

REPORT / RECOMMENDATION



To: Edina Transportation Commission

Agenda Item #: VI. D.

From: Joseph Totten, Traffic Safety Coordinator

Action

Discussion

Date: December 18, 2014

Information

Subject: Traffic Safety Committee Report of December 3, 2014

Action Requested:

Review and recommend Traffic Safety Committee (TSC) Report of Wednesday December 3, 2014, be forwarded to City Council for approval.

Information / Background:

It is not anticipated that residents will be in attendance at the meeting. An overview of the comments from the Edina Transportation Commission (ETC) will be included in the staff report provided to Council for their January 20, 2014 meeting.

Attachments:

Traffic Safety Committee Report for December 3, 2014.

Traffic Safety Committee Report

Wednesday, December 3rd, 2014

The Traffic Safety Committee (TSC) review of traffic safety matters occurred on December 03. The City Engineer, Transportation Planner, Traffic Safety Coordinator, Sign Coordinator and the Assistant City Planner were in attendance for this meeting.

For these reviews, the recommendations below are provided. On each of the items, the persons who requested the investigation have been contacted and staff recommendation has been discussed with them. The requestors have been informed that they may speak on the matters here provided at the December 18 Edina Transportation Commission and the January 20 City Council meetings.

A1. Request for street name placards on 70th Street at 70th Street cul-de-sac

The requestor states that often vehicles tailgate drivers as they turn from 70th Street, South-Westbound to Westbound at Metro Boulevard. The requestor states that the following drivers do not leave enough space for a deceleration to complete the turn into the cul-de-sac. The requestor requested a green placard to demarcate the street as present to further signify the intersection to vehicles on 70th Street. Research on this application has been minimal, however advance placement signs have been shown to have a slight decrease in injury causing collisions¹. A count from this summer has 9430 AADT using 70th Street, with an 85th percentile speed of 31.1 mph, a count from 2012 closer to the location of this request had a higher 85th percentile speed of 37.1 mph. No accidents have been reported at this location in the last 5 years.



Photo : 70th St. looking west, towards the cul-de-sac entrance.



Photo : 70th St. looking east, cul-de-sac in the foreground, metroBlvd/70th St intersection in the background



Map : 70th St and 70th St. Intersections in question

¹ Federal Highway Administration, Safety Evaluation of Advance Street Name Signs, June 2009, FWHA-HRT-09-029 <http://www.fhwa.dot.gov/publications/research/safety/09029/#toc229910885>, accessed November 2014

After review, staff recommends placing a placard signifying the house numbers present in the cul-de-sac. This decision was reached largely due to the input of the Police Traffic Supervisor, who emailed that these properties are difficult for officers to locate.

A2. Request for changing the traffic control at the intersection of Bush Lake Road and Dewey Hill Road

The requestor states that this intersection, currently a three-way stop and a four-legged intersection is confusing and dangerous. The requestor notes that many people do not yield properly to the northbound traffic, which is not controlled. This lack of yielding leads to confusion and delay. Forty-eight hours of video of this intersection were reviewed. Unexpected and dangerous situations included many vehicles not stopping or yielding to northbound traffic, one near collision and multiple times where a cautious driver avoided a near collision. There have been no crashes reported in this location in the last five years. At the intersection there are AADTs of approximately 4500 on the south and west legs of the intersection (approximate volumes are noted due to older age of the counts). Speeding in this location has not been observed as an issue in the past.



Map : Intersection of Bush Lake Rd and Dewey Hill Rd



Photo : Bush Lake Rd, looking north, towards Dewey Hill

After review, staff does not recommend changing the traffic control at this intersection. However, staff does recommend the placards, signifying that a direction of traffic does not stop, be replaced with high visibility yellow placards.

