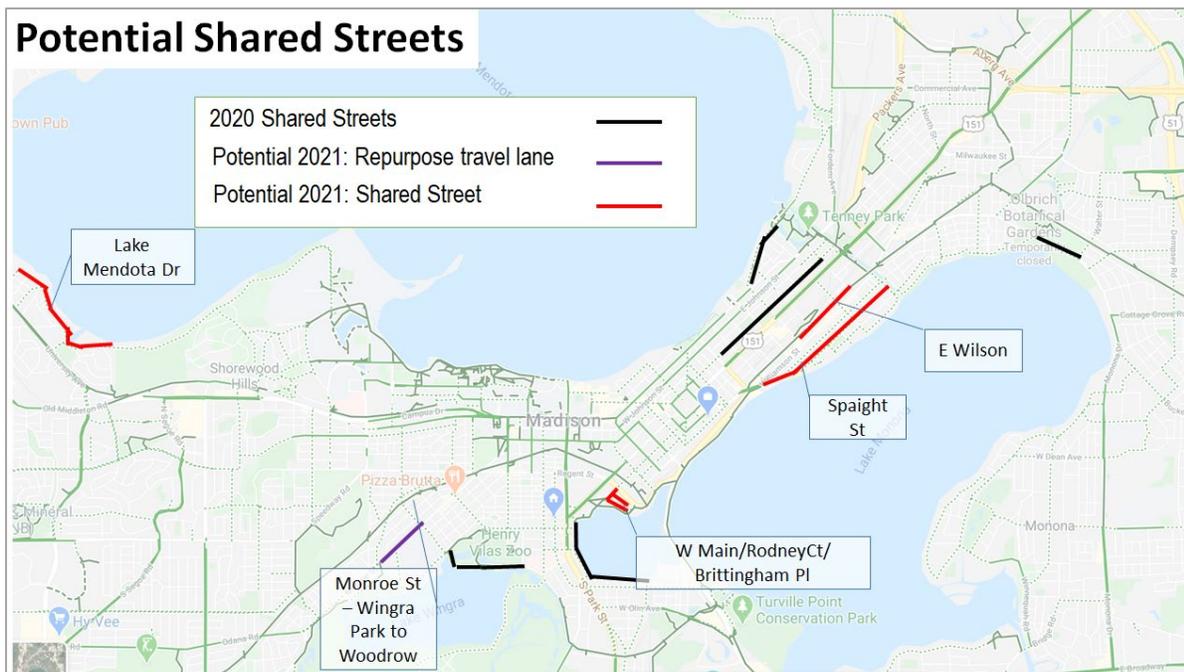
- Develop a Vision Zero Action Plan that describes how Madison will achieve 0 traffic fatalities by 2030.
- Finalize the High Injury Network methodology
- Continue to reduce the speed limit on city arterials with high numbers of crash injuries.
- Implement between 20 and 30 projects focused on increasing pedestrian and bicycle safety.
- Submit more grant applications to FHWA's HSIP program for federal funding.

School Crossing Guards

- Enable the transfer of up to 60 full and part time staff from the Madison Police Department to Traffic Engineering
- Integrate the crossing guards program to TE's other pedestrian, bicycle and school zone safety programs to maximize the synergy.

Shared Streets

The Shared Streets Program was extremely popular in 2020 and it is likely that there will be renewed calls to expand the program in 2021. Traffic Engineering will work with Madison Fire Department and Police Department and other agencies to see where and how Shared Streets can be applied in 2021. Semi-permanent traffic control might also be explored.



Complete Green Streets

Develop a draft report that establishes a modal hierarchy and draft street typology. This will be coupled on a continued emphasis on the City’s bicycle and pedestrian network partnering with City Engineering. A final project list has not yet been adopted, but candidate projects include:

- Broom Street cycletrack
- Wilson St cycle track
- Odana Road road-diet/bike lanes
- Gorham bike lane
- Dean Ave advisory bike lane
- Nelson Road bike path
- Milwaukee Street bike lanes
- Johnson St bike lanes
- Wanton Rd bike lanes
- Garver path
- Demetral path
- Davis Dempsey bike lanes
- Basset Street protected bike lanes
- West Washington bike lanes
- Segoe Road protected bike lanes
- Sidewalk on Dean, Davies, and Dempsey

Twenty is Plenty

Develop a citywide speed reduction program that would reduce the default speed limit in the City of Madison from 25 mph to 20 mph on neighborhood streets. Due to substantial amount of legislative, public engagement and logistical challenges, the initiative may start with a 2021 pilot program followed by a city wide implementation.

