Traffic Signal Design Manual

ORIGINATOR Director, Bureau of Highway Operations		1-1-1
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SUBJECT 1	General	

The guidance supplied by this text, *Traffic Signal Design Manual*, is based on established practices of the Wisconsin Department of Transportation and is supplemented by research. It is applicable to all types of new traffic signal installations and revisions. This document does not describe all possible situations; rather, it is intended to promote sound engineering and uniformity in the design process and operational aspects of traffic signals on the STH system in the State of Wisconsin. This document does not constitute a legal standard, specification, or regulation. Updates to this manual *may* occur when there is a sufficient amount of content or policies that need to be published. Contributions of ideas, suggestions for changes, new concepts, and entire drafts of subjects, etc, are welcome and should be addressed to the Regional Traffic Signal Engineers or the Bureau of Highway Operations Traffic Signal Engineer.

Much of the information presented in this manual represents the design guidelines of the Wisconsin Department of Transportation. When state-maintained signals are warranted, then Regional Traffic Engineers, Technicians, Electricians, etc. **shall** be contacted prior to the design stage. The signal plan **shall** be submitted to the Regional Traffic Engineer for final review and approval.

In cases where signals are installed on connecting highway, WisDOT **shall** provide final approval for the installation of signals (DT1199) and provide cursory plan review for *WisMUTCD* compliance. However, the ultimate maintaining authority **shall** be responsible for the final design and approval.

In cases where the signals are installed on the local highway system (i.e. municipality, county), yet is installed through a state administered project on the local system, Regional Traffic Engineers *should* provide a cursory plan review for *WisMUTCD* compliance. However, the ultimate maintaining authority **shall** be responsible for the final design and approval.

In addition to these design guidelines, this manual makes use of other documents as sources of guidance. These references include:

- *Facilities Development Manual (FDM)*, Wisconsin Department of Transportation (WisDOT)
- *Traffic Engineering Operation & Safety Manual (TEOpS)*, WisDOT
- *Wisconsin Administrative Code,* Chapter Comm. 16, *Wisconsin State Electrical Code (WEC)*, DOC
- *Wisconsin Manual of Uniform Traffic Control Devices* (WisMUTCD),* WisDOT
- *Wisconsin Standard Specifications for Road and Bridge Construction*, WisDOT
- Americans with Disabilities Act (ADA) of 1990 (42 U.S.C. 12181)
- *Manual of Traffic Engineering Studies (MTES)*, ITE
- *Manual of Traffic Signal Design (MTSD)*, Institute of Transportation Engineers (ITE)
- *National Electrical Code (NEC)*, National Fire Protection Agency (NFPA)
- "Project Engineer's Guide to Electrical Installation," WisDOT
- *Signalized Intersections: Informational Guide*, FHWA
- *Traffic Signal Manual of Installation and Maintenance Procedures (TSMI&MP)*, International Municipal Signal Association (IMSA)
- *Traffic Detector Handbook (TDH)*, Federal Highway Administration (FHWA)
- *Transportation and Traffic Engineering Handbook (T&TEH)*, ITE
- *Utilities Accommodation Manual (UAM)*, WisDOT