



## Traffic Engineering Division

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## SUMMARY OF STAFF RECOMMENDATIONS TO TRANSPORTATION COMMISSION

March 19, 2025

- WEST WASHINGTON AVENUE & SW COMMUTER PATH (#1 on the Intersections meeting warrants list): recommend installing traffic signal.
- MILWAUKEE STREET & SPRECHER ROAD (#3 on the Intersections meeting warrants list): recommend installing traffic signal.
- HENRY MALL & UNIVERSITY AVENUE (#4 on the intersections meeting warrants list): recommend maintaining current marked crosswalk, does not recommend installing traffic signal.
- AMERICAN PARKWAY & HOEPKER & RATTMAN ROAD (#2 on the intersections NOT meeting warrants list): recommend maintaining current all way stop conditions.
- ROSA ROAD & OLD MIDDLETON ROAD (#11 on the intersections NOT meeting warrants list): recommend maintaining current two way stop conditions.
- MILWAUKEE STREET & N THOMPSON DRIVE (#37 on the intersections NOT meeting warrants list): recommend maintaining current two way stop conditions.
- COTTAGE GROVE ROAD & MAHER AVENUE & ROYSTER OAKS DRIVE (#43 on the intersections NOT meeting warrants list): recommend maintaining current two way stop conditions.
- FISH HATCHERY ROAD & MARTIN STREET (#71 on the intersections NOT meeting warrants list): recommend installing traffic signal with bicycle signal for proposed re-aligned multi-use path.
- ODANA ROAD & POTOMIC LANE (Existing traffic signal, requested removal): recommend maintaining traffic signal operation.

## **2024 TRAFFIC SIGNAL PRIORITY LIST SPECIAL STUDIES FOR TRANSPORTATION COMISSION SELECT INTERSECTIONS**

### **Actions completed to date**

- **WEST WASHINGTON AVENUE & SW COMMUTER PATH**  
Review crash history.  
Collect Peak hour path volumes.  
Analyze intersection with traffic signal operation.
- **MILWAUKEE STREET & SPRECHER ROAD**  
Review of crash history.  
Collect automated 24 hour speed and volume counts.  
Collect turning movement counts.  
Collect vehicle delay observations.  
Evaluate stop control, signal, and roundabout operation using Synchro modeling software.  
Collect drone footage during weekday PM peak 15 minute period.
- **HENRY MALL & UNIVERSITY AVENUE**  
Review of crash history.  
Collect automated 24 hour speed and volume counts.  
Perform manual pedestrian crossing counts.
- **AMERICAN PARKWAY & HOEPKER ROAD & RATTMAN ROAD**  
Review of Crash History.  
Collect automated 24 hour speed and volume counts.
- **ROSA ROAD & OLD MIDDLETON ROAD**  
Review of crash history.  
Collect automated 24 hour speed and volume counts.
- **MILWAUKEE STREET & N THOMPSON DRIVE**  
Review of crash history.  
Collect automated 24 hour speed and volume counts.
- **COTTAGE GROVE ROAD & MAHER ROAD & ROYSTER OAKS DRIVE**  
Review of crash history.  
Collect automated 24 hour speed and volume counts.
- **FISH HATCHERY ROAD & MARTIN STREET**  
Review of crash history.  
Collect automated 24 hour speed and volume counts.  
Collect automated pedestrian & bicycle counts at Cannonball Path & Fish Hatchery Road.  
Analyze intersection
- **ODANA ROAD & POTOMIC LANE**  
Review of crash history.  
Collect automated 24 hour speed and volume counts.  
Review sight lines.

## **TRAFFIC SIGNAL PRIORITY LIST COMMENTARY**

### **WEST WASHINGTON AVENUE & SW COMMUTER PATH (#1 on the list of intersections meeting traffic signal warrants)**

The West Washington Avenue & SW Commuter Path intersection is located approximately 290 feet northeast of the traffic signal controlled intersection of Regent Street & Proudfit Street & West Washington Avenue, and 575 feet southwest of the traffic signal controlled intersection of Bedford Street & West Washington Avenue.

The intersection consists of a midblock crosswalk equipped with a Rectangular Rapid Flashing Beacon (RRFB) operated as a single crossing of West Washington Avenue. West Washington Avenue is a 4 lane divided roadway with standard bike lanes, the SW Commuter Path is a multi-use path running parallel to the railroad tracks crossing West Washington.