Section B : Items on which staff recommends denial

B1. Request for the intersection of Valley Lane and Tracy Avenue to be converted from a one-way stop to an all way stop

The requestor states that delays are common and turning left from Valley Lane to Tracy Avenue is difficult. A delay study was executed for the intersection and it was found that the average hourly delay during rush hours was maximized at times 07:21:20 - 08:21:20, with an average delay of 14.6 seconds per vehicle. The maximum hourly average delay for the PM peak hour was from 16:52:20 - 17:52:20, and had an average vehicle delay of 14.2 seconds per vehicle. One crash has been reported in this location in the past year. Four crashes have been reported in the last five years. Tracy Avenue in this location has an 85th percentile speed of 36.9 mph, and AADT of 9190. 33%-45% of vehicles turn left at this intersection, and likely have a higher amount of delay, however this is not considered in the warrants. This intersection does not meet engineering warrants from the Minnesota Manual on Uniform Traffic Control Devices for multi-way stop control. Warrants are attached in Appendix A.



Photo : Tracy Ave. Looking north, towards Valley Lane



Map : Valley Lane and Tracy

After review, staff recommends denial of this request at this time. This recommendation was due to a lack of warrants and pending improvements to the intersection that will be built in conjunction with the Nine-Mile Regional Trail.

B2. Request for stop signs to be placed on Idylwood Drive at Highwood Drive

Requestor states that the currently uncontrolled intersection of Idylwood and Highwood is dangerous and should be controlled with a stop sign on Idylwood. Idylwood at this location has an AADT of 155 vehicles and an 85th-percentile speed of 27.6 mph. Highwood has an AADT of 139 in this location with an 85th-percentile speed of 17.5 mph. There have been no reported crashes in this location within the last five years. Using 85th percentile speeds, there are no observed sight distance issues at this intersection, with 30 mph being used on Idylwood, and 20 mph on Highwood.



Map : Highwood Dr. and Idylwood Dr.

After review, staff recommends denial of this request. This recommendation was due to the intersection not meeting warrants for stop signs, and a lack of otherwise extraordinary circumstances.



Photo : Highwood Dr, looking south, towards Idylwood Dr

B3. Request for traffic calming on William Avenue

This request comes from a resident on William Avenue, who states that traffic routinely drives at excessive speeds down the street, and that it is an overused cut-through for traffic avoiding Interlachen and Vernon. A traffic count on William from earlier in the year had 139 AADT with an 85th percentile speed of 24.5 mph. This count was done close to the intersection with 51st Street, and likely had some speed influences, however site visits seemed to indicate this effect was minimal. Other counts in this area from previous years indicate that other streets in the area have similar volumes and speeds. One area of possible concern would be that 28 vehicles would be considered heavy vehicles (delivery trucks, buses). The requestor asked for posting of speed limit signs, physical traffic calming, enforcement, and sidewalks in the neighborhood.



Photo : William Ave, looking north, towards Interlachen



Map : William Ave, count location

After review, staff recommends denial of the request, due to low speeds and low volumes being observed in this location. The request for sidewalks was forwarded to the Transportation Planner.

Section D : Other items handled by Traffic Safety

- D1. The Transportation Planner was made aware of a situation with the bridge over 169 at Bren Road, traffic in this area and snow clearance, this was forwarded to public works and the police department.
- D2. A resident spoke of a dangerous situation with cars parking too close to the intersection of Sunnyside and France. The requestor was informed of the city's non-emergency number on the EdinaToGo application for smartphones, and the requestor stated that he would report parking within 30' of the intersection.
- D3. A resident who attends St. Stephen's Church asked for approximate parking stall lengths and estimates for the capacity of parking bays near the church. These were provided. The requestor might call back to further this request once the church reviews his numbers of usage vs the capacity provided.

