



Agenda Item Summary

File #: MOT 19-83, **Version:** 1

Submitted By

Bill McKenna, Village Engineer
Interim Transportation Commission Chairperson

Kyle Eichenberger,

Reviewed By

LKS

Agenda Item Title

A Motion to Concur with the Transportation Commission's Recommendation to Upgrade from Two-Way, East-West STOP Signs to All-Way STOP Signs at the Intersection of Adams Street and Wisconsin Avenue and Direct Staff to Prepare the Necessary Ordinance

Overview

The Village of Oak Park received a traffic calming petition for the intersection of Adams Street and Wisconsin Avenue. The Village conducted crash analysis and traffic studies for the intersection. The Transportation Commission voted four to zero to recommend upgrading to all-way STOP signs at the intersection of Adams Street at Wisconsin Avenue at its March 25, 2019 meeting. Staff does not concur with the Transportation Commission's recommendation as there are no speeding issues, no accident history, and no abnormal geometry at this intersection to warrant upgrading the intersection to all-way stop controlled.

Recommendation

Deny the Motion

Staff Recommendation

Deny the Motion.

Fiscal Impact

Staff estimates it will cost less than \$1,500 to install signage and related pavement markings to upgrade from two-way STOP signs to an all-way STOP controlled at this intersection. There are available funds in the FY2019 General Fund, Public Works - Street Services, account no. 1001-43740-761-560634 for this work.

Background

On September 14, 2018, the Village of Oak Park received a petition to install a traffic calming device at the intersection of Adams Street and Wisconsin Avenue. There were insufficient signatures on the original petition. As a result, a copy of the petition was sent to the petition organizer requesting additional signatures be obtained on the petition. On November 8, 2018, the petition was resubmitted with additional signatures. Residents representing 51.41% of the street frontage of the petitioning blocks signed the petition which is above the 51% requirement. The petition was certified as a valid petition.

In the letter of explanation, the residents requested the intersection be upgraded from two-way to all-way STOP-controlled intersection. Reasons provided for the petition are: a bus stop for Lincoln School at the NE corner of the intersection; traffic from Harlem Avenue uses the street as a cut through to Rush Oak Park Hospital; and Maple Avenue is not a through street causing increased north-south traffic on Wisconsin Avenue. See Attachment A for a copy of the letter of explanation. See Attachment B for copies of the written public testimony received by the Village for this item.

A directional twenty-four hour traffic volume and speed study was conducted on Thursday, March 7, 2019 for the 1027 and 1100 blocks of Adams Street and 600 and 700 blocks of Wisconsin Avenue. The results were analyzed and then summarized (see Attachment E). Staff also reviewed the crash history of the intersection and generated a collision diagram based on the crash reports (see Attachment H).

The petition was reviewed by the Transportation Commission at its March 25, 2019 meeting. Staff gave a presentation on the issue including: background on the petition, history of traffic control devices at the intersection, analysis of the collected traffic data and collision diagram. Area residents provided public testimony on the item. After hearing Staff's presentation and public testimony, the Transportation Commission deliberated on the item. The approved minutes for the March 25, 2019 Transportation Commission meeting are included as Attachment I.

At the March 25, 2019 meeting, the Transportation Commission voted 4 to 0 in favor of recommending to upgrade the intersection of Adams Street and Wisconsin Avenue from two-way, east-west STOP controlled to all-way STOP controlled intersection and to include continental crosswalk pavement markings for all four legs of the intersection.

Staff does not concur with the Transportation Commission's recommendation to upgrade the intersection to all-way stop controlled. Based on the data gathered there does not appear to be a speeding issue, there is not a high crash rate to warrant all-way stop signs, and there is no abnormal geometry at the intersection to warrant all-way stop signs. Staff is recommending upgrading the crosswalk pavement markings to continental crosswalks for greater visibility and improved pedestrian safety, installing "no parking here to corner" signage, and working with enforcement to ensure vehicles are not parked too close to the intersection for better lines of sight.

ANALYSIS SECTION

Geometry of the Intersection and Neighborhood Context (Attachments C & D)

See Attachment C for digital aerial photographs of the Adams Street and Wisconsin Avenue intersection and the neighboring area. Rush Oak Park Hospital cCampus is less than a block north of the intersection. Attachment D shows the traffic control devices on Adams Street between Harlem Avenue and Kenilworth Avenue as well as adjacent east-west streets, Jackson Boulevard and Monroe Street. Adams Street and Wisconsin Avenue intersection is a typical four leg intersection. Due to its proximity to the Rush Hospital campus, there is a heavy concentration of parked vehicles adjacent to the intersection. This sometimes causes sightline issues for motorists and pedestrians alike which can be a safety issue.

Traffic Study - Volume and Speed (Attachments F & G)

Reviewing the 24-hour volumes (Attachment F), the average daily traffic on the 1027 & 1100 blocks of Adams Street was 803 and 688 vehicles, respectively. For the 600 & 700 blocks of Wisconsin Avenue, the average

daily traffic was 399 vehicles and 382 vehicles, respectively. Volumes on all four blocks fall below or within the 800 to 1,200 vehicle range for typical average daily traffic volume on the Village's residential streets.

Regarding vehicular speeds, it is an accepted traffic engineering practice to set the speed limit to the 5 mile per hour increment above or below the 85th percentile speed. Village Staff holds the opinion that the majority of drivers will drive at or near the posted speed limit. In addition, it is an accepted fact that the speed indicated on speedometers can vary up to 2 percent above or below the actual speed of the vehicle.