#### **Crash History**

- 12-month crash history
  - In the year 2024, there was a total of six (6) crashes at this intersection.
  - Four (4) of these crashes are of types considered correctable by traffic signal operations.
  - Two (2) of these crashes are rear end crashes which are generally not considered correctable by traffic signal operation, however they may be in this case due to uncertainty of driver expectations.
  - 12 month intersection crash rate is an estimated 0.49 crashes per million entering vehicles (does not include entering pedestrians and bicyclists, which would lower this value).
- 5-year crash history
  - In the past 5 years (2020-2024) there was a total of eleven (11) crashes at this intersection. Eight (8) of which are types traditionally considered correctable by traffic signal operation, another two (2) as previously mentioned could be considered correctable, and one (1) considered not correctable by traffic signal operation.
  - There have been eleven (11) injuries at this intersection in the past five years in ten (10) crashes.

#### **Application of Traffic Signal Warrants**

- Manual counts were collected on the SW Commuter Path during a Kohl Center event, as well as an 'average summer PM Peak hour.' Based on these observations there are an estimated 350 crossings per hour during an average summer PM Peak hour, and 550 per hour following a Kohl Center Event. Based on these crossing volumes, the intersection meets Warrant 4, Pedestrian Volume by a magnitude of roughly 4x the numerical minimum.

#### **Staff Recommendation**

Staff recommends installing a traffic signal at West Washington Avenue & the SW Commuter Path.

### **MILWAUKEE STREET & SPRECHER ROAD (#2 on the list of intersections which Meet traffic signal warrants)**

The Milwaukee Street & Sprecher Road intersection is located approximately 2,650 feet south of County Highway T & Reiner Road & Sprecher Road, 1.0 mile north of Cottage Grove Road & Sprecher Road, 4,540 feet east of the Interstate 90 on the east side of Madison. Sprecher Road and Milwaukee Street are 4 lane divided roadways with turn lanes at this intersection. The intersection is controlled by stop signs on all approaches, with the Sprecher Road approaches equipped with flashing red indications.

#### **Crash History**

- 12-month crash history
  - In the year 2024, there was a total of two (2) crashes at this intersection. One (1) person was injured as a result of one (1) of these crashes. One (1) crash is of a type typically considered correctable by traffic signal operation, the other can be considered correctable by traffic signal with protected only left turn operation.
  - 12 month intersection crash rate is 0.30 crashes per million entering vehicles.
- 5-year crash history
  - In the past 5 years (2020-2024) there was a total of eleven (11) crashes at this intersection. Six (6) of which are types traditionally considered correctable by traffic signal operation, the other one (1) can be considered correctable by traffic signal with protected only left turn operation.
  - As a result of these crashes, four (4) people were injured in three (3) crashes.

#### **Application of Traffic Signal Criteria**

- Automatic hose counts show that this intersection is 20 percent above meeting the adopted minimum numerical volume for warrant 1-A, and 3 percent above meeting warrant 1-B.
- A manual delay observation indicated the intersection meets the numerical minimum for the Peak Hour warrant, however, does not meet on the basis of vehicle delay. The delay observed during the PM peak hour was measured to be 46% of the minimum delay outlined in Warrant 3.

#### **Intersection Operation Comparison**

Control Type	Overall		Average Approach Delay (sec)				Pedestrian Delay (sec)
	LOS	Delay	SB	NB	EB	WB	
<b>AWSC</b>	A	*14.1	12.5	17.5	17.1	6.9	-
<b>Traffic Signal (65" cycle)</b>	B	18.4	17.3	19.3	19.5	17.4	32.5"
			B	B	B	B	C
<b>Roundabout (multi-lane)</b>	A	5.6	5.0	5.6	7.0	5.3	-
			A	A	A	A	-
<b>Roundabout (single lane)</b>	B	12	11.8	13.5	10.8	8.6	-
			B	B	B	A	-

\*All way stop delay shows measured delay, not delay reported by Synchro

#### **Staff Recommendation**

Staff recommends installing a traffic signal at Milwaukee Street & Sprecher Road.



**HENRY MALL CROSSWALK & UNIVERSITY AVENUE / CAMPUS DRIVE (#3 on the list of intersections which Meet traffic signal warrants)**

The intersection of Henry Mall & University is located approximately 350-ft west of the signal controlled Randall Avenue & University Avenue intersection. The intersection has one marked crosswalk on the east side of the intersection. This crosswalk also extends to the south to cross Campus approximately 250-ft east of the signal controlled Babcock Drive & Campus Drive/University Avenue intersection.

The crosswalk in question is a marked crosswalk with continental style pavement markings with pedestrian crossing warning signs. The adjacent signal at Randall Avenue & University Avenue operates as a fixed time signal which provides gaps in traffic at the University Avenue crossing every cycle. A leading bicycle/pedestrian interval at the Randall Avenue & University Avenue traffic signal creates a larger than typical all red interval to create larger gaps for this crosswalk.