Revised Neighborhood Traffic Management Program and Pedestrian Bicycle Enhancement Program

Implement the recommendations from the Traffic Calming Subcommittee report. The subcommittee’s report will identify ways to improve outcomes and processes related to: traffic calming, safety enhancements, and pedestrian and bicycle system enhancements in the City of Madison (including, but not limited to, the Neighborhood Traffic Management Program and the Pedestrian/Bicycle Enhancement Program). The report seeks equitable distribution of resources that will improve safety and encourage increased walking and biking.

METRO TRANSIT COVID – 19 RESPONSE

The arrival of the pandemic required immediate action from metro to transport essential workers to their jobs while protecting metro drivers from the risks associated with Covid-19. The flexibility and responsiveness of staff and drivers resulted in:

- Immediate route restructuring to provide essential transportation in a reduced (~65%) service schedule.
- Rear door entry, suspension of fares, and reduced capacity
- Greatly expanded bus cleaning protocol, including fogging wiping down surfaces.
- Providing transportation to shelters for those experiencing homelessness.
- Scheduling buses to one driver per day to facilitate cleaning.
- Installing plexiglass driver partitions to limit contact between passengers and drivers.



METRO TRANSIT 2020 EFFORTS

Despite the challenges associated Covid-19, Metro Transit started or continued numerous key initiatives that will advance transit service for decades.

Bus Rapid Transit – *Imagine Madison Land use and Transportation Strategy 2b*

- Revised finance plan decreased City cost by \$15 million, while increasing the non-Small Starts cost match to 50 percent, greatly increasing Madison’s chances for a Small Starts grant. This was done by leveraging existing federal funding and already program bus and facility purchases.
- Submitting the East-West BRT project to FTA for project evaluation in August. We anticipate a good rating when they are released in April of 2021.
- Refining the Locally Preferred Alternative to center running for large portions of the route. This refinement will increase BRT efficiency while decreasing project costs and right of way acquisition.
- Metro Transit was the recipient of another 5339b grant for creating dedicated busways. This \$7 million grant with \$4.6 million of federal funding will be rolled into the BRT project.



Satellite Facility – *Imagine Madison Land use and Transportation Strategy 2a*

- An environmental document was submitted and approved for a satellite operations facility. Subsequent efforts have involved public involvement meetings, a dedicated web page, and an update of the environmental document.
- City staff have continued to negotiate with the owners of the Oscar Mayer parcel in ways that allow the city to address environmental concerns while enabling the adaptive reuse of the site. Option investigation is also continuing.

Network Transit Plan – *Imagine Madison Land Use and Transportation Strategy 1a-c*

- Metro transit enlisted Jarrett Walker and Associates, an internationally known transit planning firm, to evaluate Metro’s current route structure and develop a plan that addresses known deficiencies in the system. Goals include increasing ridership while improving service to transit dependent populations.

Transportation Oriented Development Overlay – *Imagine Madison Land Use and Transportation Strategy 5a*

- Madison obtained the services of a Harvard Bloomberg intern that provided a baseline analysis of what a TOD could look like along the BRT route. These services were prolonged with help from SSTI.
- In December FTA announced that Madison was awarded a \$290,000 federal grant to help us implement a TOD overlay within our ordinances. The grant will help us leverage Madison’s planned BRT investment to incentivize transit oriented land uses next to the BRT corridor

Improvements to Metro’s Main Facility – *Imagine Madison Land Use and Transportation Strategy 2a (partial)*

- Completed Phase 1 and 2 repairs to Metro’s main facility at 1101 East Washington Ave. This effort included new wash bay and electrical upgrades, as well as substantial HVAC upgrades which improve air quality for metro workers.

Technology Upgrade Investigations – *Imagine Madison Land Use and Transportation Strategy 9*

- Issued a Request for Information to understand how metro’s 15 year old vehicle tracking technology can be modernized and integrated with fare collection systems. Metro is currently working on a request for proposals

METRO TRANSIT 2021 INITIATIVES

BRT

- Continue working through the environmental (NEPA) documentation with a draft document available by the end of 2021.
- Prepare 60 percent plans, positioning Metro Transit to enter into a project agreement with FTA for Small Starts funding.

