

APPENDIX G

Traffic Signal Warrant Analysis Results



STUDY AND ANALYSIS INFORMATION

Municipality:	ODOT District 8	Traffic Volumes Obtained By:	ODOT District 8
County:	Warren	Analysis Date:	5/19/2023
ODOT Engineering District:	8	Agency/ Company Name Performing Warrant Analysis:	Arcadis
Google map link:	Map		

Analysis Information

Data Collection Date:	2/23/2023
Day of the Week:	Thursday

Is the intersection in a built-up area of an isolated community of <10,000 population? Yes

Existing Traffic Signal at intersection: No

Total Number of Approaches at Intersection: 4

Major Street Information

Major Street Name and Route Number: US 42

Major Street Approach Direction: N-Bound
S-Bound

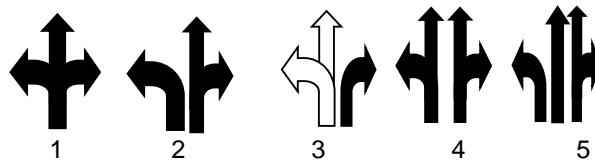
Number of Thru Lanes on Each Major Street Approach: 1 LANE(S)

Speed Limit or 85th Percentile Speed on the Major Street*: 45 MPH
*Unknown assumes below 45 mph

Minor Street Information

Minor Street Name and Route Number: Middletown Road

Minor Street Approach Configuration: 1 E-Bound
1 W-Bound



Number of Thru Lanes on Each Minor Street Approach: 1 LANE(S)

Apply Right Turn Lane Reduction*: Yes

*Right Turn Lane Reduction Shall be used for Warrants 1, 2, & 3 for New ODOT Signals. Please refer to TEM 402-3.2 for clarification and criteria under which Right Turn Reduction is not required.

TRAFFIC SIGNAL WARRANT ANALYSIS FINDINGS

	Warrant		Notes and Comments:
	Applicable?	Satisfied?	
Warrant 1, Eight-Hour Vehicular Volume	Yes	No	
Warrant 2, Four-Hour Vehicular Volume	Yes	No	
Warrant 3, Peak Hour	Yes	No	<div> <div>Signals installed under Warrant 3 should be traffic actuated.</div> <div> <div>Peak Hour</div> <div>4:45 PM</div> <div>5:45 PM</div> </div> </div>
For Warrants 1-3, new ODOT signals must be based off of 100% volume thresholds (TEM 402-3.2)			
Warrant 4, Pedestrian Volume	No		<div> <div>If this warrant is met, and a traffic control signal is justified by an engineering study, the traffic control signal shall be equipped with pedestrian signal heads complying with the provisions set forth in Chapter 4E of the OMUTCD.</div> <div> <div>Peak Hour</div> <div>5:30 PM</div> <div>6:30 PM</div> </div> </div>
Warrant 5, School Crossing	No		N/A
Warrant 6, Coordinated Signal System	No		(Shall not be used as the sole warrant in the analysis)
Warrant 7, Crash Experience	No		If this is the sole warrant, signal must be semi-actuated with control devices which provide proper coordination if installed at an intersection within a coordinated system and normally should be fully traffic actuated if installed at an isolated intersection.
Warrant 8, Roadway Network	No		(Shall not be used as the sole warrant in the analysis)
Warrant 9, Intersection Near a Grade Crossing	No		Figure 4C-9
Multi-Way Stop Warrant	No		May be used as an interim measure if traffic signal warrants are satisfied.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

If no warrants are satisfied, additional options may be considered:

1. An engineering study, performed by a firm prequalified by ODOT for signal design, if approved by the ODOT district, may be used to justify a new signal installation or retention of an existing signal that otherwise does not meet the published warrants. An example of such an instance is a traffic signal in proximity to a railroad crossing that serves to reduce queuing across the tracks.
2. According to TEM 402-2, If the actual turning movement counts fail to satisfy a signal warrant, it may be acceptable to use traffic volumes projected to the second year after project completion. The **Modeling and Forecasting Section** should provide the projected traffic volumes.
3. A pedestrian hybrid beacon may be considered for installation to facilitate pedestrian crossings at a location that does not meet traffic signal warrants (see Chapter 4C of TEM) or at a location that meets traffic signal warrants under Sections 4C.05 and/or 4C.06 but a decision is made to not install a traffic control signal. **Please fill inputs on PHB Score Sheet and submit to ODOT.**

Considerations such as geometrics and lack of sight distance generally have not been accepted in lieu of satisfying signal warrants. These considerations may allow an otherwise unwarranted traffic signal to be retained at **100 percent** local cost. Please review TEM 402-4 for details.

Conclusion:

Notes: