

Office of the City Engineer

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May 16, 2018

MEMO

To: John C. Rooney, P.E.

Re: Traffic Study - Intersection Analysis of Kewaunee St. and Carlisle Ave.

From: Ara P. Molitor, P.E.

Purpose: Determine if there is a warranted change in the “control” at the intersection, and determine if vehicle speed is a factor.

Method: Field observation, traffic counts and an accident analysis.

ANALYSIS:

Existing Conditions

- Existing roadway conditions at the intersection:
 - The intersection is a standard local street/collector street intersection at 90 degrees.
 - There are no real issues regarding vision in any of the 4 quadrants.
 - Kewaunee St. is “Stop controlled” at the intersection.
 - Kewaunee St. is the standard 36’ face to face cross-section - concrete.
 - Carlisle Ave. is a boulevard: 2 X 22’ face to face section with 6’ f/f median.
 - Carlisle Ave. is concrete with a grass median and street lighting down the median.
 - The Speed Limit for both roads are – 25 MPH. (Carlisle is posted, Kewaunee by ordinance)
 - On several field visits – did not witness excessive speed (either direction)
 - There is a bus route on Carlisle Ave., but the stops are not at this intersection.
- Extended roadway factors:
 - Albert St. (1 blk to the south) on Carlisle is a 4-way Stop.
 - High St. (2 blks to the north) on Carlisle is a 4-way Stop.
 - Summit St. (1 blk to the west) on Kewaunee is an “uncontrolled – T” intersection.
 - The western limits of this section of Kewaunee St.
 - Memorial Drive (2 blks to the east) on Kewaunee St. is a Stop controlled - T intersection.
 - The eastern limits of this section of Kewaunee St.
 - @ Blake (1 blk east), Kewaunee also is “Stop – controlled”.
 - Kewaunee St is 3 blocks long, and stops every block.

Traffic Analysis

- Average Daily Traffic: (from tube counts 4/25 – 5/1/18)
 - Kewaunee Street – ADT 199
 - Carlisle Ave. – ADT 2450
- Pedestrian Counts: were not conducted – in several visits no substantial volumes noticed.
- Accident Study 2013-current Findings
 - 3 total accidents: 2 Injuries 0 Deaths
 - Of the two Injuries reported, all were from the same accident and were listed as possible or minor injuries.
 - None of the accidents were correctable. (2-failure to stop/inattentive driving, 1-inattentive driving same direction rear-end)

Four Way Stop Sign Warrants

- At the intersection of two major arterial streets – neither street is classified as an arterial street. (not warranted)
- An Accident Problem – 5+ reported accidents that are correctable. (not warranted)
- Where the following traffic volumes are met:
 - Total Volume > 500 vph for any 8 hours a day. (not warranted)
 - Pedestrian Volume > 200 units per hour for the same 8 hours. (not warranted)
 - Average delay to minor street vehicle traffic > 20 sec. during peak hour. (not warranted)

CONCLUSIONS:

- It is my opinion to leave the intersection “As-Is”. The intersection does not warrant any change in “control”.