Transit Network Plan and Route Modifications

- Continue to make route and service refinements in response to respond to and recover from Covid-19 service changes. This could include moving some routes from State Street to West Washington to make room on State Street for BRT service.
- Continue with the Transit Network Plan study with Jarrett Walker and Associates, with 3 to 4 network plan alternatives having been developed and evaluated by the end of 2021

Facilities

- Complete acquisition of a property to serve as Metro’s satellite facility.
- Begin construction of Phase 3A at the East Washington Facility. This will include renovation of maintenance bays and providing more bathrooms for gender equity.

Technology

- Select a technology package that meets Metro’s bus tracking and fare collection needs. Begin implementation.

Sustainability

- Receive and accept the initial 3 electric buses from Proterra and integrate them into the route structure.



PARKING COVID – 19 RESPONSE

In the months ensuing the initial Covid-19 stay-at-home order, the Parking Division sought both to ease the burden on downtown businesses while maintaining work efforts for Parking Division employees. Efforts included:

- Revising front desk procedures so that customer service could be provided on-line.
- Instituting safety protocols for field staff.
- Redeploying Parking Cashiers to other agencies, such as Streets and Public Health.
- Instituting curb management to support local businesses. This included designating up to 141 metered spaces for curbside pickup (without fees to customers or businesses) and 64 spaces for Streateries. 110 spaces remain designated for curbside pickup, supporting local businesses.
- For several months, suspending all on-street parking meter fees and restrictions, and suspension of time limit and RPO restrictions.
- In Phase 2, reducing parking garage fees to \$5 per day and free first hour of parking on Saturdays to support local businesses and front line workers.



PARKING 2020 EFFORTS

Wilson Street Garage – *Imagine Madison Land Use and Transportation Strategy 9c (partial), 7 (partial)*

The Parking Division opens a new garage every 20 to 30 years, except in the past two years where both the South Livingston Street and Wilson Street Garages have been opened. Opening a new garage involves a considerable amount of effort as vehicle and pedestrian wayfinding, network infrastructure and communications for automated payment and access control systems, life-safety systems, ventilation, and regular maintenance are all worked out. Additionally, coordination of design, shared building systems, and common areas with a public-private redevelopment project, present additional

design and operational challenges compared to building and operating a stand-alone public parking structure. The Wilson Street garage, under construction for the past 3 years, has 511 public parking spaces, 40 City Fleet spaces, bicycle parking, motorcycle/moped parking, and is part of a condominium arrangement with Stone House development.



Government East Garage Demolition

With the opening of the Wilson Street garage, demolition of the City's first public parking garage, the Government East Garage, was initiated. This garage has been in service since 1958.



Mobile Payment Provider – *Imagine Madison Land Use and Transportation Strategy 9c*

The Covid-19 crisis brought on the bankruptcy of the mobile payment vendor used the City of Madison. Parking staff had to quickly identify an alternate vendor that was interoperable with the city's different parking meter systems and could communicate with software used for enforcement. The transition to a new mobile payment vendor is nearly complete.

Smart Meter Conversion – *Imagine Madison Land Use and Transportation Strategy 9c*

Parking has continued on its phased replacement of older parking meters with the newer IPS single space smart meters. These meters accept multiple types of payment, are equipped with current communications, and provide greater programming flexibility and data analytics to manage on-street parking occupancy and demand.



Transportation Demand Management and On-Street Parking— *Imagine Madison Land Use and Transportation Strategy 5c*

The Parking Division has played a lead role in working with Bloomberg Harvard and SSTI to develop a Transportation Demand Management (TDM) ordinance and policy. This initiative seeks to reduce motor vehicle travel by requiring developers to incorporate measures that reduce traffic. Examples are transit subsidies, bike infrastructure, and carpool initiatives.

Coupled with the TDM ordinance development is a review of Madison's on-street Residential Permit Parking Program policies, which have been in effect for over 50 years. This review likely will lead to ordinance changes that hopefully will better manage on-street parking and encourage less auto usage.

2021 INITIATIVES

Parking Enforcement Officer Migration

Pending final approval by Council, it is likely that Parking Enforcement Officers will be transferred from Madison Police Department to the Parking Division. Because of enforcement processes, software, and communication methods, this will require months of integration.

Staff Model Restructure

The opening of two new garages along with the changes brought on with Covid-19 has highlighted the need to modify the Division's staffing model. The Division is currently working through an internal hiring process to fill a number of positions reclassified through the budget process, to better respond to changing work needs arising from new garages, new technology, and different parking patterns.