**Crash History**

- 12-month crash history
  - There were no reported crashes in the year 2024.
- 5-year crash history
  - There was one (1) crash potentially at this crosswalk. Due to inconsistencies between the crash pin, diagram, and narrative, it is unclear if this crash involving a pedestrian in a crosswalk was at this intersection.

**Application of Traffic Signal Criteria**

- Due to very little side street vehicle demand, and nature of complaint, vehicle warrants were not considered.
- A manual count of pedestrian crossings during a weekday morning when the University of Wisconsin was in session indicates the pedestrian warrant is met and exceeds minimum number of pedestrian crossings by 6%.

**Staff Recommendation**

Staff recommends maintaining the marked crosswalk but not installing a traffic signal at this crossing. Staff recommends maintaining the extended all red interval at Randall Avenue & University Avenue to help increase regular gaps at this crosswalk.

**AMERICAN PARKWAY & HOEPKER ROAD & RATTMAN ROAD (#2 on The All-Way Stop Intersection List that Do Not Meet traffic signal warrants)**

The intersection of American Parkway & Hoepker Road & Rattman Road is an all way stop intersection located approximately 3,480 ft west of the traffic signal controlled intersection of Hoepker Road & Prairie Lakes Drive & Triumph Drive in Sun Prairie, WI, and 4,740 ft north of the traffic signal controlled intersection of American Family Drive & American Parkway.

Each approach at this intersection involves multiple lanes of varying combinations of dedicated turn lanes, thru lanes, and shared thru and right turn lanes. The intersection also is the current termination point for a separated bike path in Sun Prairie, WI.

**Crash History**

- 12-month crash history.
  - In 2024 there were a total of three (3) recorded crashes. All three (3) of which is of type traditionally considered to be correctable by traffic signal operation.
  - Of these crashes, one (1) crash resulted in one (1) person being injured.
  - The 12 month intersection crash rate is 0.49 crashes per million entering vehicles.
- 5-year crash history.
  - In a 5 year period (2020-2025), there have been thirteen (13) recorded crashes. Of which, nine (9) are of types traditionally considered correctable by traffic signal operations.
  - Of these thirteen (13) crashes, six (6) resulted in seven (7) people being injured. Five (5) of these six (6) are from crash types traditionally considered correctable by traffic signal operations.

**Application of Traffic Signal Criteria**

- Automatic hose counts show that this intersection is 22 percent below meeting the adopted minimum numerical volume for warrant 1-A, and 38% below meeting warrant for 1-B.
- No other warrants were met.

**Staff Recommendation**

Staff recommends maintaining existing stop control operation.

**ROSA ROAD & OLD MIDDLETON ROAD (#11 on the list of intersections that Do Not Meet traffic signal warrants).**

The intersection of Rosa Road & Old Middleton Road is a two way stop controlled intersection located approximately 200 feet east of the all way stop at Old Middleton Road & Old Sauk Road, and 2,580 feet north of Rosa Road & Regent Street.

**Crash History**

- 12 month crash history.
  - There have been no reported crashes in 2024.
- 5 year crash history
  - There have been no reported crashes in the past 5 years.

**Application of Traffic Signal Criteria**

- Automatic hose counts indicate this intersection is 31% below meeting minimum numerical volumes for warrant 1-B, and does not meet any other signal warrants.

**Staff Recommendation**

Staff recommends maintaining existing two way stop control.

**MILWAUKEE STREET & N THOMPSON DRIVE (#37 on the list of intersections which Do Not Meet traffic signal warrants).**

The intersection of Milwaukee Street & N Thompson Drive is a two way stop controlled intersection located approximately 750 feet west of the Interstate 90 bridge, and 3,410 feet east of the intersection of Milwaukee Street & Swanton Road.

**Crash History**

- 12 month crash history
  - In 2024 there was one (1) reported crash. This crash is not a crash typically considered correctable by traffic signal operation.
  - The intersection crash rate is 0.39 crashes per million entering vehicles.
- 5 year crash history
  - In a 5 year period (2020 to 2025) there were a reported seven (7) crashes. Of these seven (7) crashes, three (3) are of types considered correctable by traffic signal operation.
  - Of the seven (7) reported crashes, two (2) resulted in a total of two (2) injuries.

**Application of Traffic Signal Criteria**

- Automatic hose counts indicate this intersection is 56% below meeting minimum numerical volumes for meeting warrant 1-A. No other warrant that was analyzed was met.

**Staff Recommendation**

Staff recommends maintaining existing stop control configuration.

