Public Works and Environmental Services Department
TRAFFIC ENGINEERING DIVISION
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SUBJECT: Traffic Engineering Division Technical Policy Memo #TPM-25-003

Traffic Signal Warrant Methodology

EFFECTIVE DATE: December 31, 2025

CONTACT POSITION: Studies Section - Engineering Unit Supervisor

PURPOSE:
This policy establishes uniform procedures for the application of traffic signal warrants as outlined in the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). The intent is to ensure consistency, transparency, and defensibility in the application of traffic signal warrant studies within Broward County.

AUTHORITY:
Manual on Uniform Traffic Control Devices (MUTCD)
Florida State Statute (316.0745; 335.09)

POLICY:
The following criteria are the minimum requirements governing the installation of traffic signals within Broward County:

1. The intersection to be signalized shall be under the jurisdiction of the County, or a permit must be granted by the agency responsible, or a maintenance contract must be executed with the responsible agency.
2. The installation of the traffic signal shall not place the County in violation of the intent of Florida Statute 316.0745.
3. The intersection to be considered for signalization shall satisfy at least one (1) of the applicable signal warrants, as detailed in criteria #4 below, of the latest edition of the MUTCD appropriate for the traffic conditions of the intersection.
4. Default MUTCD warrants applied for each study are Warrant 1, Eight-Hour Vehicular, and Warrant 7, Crash Experience. Other MUTCD warrants beyond Warrants 1 and 7 can only be used if applicable.
5. More restrictive policies and standards such as access management shall be given consideration when reviewing an intersection for possible signalization.
6. MUTCD warrants are guidelines, not mandates. The satisfaction of a warrant does not automatically justify signal installation.
7. Warrant evaluations shall consider safety, operational needs, and engineering judgment.
8. Reduced-volume criteria and conditional applications may be considered when specified herein.

9. The 70 percent volume thresholds or 70 percent factor may not be used for Warrants 1, 2, and 3.
10. The use of 56 percent volume thresholds for the combination of Conditions A and B is not considered by the County.
11. The traffic data are required to be collected when the public schools are in session.
12. Peak-season correction factors (PSCFs) are not considered.
13. Traffic data should be actual demand as collected. Future traffic projections associated with planned developments/redevelopments are not considered.
14. Before a decision is made to install a traffic control signal, consideration shall be given to the implementation of other remedial measures, such as warning signs and flashers, and/or roadway modifications.
15. At an intersection where the minor-street approach is a private roadway or a commercial driveway/entrance, the private development or business shall be responsible for funding the design, any necessary utility relocation, and installation of the traffic signal. The private development or business shall also dedicate and/or convey necessary right-of-way or easement free of cost.

MUTCD Traffic Signal Warrant Application Methodology

The following are the default MUTCD Warrants to be applied in all studies:

Warrant 1, Eight-Hour Vehicular Volume

Both major and minor street volumes shall be considered in accordance with MUTCD criteria; however, reduced volume criteria outlined in the MUTCD shall not be utilized. The Minimum Vehicular Volume, Condition A is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The Interruption of Continuous Traffic, Condition B is intended for application at locations where Condition A is not satisfied and where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

Warrant 7, Crash Experience

Default warrant to be applied in all studies. The Crash Experience signal warrant conditions are intended for applications where the severity and frequency of crashes are the principal reasons to consider installing a traffic control signal. The conditions for this warrant are detailed in Section 4C.08 of the MUTCD.

MUTCD Warrants that may be considered on a case-by-case basis, as justified, include the following:

Warrant 2, Four-Hour Vehicular Volume

The Four-Hour Vehicular Volume signal warrant is intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The warrant conditions are detailed in Section 4C.03 of the MUTCD.

Warrant 3, Peak Hour

The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor street traffic suffers undue delay when entering or crossing the major street. This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities attracting or discharging large numbers of vehicles over a short time. The warrant conditions are detailed in Section 4C.04 of the MUTCD.

Warrant 4, Pedestrian Volume

For the consideration of Pedestrian Signals and midblock crossing, see Technical Memo Uncontrolled Crossing Methodology TPM-25-001 under BCTED Publications.

Warrant 5, School Crossing

The School Crossing signal warrant is intended for application where the fact that school children cross the major street is the principal reason to consider installing a traffic control signal. The warrant conditions are detailed in Section 4C.06 of the MUTCD.

Warrant 6 (Coordinated Signal System) and Warrant 8 (Roadway Network)

Shall not be analyzed nor applied.

Warrant 9, Intersection Near a Grade Crossing

This signal warrant is intended for intersections where a grade crossing exists on an intersection approach controlled by a STOP or YIELD sign and none of the other eight traffic signal warrants are met. This signal warrant should only be applied after evaluating other alternatives and determining that the alternatives do not address safety concerns related to the grade crossing. The conditions for this warrant are detailed in Section 4C.10 of the MUTCD.

Criteria for Minor Street Right-Turns

Right Turn Treatment

1. Exclusive right-turn lanes are present.
    a. Right turns from the minor street shall not be included in the analysis.
    b. Exception: If a study documents average delay ≥ 35 seconds for minor street right turns, then 50 percent of the right-turn volume may be added to the minor street left turn or through movement totals.
2. Shared right-turn lanes with through and/or left turn lanes.
    a. Study shall document the number of right turns for all the hours warrants are assessed:
        - The analysis should be conducted in both scenarios, removal of the right turns and inclusion of the right turns.
    b. Shall confirm that an exclusive right-turn lane can or cannot be added:
        - If the right-of-way is available and an exclusive right turn lane can be accommodated 100 percent right turns shall be excluded from the analysis.

DOCUMENTATION

Each warrant analysis shall document:

1. Any study submitted to the Broward County Traffic Engineering Division (BCTED) shall include a BCTED approved methodology.
2. Evaluation of default MUTCD warrants: Warrant 1, Eight-Hour Vehicular Volume and Warrant 7, Crash Experience.
3. Evaluation of other MUTCD warrants, as applicable per this policy and as documented and approved by BCTED in the methodology.
4. Whether reduced criteria were applied and justification.
5. Traffic Data Collection: peak turning movement counts, and at minimum 24-hour daily intersection approach traffic counts.
6. Video analytics for pedestrian related data.
7. Document crashes for the most recent 3-year time period and provide a crash diagram:
   a. Document types of crashes.
   b. Document the dates and times of the crashes and severity of the crashes.
   c. Include short form/long crash reports in an appendix.
8. Treatment of right turns.
9. Engineering judgment and recommendations must be clearly noted.

APPROVAL:

Division Director: Rasem Awwad Digitally signed by Rasem Awwad Date: 2025.12.31 15:07:50 -05'00' _____ Date: 12/31/25 _____