Transportation Demand Management and On-street Parking

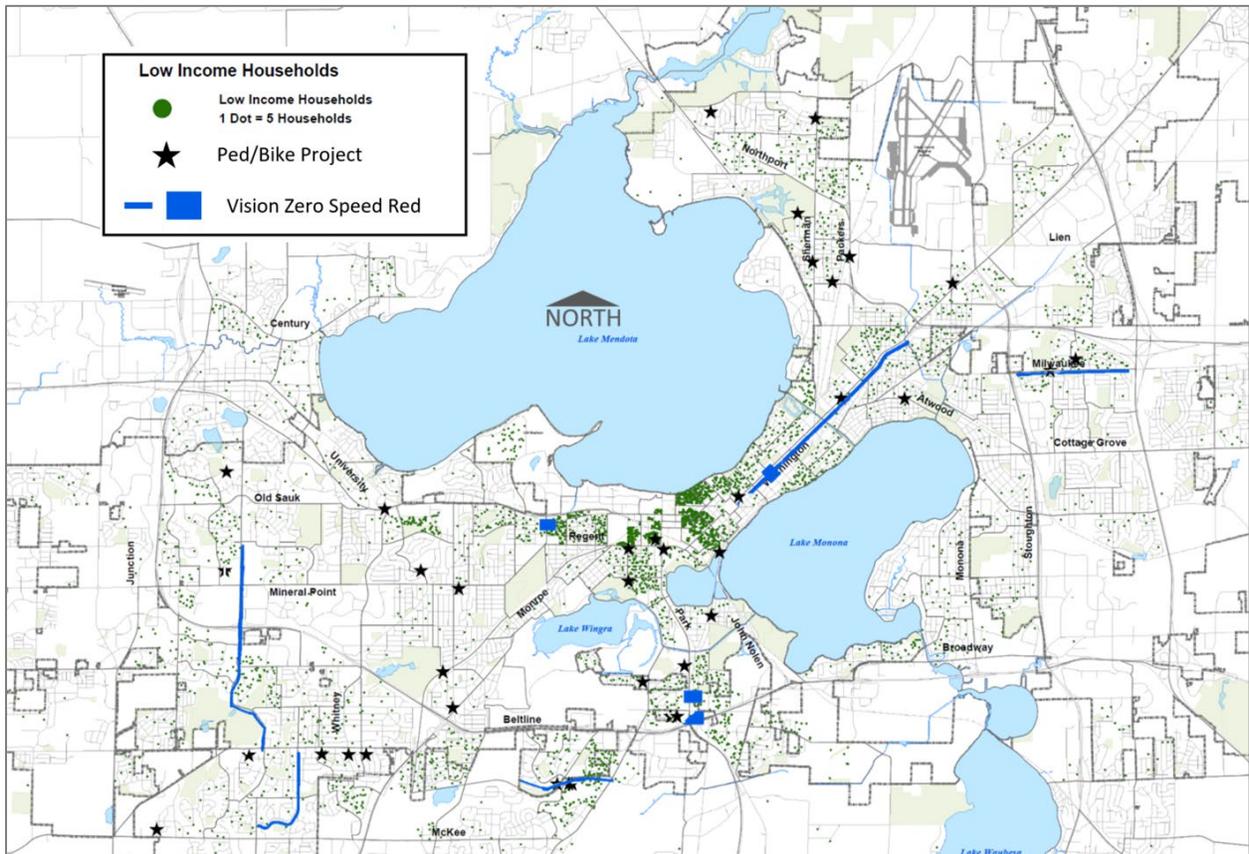
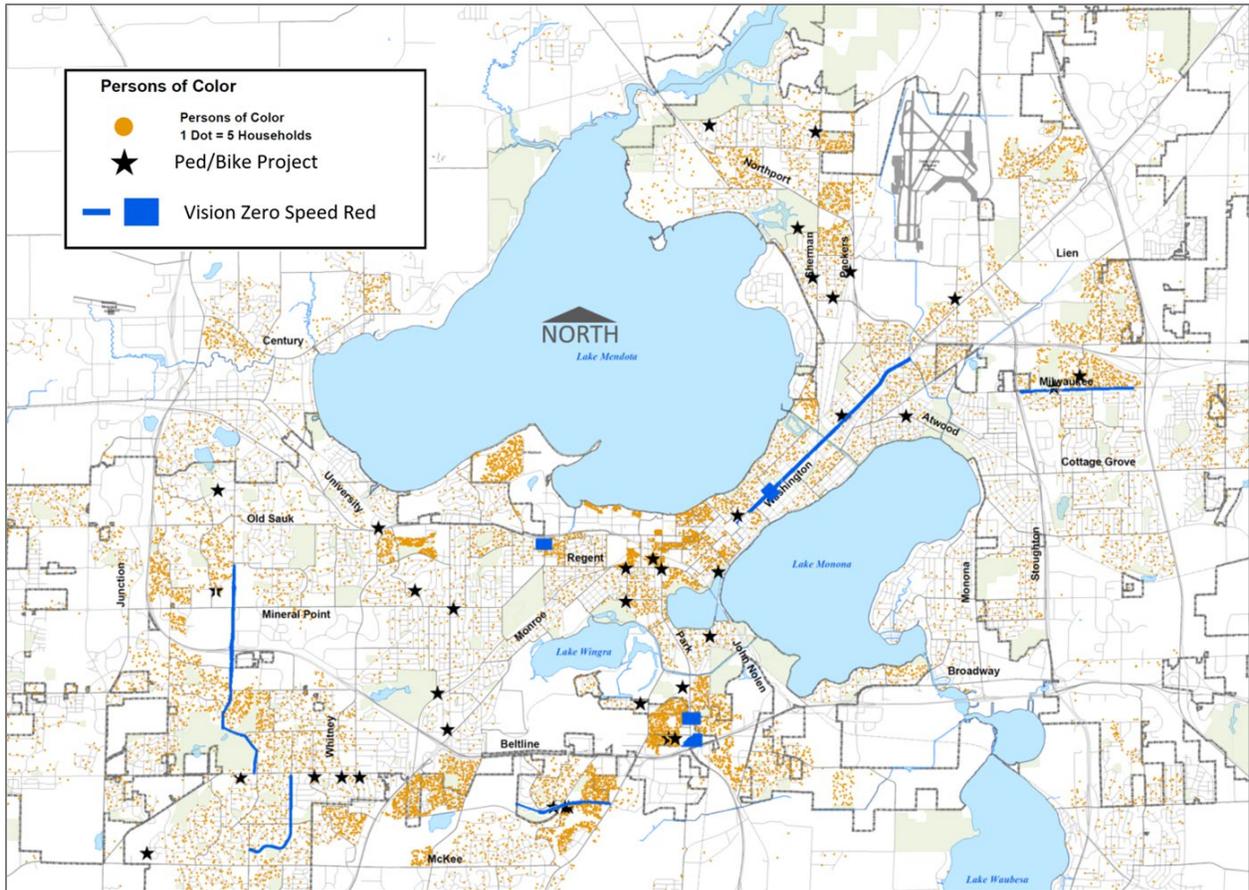
Parking will continue its key role in the development of a TDM ordinance. This effort will be coupled with a likely change to Madison's on-street parking ordinances which regulate RP3 and RPO permitting.

