



"... meeting community needs ... enhancing quality of life."

DEPARTMENT OF PUBLIC WORKS
Engineering Division – Traffic Section
2625 E. Glendale Avenue
Appleton, WI 54911
TEL (920) 832-5580
FAX (920) 832-5570

To: Municipal Services Committee
From: Michael Hardy, Assistant Traffic Engineer
Date: June 28, 2016
Re: Franklin Street & Outagamie Street - Intersection Control

In response to being flagged in our 2014 City Annual Crash Overview report, the Traffic Section has reviewed the traffic control at the intersection of Franklin Street and Outagamie Street. The crash rate at this intersection is 2.55 crashes per million entering vehicles (based on the 5-year crash history from 2010 to 2014). This crash rate ranks in the top five for yield-controlled intersections across the City. The average citywide crash rate for yield-controlled intersections in 2014 was 0.362.

This intersection is located north of College Avenue and east of Linwood Street. The existing control at this intersection has Outagamie Street yielding to Franklin Street. Both roadways are functionally classified as *Local* at this intersection. The land use in this area is residential.



Aerial Photo, Intersection of Franklin Street & Outagamie Street

The procedure for evaluating *stop* control was applied. Based on City policy, as well as state and federal standards, we consider traffic volumes, crash experience, critical approach speeds, and the functional classification of the roadways when performing a typical intersection control study. Designated *school safe walking routes* are also considered when appropriate.

The City of Appleton policy states that *stop* control *may* be appropriate at a four-legged intersection when:

1. Entering volumes are greater than 3,000 vehicles per day, OR
2. There has been at least one preventable-type crash in the past 12-months, OR
3. The critical approach speed is less than 15 miles per hour, OR
4. If the roadway is intersecting with a roadway which is functionally classified as a *Collector* or *Arterial*.

Historical traffic counts at this intersection revealed estimated volumes of approximately 300 vehicles per day along Outagamie Street, and approximately 300 vehicles per day on Franklin Street. These daily counts do not meet the volume criteria for a stop controlled approach.

The most recent five years of crash experience indicates there were two reportable crashes at this intersection, one in 2013 and the other in 2014. Both would be classified as preventable. Since this analysis used 2014 as the most recent 12-months of crash history, the crash criterion is met.

The *critical approach speed* is the speed that a vehicle may approach the intersection and safely stop if an opposing vehicle is sighted. The critical approach speeds on Outagamie Street for this intersection was measured to be approximately 6 miles per hour on the northbound approach, and 10 miles per hour on the southbound approach, which is due in large part to the close proximity of houses near the intersection corners and large trees in the terraces near the intersection. If *stop* control were implemented, it would create a safer situation.

All intersecting streets are functionally classified as *Local*.

While this intersection does not meet the volume based criteria for *stop* control, it *does* meet the crash and critical approach speed criteria.

Based on this review, stop control is recommended at this intersection.

To accomplish this, the following ordinance action is required:

1. **Create:** "Replace Yield signs with Stop signs on Outagamie Street at Franklin Street."