**COTTAGE GROVE ROAD & MAHER AVENUE & ROYSTER OAKS DRIVE (#43 on list of intersections which Do Not Meet traffic signal warrants).**

The Cottage Grove Road & Maher Avenue & Royster Oaks Drive intersection is a two way stop controlled intersection located approximately 1,560 feet from the traffic signal controlled intersection of Atwood Avenue & Cottage Grove Road, and 770 feet west of the traffic signal controlled intersection of Cottage Grove Road & Dempsey Road.

The intersection is equipped with a Rectangular Rapid Flashing Beacon on the east crosswalk.

**Crash History**

- 12 month crash history
  - In 2024 there was one (1) reported crash. This crash is not a crash typically considered correctable by traffic signal operation.
- 5 year crash history
  - In a 5 year period (2020 to 2025) there were four (4) reported crashes. Of these crashes, two (2) were of types considered correctable by traffic signal operations.
- Of the four (4) crashes in the past five (5) years, one (1) resulted in one (1) person injured. This one (1) crash is not of a type traditionally considered correctable by traffic signal operation.

**Application of Traffic Signal Criteria**

- Studies indicate this intersection does not meet any of the minimum numerical value for traffic signal warrants that were studied.

**Staff Recommendation**

Staff recommends maintaining the existing stop control configuration with Rectangular Rapid Flashing Beacon.

**FISH HATCHERY ROAD & MARTIN STREET (#71 on the list of intersections which Do Not Meet traffic signal warrants).**

The intersection of Fish Hatchery Road & Martin Street is located 1,630 feet north of the traffic signal controlled intersection of Fish Hatchery Road & Badger Road, and 2,900 feet south of the traffic signal controlled intersection of Fish Hatchery Road & Wingra Drive. The intersection is also located 445 feet north of the Cannonball Path and Railroad crossing of Fish Hatchery Road.

The intersection is currently a side street stop “T” intersection.

Due to the Office of the Commissioner of Railroads order (Docket ID 9170-RX-346), the City of Madison has been ordered to install a pedestrian signal that can be interconnected with the railroad. The options for doing so are to either install a traffic signal or pedestrian hybrid beacon. Due to the pedestrian hybrid beacon sharing similarities to a railroad signal, but having different meaning, Staff does not recommend this option.

**Crash History**

- 12 month crash history
  - There were no reported crashes in 2024 at this intersection.
- 5 year crash history
  - There were no reported crashes between 2020 and 2025 at this intersection.
- Fish Hatchery Road & Cannonball Path 5-year crash history
  - In the past five (5) years, there were five (5) reported crashes, three (3) of which involved rear end crashes during an RRFB activation.

**Application of Traffic Signal Criteria**

- Traffic studies indicate this intersection does not meet any of the minimum numerical traffic signal warrants.
- The intersection is 73% below meeting warrant 1-A or 1-B, is 64% below meeting the minimum pedestrian warrant when applying Cannonball Path traffic to this intersection.

**Staff Recommendation**

Due to the OCR order to install a pedestrian signal with interconnect into the railroad, staff recommends closing the Cannonball Path crossing of Fish Hatchery Road, re-routing that path north to Martin Street and installing a traffic signal with diagonal NB bike signal to avoid requiring railroad interconnect while also crossing path users in a safe and orderly manner.

### **ODANA ROAD & POTOMAC LANE (Not on List)**

The intersection of Odana Road & Potomac Lane is a traffic signal-controlled intersection located 1,525 feet east of the traffic signal-controlled intersection of Grand Canyon Drive & Odana Road and 1,622 feet west of the traffic signal controlled intersection of Odana Road & Research Park Boulevard.

The intersection was requested to be studied for removal of the traffic signal.

This traffic signal went into operation on 11-13-1996 and has not received any updates of note since.

#### **Crash History**

- 12 month crash history
  - There were no reported crashes in 2024.
- 5 year crash history
  - There were two (2) reported crashes between 2020 to 2025, none of which are considered to have been caused by a traffic signal operation.

#### **Application of Traffic Signal Criteria**

- An automated hose count indicates this intersection does not currently meet traffic signal warrants 1-A, 1-B, or peak hour warrants.
  - Current redevelopment on the south side of the intersection is expected to bring this intersection closer to meeting traffic signal warrant.
- The signal spacing between this intersection and adjacent intersections is near equal distance between Research Park Boulevard and Grand Canyon Drive. This location may allow for platoon management when running in coordination.
- Visibility coming from the south side of the intersection is currently roughly 350 feet to the east, and approximately 250 feet to the west. At the posted speed limit, this is approximately 7-9 seconds down the road. At the 85<sup>th</sup> percentile speed measured, this approximately 5-7 seconds down the road. See figures 1 and 2 below.

Figure 1: NB Potomac, looking east



Figure 2: SB Potomac, looking west



**Staff Recommendation**

Staff recommends maintaining existing traffic signal operation.

END