REFERENCE DOCUMENTS

The following is a listing of reference manuals, guides, codes or other documents that are related to the requirements shown and stated within the Traffic Standard Drawings, the Standard Specifications for Road and Bridge Construction, related Stored Specifications and Project Special Provisions, and plans. All contractors, subcontractors, suppliers and manufacturers (owners and employees) shall have direct knowledge and experience with the content and intent of these documents as it pertains to Arizona Department of Transportation (ADOT or the Department) projects that involve traffic signals and lighting. This includes having the necessary and proper equipment to do the work according to these references.

The related reference documents and the versions known or required to related to the content presented are as follows:

The Federal Highway Administration's (FHWA) current Edition of the Manual on Uniform Traffic Control Devices (MUTCD) after formal adopted by the Department per Arizona Supplement to the Manual on Uniform Traffic Control Devices (MUTCD). The current formal adoption is the 2009 Edition.

The National Fire Protection Association's (NFPA) National Electric Code (NEC) and National Electrical Code Handbook. The current version is 2008.

The Institute of Electrical and Electronics Engineers (IEEE) National Electrical Safety Code (NESC). The current version is 2007.

The Western Underground Committee (WUC) Guide Version 3.6/02/0588.

The Society of Cable Telecommunications Engineers (SCTE) Specification for Underground Enclosure Integrity (ANSI/SCTE 77). The current version is 2007.

The Institute of Electrical and Electronic Engineers (IEEE) Recommended Practice for Grounding of Industrial and Commercial Power Systems, IEEE Standard 142.

The National Electrical Manufacturers Association's (NEMA) Standards Publication Number (No.) TS 1 1989 Traffic Control Systems, previous version of TS 2 Traffic Controller Assemblies and TS 2 2003 Traffic Controller Assemblies with NTCIP Requirements.

The American Welding Society (AWS) Structural Welding Code (Latest edition)

The American Association of State Highway and Transportation Officials (AASHTO) Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 6th Edition (2013), including the 2015, 2019, and 2020 interim revisions.

The Electric Utility Service Equipment Requirements Committee (EUSERC) EUSERC Requirements Manual. Always current version.

The following Institute of Transportation Engineers (ITE) Equipment and Materials Standards apply:

- Chapter 2 Vehicle Traffic Control Signal Heads (VTCSH) for housings, backplates and visors. The current version is 1985.
- Vehicle Traffic Control Signal Heads - Light Emitting Diode (LED) Circular Signal Supplement. The current version is 2005.
- Vehicle Traffic Control Signal Heads - Light Emitting Diode (LED) Vehicle Arrow Traffic Signal Supplement. The current version is 2008.
- Pedestrian Traffic Control Signal Indications - Light Emitting Diode (LED) Pedestrian Traffic Signal Modules. The current version is 2004.

All contractors involved in the construction and maintenance of traffic signals and lighting system shall develop the highest possible understanding of the NEC, the NESC, and related OSHA requirements to keep the public, workers and themselves safe.

The reference of these documents here is not met to be all encompassing requirement. Rather it has three basic meanings:

The first meaning is to establish the basic context of the proposed work to be done as it specify relates to traffic signals and lighting.

Secondly, it means that any drawing which includes a specific reference to that document shall meet those requirements within the context of what is contained on the drawing unless specifically stated otherwise in the project special provisions and/or plans. It is further required that the project plans specifically acknowledge that the applicable requirement being changed or modified in some fashion.

The third meaning relates to implied reference within the context of these drawings; specifically, if the content of the drawing herein implies that a referenced document does apply, then it shall apply unless stated otherwise.

If the contractor has any questions and/or conflicts with regards to the context, direct reference and/or implied requirements, the contractor shall submit a detailed written statement to the Engineer seeking clarification.

If the referenced documents are changed and/or modified in any way during the course of a project, it is the responsibility of the contractor, supplier and manufacturer to carefully study these changes to determine if such changes or modifications might impact the materials or equipment being supplied or how it might be installed and operated in the field. The contractor shall inform the Department if any changes need to be made to considered. The Department shall have the right to continue to order and receive the older version of the specified equipment for the life of a contract, unless justified otherwise.

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STANDARDS ENGINEER A. ALZUBI RECOMMENDED FOR APPROVAL	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION **TRAFFIC SIGNAL & LIGHTING** **STANDARD DRAWING**
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