



MEMORANDUM

LEGISLATIVE REFERENCE BUREAU

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To: Ald. Michael J. Murphy
From: Tea Norfolk, Legislative Fiscal Analyst – Lead
Date: January 9, 2020
Subject: Carjacking and Reckless Driving: UWM Planning Policy Analysis Student Reports

This memo summarizes the December 12, 2019, recommendations provided by graduate students of the University of Wisconsin – Milwaukee Planning Policy Analysis class. The students worked in three groups of four students each. Each group made four recommendations, which they analyzed by criteria set by each group. Each group then selected a top recommendation for its group. In total, the students made 12 distinct recommendations. The recommendations are set forth below, with each group's top recommendation underlined.

Forrest Elliott, John Hennessy, Joe Krivichi, and Jessica Pittner recommended the following, each of which they analyzed for effectiveness, cost, equity, and flexibility:

1. Adopt youth education policy changes.

This recommendation includes three parts: (1) Lobby the State to adopt a more stringent graduated driver's license statute to match all points in the standard set by the National Highway Traffic Safety Administration. (2) Expand the Milwaukee Public School Drive initiative to make it free and available to all students. (3) Push back the start time for all high schools in the Milwaukee Public Schools district to 8:40 a.m.

2. Lobby the State for hands-free cell phone legislation.

Wisconsin currently has laws related to cell phone usage while driving, but this recommendation proposes introducing a bill that would prohibit all hand-held cell phone usage by drivers on Wisconsin roadways. This past October, a bi-partisan bill to prohibit hand-held cell phone use while driving was introduced, but its fate is uncertain.

3. Install an automated speed enforcement system (ASES).

Automated enforcement systems, specifically red-light cameras, have been shown to increase rear-end crashes initially due to drivers slamming on their brakes, but studies also show that the presence of signage informing drivers of the cameras reduces the number of rear-end crashes. The use of an ASES by law enforcement is currently prohibited under Wisconsin State law. However, State Representative David Crowley has proposed new legislation that would allow an ASES pilot program in the city of Milwaukee. This recommendation proposes an ASES reckless driving fund where all revenue beyond operating and maintenance costs would be directed to engineering solutions, education, and enforcement measures within a half-mile radius of the high-crash-rate intersections where cameras are installed.

4. Install rapid-flashing beacons and raised crosswalks.

Rapid-flashing beacons are flashing lights and signs triggered by a pedestrian button that are meant to alert drivers that a pedestrian intends to cross the street. Raised pedestrian crosswalks maintain continuity with the existing height of the sidewalk and impede excessive speed by automobiles. Based on data from the Federal Highway Administration, installing a raised crosswalk with rapid-flashing beacon signals will cost an average of \$30,000 per crosswalk and reduce pedestrian crashes by about 45% at intersections where they are installed. Approximately 40 crosswalks could be improved within the city annually, with high-crash-rate intersections taking priority for improvement.

Tim Brown, Adam Kuh, Luis Reynoso, and Kong Thao recommended the following, each of which they analyzed for effectiveness, efficiency, equity, and legality:

1. Conduct traffic safety checkpoints.

According to the Kentucky Injury Prevention and Research Center, traffic-safety checkpoints are an effective way to identify impaired drivers and remove them from the roadway. Officers at a checkpoint identify drivers who are drunk, drugged, drowsy, distracted, unlicensed, or driving on a suspended license, as well as drivers with active warrants or those who are driving uninsured or unregistered vehicles. The Centers for Disease Control and Prevention evaluated the effectiveness of checkpoints and found that they can reduce crashes caused by impaired drivers by 20%. Staffing a traffic safety checkpoint typically requires

at least five or six officers. However, Wisconsin Statute prohibits sobriety checkpoints, and the U.S. Supreme Court has ruled that police departments can implement traffic stops, such as sobriety checkpoints, only under limited circumstances.

2. Construct chicanes at mid-blocks.

Chicanes are a series of two or three staggered curb bulbs placed on alternating sides of the street. This recommendation proposes placing two landscaped chicanes at both ends of ten intersections that experience the greatest frequency of traffic-related crashes, which would cost approximately \$100,000 for each intersection to construct, bringing the total cost to \$1 million. A study in Seattle found that 85th-percentile speeds were reduced by eight to 12 miles per hour for locations where chicanes were constructed. Research shows that chicanes reduce the number of traffic-related crashes. In the United Kingdom, for example, the overall reduction in crash frequency was 54%, while crashes where an individual was killed or seriously injured were reduced by 78%. This recommendation requires design that makes chicanes visible for drivers, especially at nighttime. The Wisconsin Department of Transportation actively promotes the construction of chicanes, stating that it is among the five best designs for promoting pedestrian travel.