By definition, the 85th percentile speed is the speed at which 85 percent of the vehicles are traveling at or less than. Conversely, 15 percent of the vehicles will be traveling faster than the 85th percentile speed. It has already been stated that speed limits are typically set to the 5 mile per hour increment above or below the 85th percentile speed. This implies that it is expected that approximately 15 percent of vehicles will be traveling faster than the speed limit, if the speed limit is the 5 mile per hour increment below the 85th percentile speed.

Looking at the 85th percentile speeds for the 1027 & 1100 blocks of Adams Street, the directional speeds for the two blocks range between 20 and 24 miles per hour (mph). The 24-hour survey showed that 3.9% of the eastbound vehicles and 8.4% of the westbound vehicles on the 1027 block of Adams Street were traveling faster than the posted 25 mph speed limit. For the 1100 block of Adams Street, the percentage of vehicles traveling faster than the posted 25 mph speed limit were 4.7% for eastbound traffic and 8.9% for westbound traffic.

Looking at the 85th percentile speeds for the 600 & 700 blocks of Wisconsin Avenue, the directional speeds for the two blocks range between 23 mph and 24 mph. The 24-hour survey showed that 9.2% of the northbound vehicles and 12.6% of the southbound vehicles on the 600 block of Wisconsin Avenue were traveling faster than the posted 25 mph speed limit. For the 700 block of Wisconsin Avenue, the percentage of vehicles traveling faster than the posted 25 mph speed limit were 7.0% for northbound traffic and 8.1% for southbound traffic.

Based on the collected traffic data, it appears there is not a speeding issue on any of the four blocks studied (1027 & 1100 blocks of Adams Street and 600 & 700 blocks of Wisconsin Avenue).

Attachment G provides a summary of the number of pedestrians crossing any of the Adams Street and Wisconsin Avenue intersection's four legs during the 7:00AM-9:00AM and 2:00PM-4:00PM time periods. Also included in the summary is the number of vehicles traveling through the intersection during these same time periods. For the morning peak hour, 43 pedestrians crossed Adams Street at the intersection while 185 vehicles traveled on Adams Street through the intersection. During the same time period, 25 pedestrians crossed Wisconsin Avenue at the intersection while 98 vehicles traveled on Wisconsin Avenue through the intersection.

In the afternoon two hour time period (2PM-4PM), 5 pedestrians crossed Adams Street while 230 vehicles traveled along Adams Street through the intersection. During the same time period, 14 pedestrians crossed Wisconsin Avenue at the intersection while 125 vehicles traveled along Wisconsin Avenue through the intersection.

Crash History - Collision Diagrams (Attachment H)

Thirty-six months of vehicle crash reports covering the period of January 2016 through December 2018 were

reviewed for the Adams Street and Wisconsin Avenue intersection. Please see Attachment I for the collision diagram.

In 1997, the intersection was studied as part of the Village-wide traffic study. At the time, the intersection was uncontrolled. The number of reported crashes at the intersection in the 36 month period totaled six, while the average daily traffic was 1,911 vehicles. The 1997 crash rate for the Adams Street and Wisconsin Avenue intersection was calculated to be 2.867 accidents per million entering vehicles (Acc/MEV). This crash rate is then compared to the critical crash rate for the particular section of the Village's area-wide traffic study. For the south middle section of the area-wide traffic study (South Boulevard to I-290 Expressway and Harlem Avenue to Austin Boulevard), the critical crash rate is 1.029 Acc/MEV. If an actual accident rate exceeds the critical crash rate then it is highly probable that the accidents were caused by factors other than chance. As a result, east-west STOP signs were installed on Adams Street at Wisconsin Avenue on August 24, 1999.

The number of reported crashes that occurred at the Adams Street and Wisconsin Avenue intersection for the thirty-six months ended December 31, 2018 totaled one. In May 2016, a vehicle traveling westbound on Adams Street which has a STOP sign, did not yield to the southbound Wisconsin Avenue vehicle which had the right of way. The average daily traffic for the intersection as determined as part of the 2018 traffic study was 1,170 vehicles. From this data, the 2018 crash rate for the Adams Street and Wisconsin Avenue intersection is calculated to be 0.781 Acc/MEV. This crash rate is below the critical crash as determined in the area-wide traffic study of 1998 (1.029 Acc/MEV). In conclusion, there does not seem to be a problem with vehicle crashes at the intersection of Adams Street and Wisconsin Avenue.

Alternatives

Deny the Commission's recommendation and the intersection remains two-way, east-west STOP-controlled on Adams Street at Wisconsin Avenue.

Previous Board Action

On June 7, 1999, the Village Board of Trustees adopted an Ordinance (1999-O-18) to install east-west STOP signs on Adams Street at Wisconsin Avenue (Item AD). This action was part of the Village's area-wide traffic study completed in the late 1990s.

Citizen Advisory Commission Action

The Transportation Commission recommended the following:

1. Upgrade from two-way, east-west STOP signs to all-way STOP signs at the intersection of Adams Street and Wisconsin Avenue.
2. Install or refresh continental crosswalk pavement markings on all four legs of the Adams Street and Wisconsin Avenue intersection.

The motion passed unanimously, four to zero.

Anticipated Future Actions/Commitments

Subject to consensus of the Village Board, staff will submit an Ordinance to the Village of Oak Park Board for adoption for the installation of the north-south STOP signs on Wisconsin Avenue at Adams Street at a future Board meeting.

Intergovernmental Cooperation Opportunities

None at this time.