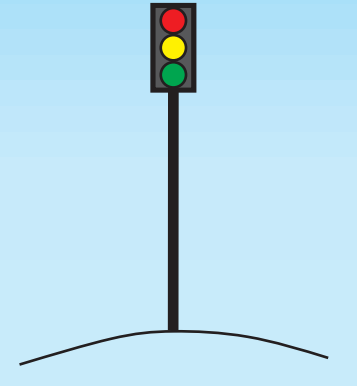# Wisconsin Manual on Uniform Traffic Control Devices (MUTCD) Signal Warrants

Warrant Name	Warrant Requirements	WIS 19 & Westmount Drive Analysis
Warrant 1 Eight Hour Vehicle Volume	Applied under three conditions: (a) Large volumes of intersecting traffic are present (movements that cannot occur simultaneously). (b) Vehicles attempting to enter the major roadway from the minor roadway are seriously delayed from major roadway traffic. (c) A combination of (a) and (b) at lower thresholds.	Intersecting traffic volume thresholds and delays are dependent on roadway geometry, vehicle speed, and community population. **WARRANT NOT MET:** 0/8 hourly traffic volumes meet warrant thresholds.
Warrant 2 Four Hour Vehicle Volume	Applied where the 4-hour vehicular volume of intersecting traffic is the principal reason to consider installing a traffic signal.	Conflicting intersection volumes of 3 busiest intersection legs must exceed WisDOT MUTCD thresholds. **WARRANT NOT MET:** Left/through vehicles may impede right-turning vehicles on Westmount Drive causing delay to right-turning vehicles. The proposed N Westmount Drive lane configuration removes this conflict by clearly marking the lanes, which will lead to less delay for right-turning vehicles.
Warrant 3 Peak Hour Vehicle Volume	Applied at intersections where traffic conditions are described as: (a) For at least 1 hour on an average day, vehicles traveling on the major roadway delay vehicles on the minor roadway. (b) Unusual cases where infrastructure attracts or discharges large numbers of vehicles in a short amount of time.	Intersection volumes for a one hour period of the day must exceed WisDOT MUTCD thresholds. **WARRANT NOT MET:** No one hour period of the day exceeds WisDOT MUTCD thresholds.
Warrant 4 Pedestrian Volume	Applied at locations where large quantities of pedestrians experience significant delay crossing the major roadway.	100 persons per hour must utilize the intersection pedestrian facilities. **WARRANT NOT APPLICABLE:** Existing traffic information does not indicate this volume of pedestrian activity.
Warrant 5 School Crossings	Applied at intersections where school children crossing the major roadway is the principal reason to install a traffic signal.	Existing pedestrian volumes must indicate this intersection is heavily utilized by school children. **WARRANT NOT APPLICABLE:** Currently, this intersection has insufficient pedestrian facilities and low volumes of school children.
Warrant 6 Coordinated Signal System	Applied at intersections which are located within a coordinated signal system corridor and a traffic signal is needed to maintain proper platooning of vehicles.	This intersection must be joining an existing coordinated traffic signal system. **WARRANT NOT APPLICABLE:** There are no adjacent coordinated signal systems.
Warrant 7 Crash Experience	Applied at intersections whose crash severity and frequency are considered elevated and would be reduced by the installation of a traffic signal.	Warrant is applied after other crash remedial measures have been taken and a minimum of 5 crashes occurred within any 12-month span. **WARRANT NOT APPLICABLE:** Within the past 5 years, at most, 3 crashes occurred within a 12-month span.
Warrant 8 Roadway Network	Applied at a common intersection of two or more major routes to encourage concentration and organization of traffic flow. <u>Major Route Criteria:</u> - Serves as principal roadway for through traffic in a roadway system. - Rural/suburban highway navigating in and out, or though a city. - Appears as a major route on an official plan.	For this warrant to be considered, one or more of Warrant 1, Warrant 2, and Warrant 3 must be met and must involve an intersection of two or more major routes. **WARRANT NOT APPLICABLE:** Westmount Drive does not meet criteria of a major route.
Warrant 9 Intersection Near a Grade Crossing	Applied at intersections which are located near a grade crossing, e.g. a railroad crossing.	For this warrant to be met, there must be a railroad or other grade crossing present. **WARRANT NOT APPLICABLE:** No grade crossings are located within the intersection boundaries.