- D4. A resident from the Edina West Condominiums asked for investigation of the sight distances from the driveway onto Lincoln Drive. The sight distances are inadequate, but making them adequate requires clearing of vegetation on Edina West Condominiums property. Informed the requestor of this, and offered assistance to the property managers in how much removal should be done to allow proper sight distances.
- D5. A resident asked for the intersection of 69th and York to be reconfigured to help right turning movements. This request was forwarded to the county, who has appropriate software and expertise, and controls the signal at this intersection. The county recommends keeping the current layout unless Edina would like to build an additional east-bound right turn lane.

Appendix A

Multi-way Stop Applications State

MNMUTCD 2B.7) Multi-Way STOP

The following criteria should be considered in the engineering study for a multi-way STOP sign installation:

- A. Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.
- B. Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.
- C. Minimum volumes:
 - 1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and
 - 2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but
 - 3. If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.
- D. Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.

Other criteria that may be considered in an engineering study include:

- A. The need to control left-turn conflicts;
- B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
- C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and
- D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.

Appendix B

Stop Sign Warrants,

Edina City Policy

1. The provisions of the Minnesota Manual on Uniform Traffic Control Devices (MUTCD) shall be followed.
2. Relevant speed, volumes, accident records and sight obstructions shall be reviewed when considering the installation of a stop sign.
3. Absent engineering data which clearly indicates the need for a stop sign, a residential intersection should be left uncontrolled.
4. If an intersection experiences five (5) or more right angle accidents in a three (3) year period, stop signs should be considered.
5. If the presence of a sight obstruction is contributing to accidents at an intersection, removal of the sight obstruction should be sought before considering a stop sign.
6. If the 85th percentile speed on any leg of an intersection is more than five (5) MPH over the posted speed limit, a stop sign should be considered for the intersecting street.
7. If traffic volumes exceed 1,000 vehicles per day on each of the intersecting streets, stop signs should be considered.
8. Residential stop signs shall not be installed in an attempt to control speed.
9. Residential stop signs shall not be installed in an attempt to control volume.

State Warrants

Engineering judgment should be used to establish intersection control. The following factors should be considered:

- A. Vehicular, bicycle, and pedestrian traffic volumes on all approaches;
- B. Number and angle of approaches;
- C. Approach speeds;
- D. Sight distance available on each approach; and
- E. Reported crash experience.

YIELD or STOP signs should be used at an intersection if one or more of the following conditions exist:

- A. An intersection of a less important road with a main road where application of the normal right-of-way rule would not be expected to provide reasonable compliance with the law;
- B. A street entering a designated through highway or street; and/or
- C. An unsignalized intersection in a signalized area.

In addition, the use of YIELD or STOP signs should be considered at the intersection of two minor streets or local roads where the intersection has more than three approaches and where one or more of the following conditions exist:

- A. The combined vehicular, bicycle, and pedestrian volume entering the intersection from all approaches averages more than 2,000 units per day;
- B. The ability to see conflicting traffic on an approach is not sufficient to allow a road user to stop or yield in compliance with the normal right-of-way rule if such stopping or yielding is necessary; and/or

- C. Crash records indicate that five or more crashes that involve the failure to yield the right-of-way at the intersection under the normal right-of-way rule have been reported within a 3-year period, or that three or more such crashes have been reported within a 2-year period.

YIELD or STOP signs should not be used for speed control.

At intersections where a full stop is not necessary at all times, consideration should first be given to using less restrictive measures such as YIELD signs (see Sections 2B.8 and 2B.9).

The use of STOP signs on the minor-street approaches should be considered if engineering judgment indicates that a stop is always required because of one or more of the following conditions:

- A. The vehicular traffic volumes on the through street or highway exceed 6,000 vehicles per day;
- B. A restricted view exists that requires road users to stop in order to adequately observe conflicting traffic on the through street or highway; and/or
- C. Crash records indicate that three or more crashes that are susceptible to correction by the installation of a STOP sign have been reported within a 12-month period, or that five or more such crashes have been reported within a 2-year period. Such crashes include right-angle collisions involving road users on the minor-street approach failing to yield the right-of-way to traffic on the through street or highway.