



Traffic Engineering Division

David C. Dryer, City Traffic Engineer

215 Martin Luther King, Jr. Boulevard
P.O. Box 2986
Madison, Wisconsin 53701-2986
(Phone) 608 266 4761
(TTY) 608 267 9623
(FAX) 608 267-1158

SUMMARY OF STAFF RECOMMENDATIONS To PBMVC

March 20, 2013

1. Junction and Driveway at Target: Recommend maintaining current stop sign control.
2. Main & Webster: Recommend installing traffic signal control during this year's Outer Loop reconstruction project
3. Cottage Grove (CTH BB) & Thompson: Recommend maintaining current stop sign control.
4. Knutson & Northport: Recommend maintaining current stop sign control.
5. Prairie & Raymond: Recommend maintaining current stop sign control.
6. Buckeye (CTH AB) & Thompson: Recommend maintaining current stop sign control.
7. American Pkwy & Buttonwood: Recommend maintaining current stop sign control

2011 TRAFFIC SIGNAL PRIORITY LIST SPECIAL STUDIES FOR PBMVC SELECT INTERSECTIONS

Actions completed to date

1. **Junction & Driveway at Target**
Collected 24 hour automatic machine counts.
Collected Manual turning movement counts.
2. **Main & Webster**
Reviewed Capitol Loop Traffic Need Study and proposed contra flow bike lane designs for Main Street.
3. **Cottage Grove & Thompson**
Collected 24 hour automatic machine counts.
Manually recorded vehicle delay.
4. **Knutson & Northport**
Collected 24 hour automatic machine counts.
Collected Manual turning movement counts.
5. **Prairie & Raymond**
Collected 24 hour automatic machine counts.
Manually recorded vehicle delay.
6. **Buckeye & Thompson**
Collected 24 hour automatic machine counts.
Collected Manual turning movement counts.
7. **American Parkway & Buttonwood**
Collected 24 hour automatic machine counts.
Manually recorded vehicle delay.

TRAFFIC SIGNAL PRIORITY LIST COMMENTARY

Junction Road & Driveway at Target

The Junction Road-Target Driveway intersection is located on Junction Road approximately 1,200 feet north of the signalized intersection at Mineral Point Road, and approximately 3,100 feet south of the signalized driveway intersection at City Center West.

Recent hose and manual counts show that this intersection is 4% short of meeting the adopted minimum numerical volume warrants for traffic signals.

Crash History

- The crash history for the past five years, 2007 thru 2011, shows there has been an average of 0.6 crashes per year (of crash types considered correctable by traffic signals). A traffic signal is not expected to improve upon this number of crashes.

Application of Traffic Signal Criteria

- Recent manual and automatic hose counts show that this intersection is 4% short of meeting the adopted minimum numerical volume for traffic signals.

Staff recommends maintaining the current stop sign control. We will continue to monitor the Junction Road-Target Driveway intersection to assess changing conditions.

East Main Street & Webster Street

The Main-Webster intersection is located on the outer loop between the signalized intersections at Doty-King-Webster and at Webster-East Washington.

The Capitol Loop Traffic Needs Study completed in 2005 studied this intersection along with the all the other non-signalized intersections on the Outer Capitol Loop (Fairchild-Doty-Webster-Dayton). The report recommended maintaining the existing traffic control at the time of the study but noted heavy pedestrian crossing of Webster at Main Street.

A new signal at this intersection will facilitate both pedestrian crossing of Fairchild as well as a proposed contra-flow cycle track being planned for the 100 block of East Main Street

Staff recommends installing traffic signal control during this year's Outer Loop Reconstruction Project.

Cottage Grove Road & Thompson Drive

The Cottage Grove-Thompson intersection is located on Cottage Grove Road approximately 600 feet west of the bridge over Interstate Highway 90. It is approximately 4,400 feet east of the signalized intersection at Acewood Blvd. and approximately 5,300 feet west of the signalized intersection at Sprecher Road. The Cottage Grove-Thompson intersection forms a "T" intersection with Cottage Grove having the right-of-way and Thompson Road being stop controlled.

