

# MEMORANDUM



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**DATE:** September 30, 2011

**TO:** Traffic Committee, Village of Glenview

**FROM:** Todd Hoffman, P.E.

**SUBJECT:** Stop Sign Analysis: Magnolia Street and Larch Avenue

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Baxter & Woodman, Inc. has completed a review of the intersection of Magnolia Street and Larch Avenue to determine if the installation of a STOP traffic control sign is warranted at this location.

**Existing Conditions:**

There is no traffic control for either Magnolia Street or Larch Avenue traffic. There are existing sidewalk on each side of Larch Avenue. No pavement markings are present at the intersection. A large tree exists at the southeast corner of the intersection. Magnolia and Larch Avenue each has a posted speed limit of 20 mph.

**Manual on Uniform Traffic Control Devices Guidelines:**

The Manual on Uniform Traffic Control Devices (MUTCD) (Section 2B.06) provides the following guidance regarding use of a stop sign at side street approaches:

*"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.*

MUTCD Section 2B.04, Paragraph 05 also states: "Yield or Stop signs should not be used for speed control."

Stop Sign Analysis:

The Village of Glenview completed traffic counts along Magnolia Street and Polo Lane in April 2011. The Village also compiled crash data for the past three years at this location. Our review of the provided data yielded the following results:

- A. The Average Daily Traffic (ADT) of Magnolia Street was 481 vehicles/day. Per the MUTCD, installation of a stop sign would be warranted if the ADT of the thru street (Magnolia Street) was over 6,000 vehicles. The recorded ADT of Magnolia Street is significantly less than the threshold, therefore, existing traffic does not meet warrants for stop sign installation.
- B. Baxter and Woodman completed a site visit to this location on August 3, 2011 and September 29, 2011. There were no site restrictions as a result of the geometry of the intersection or the roadway profiles. A large tree exists on the southeast corner of the intersection which is within the clear sight triangle required for vehicles on Larch Avenue to view oncoming traffic from the south approach of Magnolia Street and vice versa. For a posted speed limit of 20 mph, a clear sight line is required for a vehicle which is 90 feet from the intersection to see an oncoming vehicle which is 90 feet from the intersection on the adjacent approach. This tree has been trimmed so that all branches conflicting with driver's clear sight have been removed. Therefore, this tree is not a sight conflict.
- C. There have been no crashes, pedestrian or vehicular, reported over the most recent three year period at this location. Therefore, the recorded crash data does not support warrants for stop sign installation.

Conclusions/Recommendations

The existing traffic does not meet warrants for installation of a STOP traffic control sign on Magnolia Street or Larch Avenue per MUTCD guidelines. There have been no reported crashes at this location. There are no sight restrictions which exist at the intersection. We recommend that a stop sign should not be installed on Magnolia Street or Larch Avenue at this intersection.

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