Joint Development

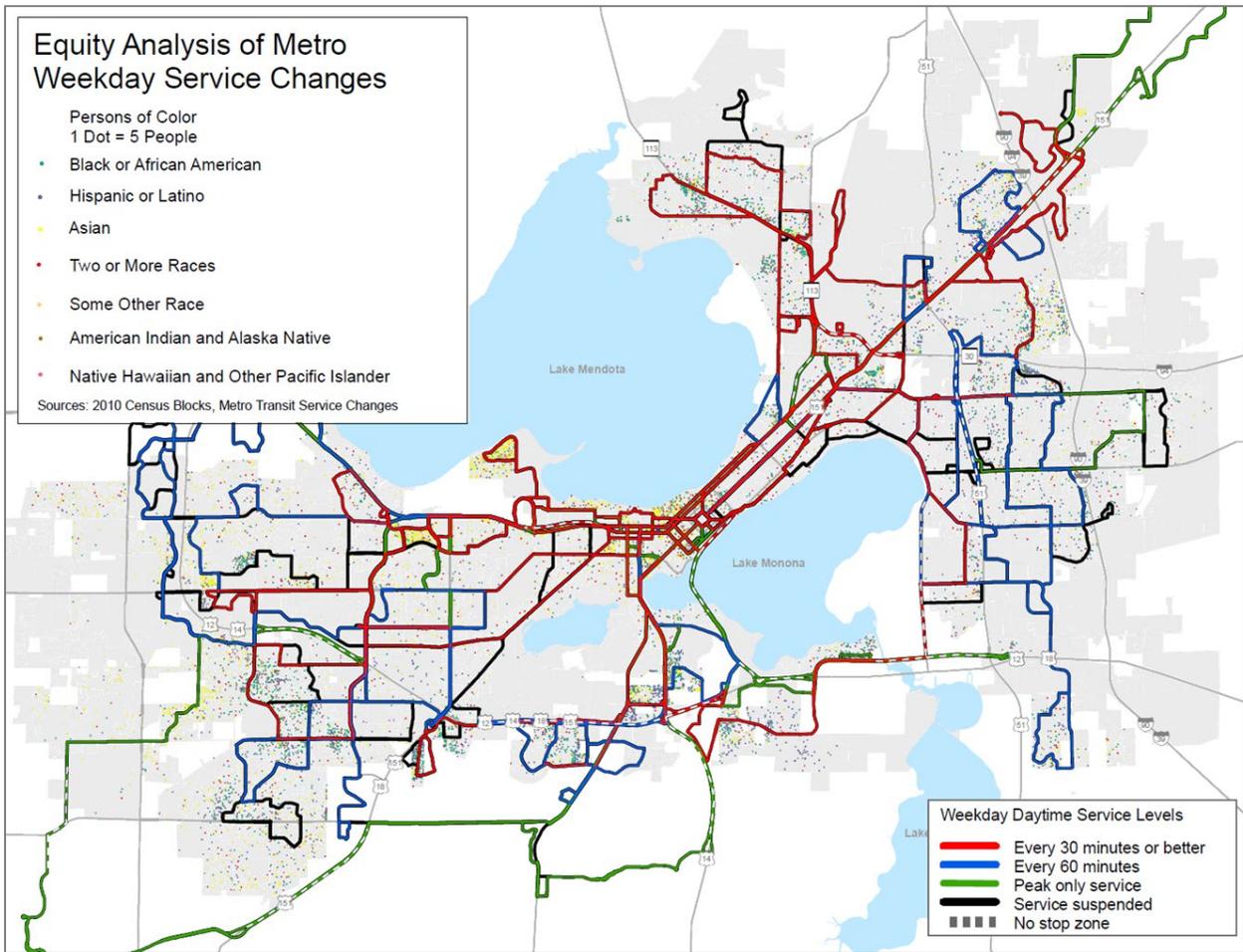
While the Parking Division reserves are diminished, the Division will still explore the possibility of a public private partnership in the redevelopment of the State Street Campus parking garage. Alternate funding arrangements might still provide an opportunity to replace the aging garage, construct an inter-city bus terminal, and provide housing. Similar opportunities may be available with the implementation of BRT and the Brayton surface parking.

EQUITY

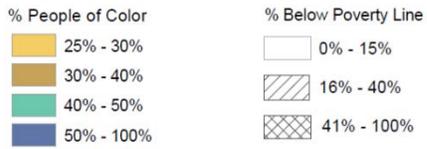
Efforts were made by Transportation to minimize impacts and distribute resources in a way that acknowledges Madison's communities of color and low income households. Traffic Engineering uses Neighborhood Resource Teams (NRT) to help identify potential pedestrian and bicycle projects in underserved neighborhoods. Staff also worked with the Madison Metropolitan School District community schools to identify projects to improve walking and biking. Equity focused criteria used to select projects include location within an NRT, minority population percentage and amount of low income housing units. Distribution and equity was also considered in the selection of Vision Zero projects, although with a less formal process. The following two graphics illustrate 2020 Pedestrian and Bicycle Projects as well as Vision Zero projects in relation to Madison's communities of color as well as low income households.



As mentioned previously, the immediate response from Metro Transit had a larger impact on communities and individuals that are dependent on transit to access jobs and services. Route coverage was reduced as well as service hours. In the August transit service recovery, Metro Transit considered service affecting underserved communities, some of which lie in peripheral areas. The August service changes helped increase access, yet because of staff limitation, new cleaning protocols, and occupancy limits, Metro is unable to restore transit to 2019 service levels. The following two graphics illustrate Metro’s restored service in relation to communities of color and low income households. Equity will be a large consideration in 2021 as Metro Transit progresses through the Transit Network Plan study.



Equity Analysis of Metro Weekday Service Changes



Sources: 2018 American Community Survey 5 year estimates
Census Block Groups, Metro Transit Service Changes