3. Mandate cognitive behavioral therapy as an alternative to incarceration.

In a survey conducted by researchers of 500 households in four states, participants favored paying about 20% more in annual taxes for rehabilitation compared to incarceration. Cognitive behavioral therapy (CBT) is a form of psychological treatment proven effective for a range of problems, including depression, anxiety disorders, alcohol and drug use problems, marital problems, eating disorders, and severe mental illness. In 2008, a study found that among 200 bus drivers at five different locations, those treated with CBT showed an average improvement of 21.15% in driver's attitudes and behavior compared to those that did not receive treatment. Another study found that criminals with a mental illness, particularly post-traumatic stress disorder (PTSD), were 1.4 times more likely to be rearrested for general crime, such as reckless driving, versus those without PTSD. There is approximately a 50% success rate for those with PTSD being treated with CBT. This proposal estimates that, over five years, the crash rate will likely decrease by 9% with the use of CBT.

4. Construct mini traffic circles at strategic intersections.

Milwaukee's configuration of many long straight roads lends itself to speeding. Creating physical barriers, such as traffic circles, can prevent reckless driving behavior. Mini traffic circles have proven effective at reducing speeds and the number of crashes at intersections. The crash reduction is due not only to the speed reduction but also by limiting the number of conflict points through an intersection. A standard four-way intersection has 20 conflict points, which are locations within an intersection where a vehicle's path crosses another. At a traffic circle, there are only eight conflict points, resulting in a collision rate decrease of 82% on average. This recommendation notes that visibility should not be decreased, and warning signs will need to be installed ahead of the intersection in all directions traveled along with adequate lighting to help drivers navigate traffic circles at nighttime. Landscaping can act as a buffer that separates vehicular traffic from pedestrian traffic. Additionally, mini traffic circles should be deployed only on streets with one lane in each direction of travel. The recommendation further indicates that monitoring should be conducted to ensure that traffic circles are effective.

Alex Uebelacker, Cory Clark, Valarie Davis, and Vijaya Tamla Rai recommended the following, each of which they analyzed for effectiveness, efficiency, equity, and collaboration:

1. Increase transit service.

This recommendation includes two parts: (1) construct enclosed bus shelters with improved amenities, and (2) use a flash-charging electric bus system in Bus Rapid Transit (BRT). According to the American Public Transportation Association, public transit passengers have less than 10% the per-mile crash rate as automobile occupants, and transit-oriented communities have less than 20% the total per-capita traffic fatality rates compared to automobile-dependent communities. Providing better transit service will increase ridership while connecting more people to employment opportunities. The recommendation proposes piloting the program in Aldermanic District 7, which has had the highest traffic crash rate in the last five years. The proposed enclosed bus shelters and surrounding design includes stop signs, trash cans, spacious sidewalks with planting strips to separate them from the road, sidewalk benches, painted crosswalks, installation of BublR bike stations and bicycle racks, public restrooms, and dedicated bus lanes. The recommendation also urges adding heat and closeable doors to the bus shelters. The recommendation is for flash-charging e-

buses, which cost approximately \$750,000 per bus. Funding for the system would be a combination of grants and a local sales tax.

2. Crowdsourcing reckless driving behavior.

This recommendation proposes crowdsourcing reckless driving behavior through privately-operated dash cams with license plate recognition. The dash cams would link to the user's private e-mail, providing recorded clips that the user could anonymously send to the police or post to a database. The recommendation creates an eight-officer Traffic Tech Police Unit within the Police Department to review footage and issue citations. Funding would come from insurance companies, which would be willing partners given the ability to use data for claims.

3. Create an aggressive driving unit.

This recommendation proposes establishing a multi-agency law enforcement unit that would be comprised of officers selected from the Wisconsin State Patrol, Milwaukee County Sheriff's Office, Milwaukee Police Department, and each of the 18 municipal law enforcement agencies in Milwaukee County. Officers from these jurisdictions would be deputized by the Sheriff, granting them special deputy status.

4. Redesign roads and enhance corridors for a road diet.

This recommendation proposes installing road-diet solutions and traffic-calming measures including traffic circles, roundabouts, lighting, curb extensions, bollards, and speed tables. This recommendation prioritizes Aldermanic District 7, including the West Fond Du Lac Avenue corridor. The State of Michigan conducted a study on cities and road diets, capturing data over the course of five years, and found an average reduction of 43% in crashes with implementing a road diet. In Iowa, the results were similarly positive: after implementing a road diet on 11 sites, there was a 60% reduction in fatal crashes and a 40% reduction in major injury crashes, particularly to age groups 25 and under and 65 and older.