# PUBLIC WORKS STAFF REPORT

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| **MEMO DATE:** | August 9, 2021 |
| **MTG. DATE:** | **August 16, 2021** |
| **TO:** | Village Board |
| **FROM:** | JJ Larson – Village Director of Public Works & Utilities |
| **RE:** | **Stop sign modifications** |

**BACKGROUND**

For years this Department has received calls about placement of some seemingly unnecessary stop signs in the Village. In researching over the years, I have never found any justification, traffic study, or documentation of any kind related to these sign placements.

For a brief background, stop signs are not recommended as a speed control measure and placing stop signs in locations where they are unwarranted ultimately makes those intersections and neighborhoods more dangerous.

I have spoken with our Police Department, and they are well aware of the hazards created by unwarranted stop signs and would partner with us in making the necessary corrections in the safest possible manner.

**OVERVIEW**

While there are likely many more locations throughout the Village, I asked our Village Engineer to take a look at three particularly egregious examples and recommend corrective measures. A 3-way stop at the intersection of Killian and Donegal, a 2-way stop at Manley and Cork Crossing and a 2-way stop at Landmark and Michelle. Village Engineer, Josh Straka's, recommendation and the MUTCD (Manual on Uniform Traffic Control Devices) guidance follow this memo.

**COMMITTEE RECOMMENDATION**

At the August 3rd meeting, the Public Works & Properties Committee voted unanimously to make the recommended changes.

Hi JJ,

Multiple stop signs in residential areas are typically installed to control speed situations and not always warranted. Below is the MUTCD standards for multi-way stop applications:

The two intersections listed below with only two stop signs is a little unusual and can be confusing to drivers.

Assuming there is not heavy traffic on any of these roadways and that they do not have high crash rates, I would suggest the following options based on traffic standards (which are similar to your thoughts below).

- Manley/Cork Intersection - Eliminate the eastbound stop sign on Manley
- Landmark/Michelle Intersection - Eliminate the northbound stop sign on Landmark
- Killian/Donegal - Eliminate both stop signs on Killian.

Law enforcement may want to monitor these intersections after the signs are removed to get a feel if the removals are adequate.

Josh

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## Section 2B.06 STOP Sign Applications

*Guidance:*
01 *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.08 and 2B.09).*

02 *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.*

Support:
03 The use of STOP signs at grade crossings is described in Sections 8B.04 and 8B.05.

## Section 2B.07 Multi-Way Stop Applications

Support:
01 Multi-way stop control can be useful as a safety measure at intersections if certain traffic conditions exist. Safety concerns associated with multi-way stops include pedestrians, bicyclists, and all road users expecting other road users to stop. Multi-way stop control is used where the volume of traffic on the intersecting roads is approximately equal.

02 The restrictions on the use of STOP signs described in Section 2B.04 also apply to multi-way stop applications.

*Guidance:*
03 *The decision to install multi-way stop control should be based on an engineering study.*

04 *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.*

Option:

05 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.