An updated delay study was performed in during the peak p.m. traffic period showed that the actual delay to motorist on the Thompson northbound is 86% short of meeting the minimum delay criteria for traffic signals. The highest 15-minute delay period was found to be from 4:45 – 5:00 p.m. during which time the average delay to motorist on the northbound approach was found to be 20 seconds per vehicle. Average delays recorded during all other time intervals were significantly less.

Crash History

- The crash history for the past five years, 2007 thru 2011, shows there have been an average of 1.6 crashes per year (of crash types considered correctable by traffic signals). A traffic signal is not expected to improve upon this number of crashes.

Application of Traffic Signal Criteria

- Recent manual and automatic hose counts show that this intersection is 36% short of meeting the adopted minimum numerical volume for traffic signals.

Staff recommends maintaining the current stop sign control. We will continue to monitor the Cottage Grove-Thompson intersection to assess changing conditions.

Knutson Drive & Northport Drive

The Knutson-Northport intersection is a T-intersection located on Northport Drive approximately 1,300 feet northwest of the signalized intersection at Kennedy Road, and approximately 3,100 feet west of the signalized intersection at Whitney Way.

Crash History

- During the five-year period 2007-2011, there have been no crashes reported which were types considered to be correctable by traffic signals.

Application of Traffic Signal Criteria

- Recent manual and automatic hose counts show that this intersection is 64% short of meeting the adopted minimum numerical volume for traffic signals.
- Traffic counts do meet the minimum criteria for either the 4 hour or the Peak Hour warrants.

Staff recommends maintaining the current stop sign control.

Prairie Road & Raymond Road

The Prairie-Raymond intersection is located on Raymond Grove Road approximately 2,100 feet east of the signalized intersection at McKenna Boulevard, and approximately 3,100 feet west of the signalized intersection at Whitney Way.

An delay study was performed in during the peak a.m. traffic period showed that the actual delay to motorist on the Prairie Road northbound approach is 83% short of meeting the minimum delay criteria for traffic signals. The highest 15-minute delay period was found to be from 8:15 – 8:30 a.m. during which time the average delay to motorist on the northbound approach was found to be 13 seconds per vehicle.

Crash History

- The crash history for the past five years, 2007 thru 2011, shows there have been an average of 1.6 crashes per year (of crash types considered correctable by traffic signals). A traffic signal is not expected to improve upon this number of crashes.

Application of Traffic Signal Criteria

- Recent manual and automatic hose counts show that this intersection is 54% short of meeting the adopted minimum numerical volume for traffic signals.

Staff recommends maintaining the current stop sign control.

Buckeye Road & Thompson Drive

This intersection is located on Buckeye Road approximately 2,250 feet to the east of the all-way stop controlled intersection at Buckeye-Vondron and approximately 600 feet to the west of the bridge over HWY I-90. The westbound approach from the bridge is downhill at an approximate 5 percent slope.

Crash History

- During the five-year period 2007-2011, there have been a total of 4 crashes reported which were types considered to be correctable by traffic signals. A traffic signal is not expected to improve upon this number of crashes.

Application of Traffic Signal Criteria

- Recent counts show that this intersection is 104% short of meeting the adopted minimum numerical volume for traffic signals.

Staff recommends maintaining the current stop sign control.

American Parkway & Buttonwood Drive

This intersection is located on American Parkway approximately 960 feet to the north of the signalized intersection at Eastpark Boulevard and approximately 6,100 feet to the south of an all-way stop controlled intersection at Hoepker Road.

Crash History

- During the five-year period 2007-2011, there have been a total of 4 crashes reported which were types considered to be correctable by traffic signals. No crashes were reported in 2009, 2010 or 2011.

Application of Traffic Signal Criteria

- Recent counts show that this intersection is 75% short of meeting the adopted minimum numerical volume for traffic signals.

A future UW Hospital is being proposed to be built on the northwest corner of Eastpark Blvd. and Portage Road. This development could result in future increased traffic volumes at the Buttonwood intersection. It is not apparent that the increased traffic from this future development will trigger that need for traffic signal control at the American Parkway-Buttonwood intersection.

Staff recommends maintaining the current stop sign control at this time. .