What Target Audience Should the MUTCD be Written For?

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A basic rule of effective written communication is to write to the intended audience. A writer must know the abilities of the target audience in order to understand how to present the information in the document. This is particularly true of an engineering document. There are two audience groups of concern with respect to the MUTCD\(^1\), the audience to which the content is directed and the group of users of the MUTCD, which is larger than the target audience. It is appropriate to first start with the latter of these two groups.

The MUTCD is used by a wide range of individuals for a range of different purposes. In part, this is due to the fact that the MUTCD is freely available, which makes it more accessible to non-engineering audiences than most engineering standards or engineering documents. Although this is the case, the wider availability of the document does not change its intended purpose or the target audience. The various MUTCD user groups and the manner in which they use the MUTCD are listed below.

- Transportation/traffic engineers (professional engineers) with appropriate experience and expertise in traffic engineering who use the MUTCD for decisions regarding the design, selection, application, placement, operation, maintenance, and removal of traffic control devices (TCDs).
- Other types of professional engineers who use the MUTCD as a reference when performing engineering activities that do not relate to TCDs. This group of professional engineers does not have appropriate experience and expertise in traffic engineering to make engineering decisions regarding TCDs.
- Engineers-in-training and engineering technicians working under the supervision of a licensed engineer who use the MUTCD for activities related to the design, selection, application, placement, operation, maintenance, and removal of (TCDs).
- Field (maintenance) personnel and contractors who use the MUTCD for instructions on where or how to install or place TCDs.
- Law enforcement personnel who must use TCDs to control traffic around incidents and in coordination with temporary traffic control (such as work zones and special events).
- Planners, architects, landscape architects, and developers who use the MUTCD to guide decision-making and planning activities related to site development and related actions.
- Elected officials and administrators who use the MUTCD to make policy related decisions regarding funding TCD activities.
- Lawyers who use the MUTCD for activities related to tort claims (defense and plaintiff).
- Road users and related groups who use the MUTCD to gain a better understanding of TCD principles and how TCDs can be used to improve safety and/or mobility for a specific group of road users.

\(^1\) Within the context of the MUTCD, this white paper uses the MUTCD as it currently exists. If the current MUTCD document were to be split into multiple documents, it would be necessary to define the target audience for each document.
To define the target audience for the MUTCD, it is necessary to evaluate the various activities associated with the use of the MUTCD. One of the key aspects of determining the target audience is defining engineering activities. The following definitions are taken from the National Council of Examiners for Engineering and Surveying (NCEES) Model Law. While the engineering laws may vary in individual states, these definitions represent the national recommendation for the indicated terms.

- **Engineer** – The term “Engineer,” within the intent of this Act, shall mean an individual who is qualified to practice engineering by reason of special knowledge and use of the mathematical, physical, and engineering sciences and the principles and methods of engineering analysis and design, acquired by engineering education and engineering experience.

- **Professional Engineer** – The term “Professional Engineer,” as used in this Act, shall mean an individual who has been duly licensed as a professional engineer by the board. The board may designate a professional engineer, on the basis of education, experience, and examination, as being licensed in a specific discipline or branch of engineering signifying the area in which the engineer has demonstrated competence.

- **Practice of Engineering** – The term “Practice of Engineering,” as used in this Act, shall mean any service or creative work, the adequate performance of which requires engineering education, training, and experience in the application of special knowledge of the mathematical, physical, and engineering sciences to such services or creative work as consultation, investigation, expert technical testimony, evaluation, planning, design and design coordination of engineering works and systems, planning the use of land, air, and water, teaching of advanced engineering subjects, performing engineering surveys and studies, and the review and/or management of construction for the purpose of monitoring and/or ensuring compliance with drawings and specifications; any of which embraces such services or work, either public or private, in connection with any utilities, structures, buildings, machines, equipment, processes, work systems, projects, communication systems, transportation systems, and industrial or consumer products, or equipment of a control systems, communications, mechanical, electrical, hydraulic, pneumatic, chemical, environmental, or thermal nature, insofar as they involve safeguarding life, health, or property, and including such other professional services as may be necessary to the planning, progress, and completion of any engineering services.

  - Design coordination includes the review and coordination of those technical submissions prepared by others, including as appropriate and without limitation, consulting engineers, architects, landscape architects, surveyors, and other professionals working under the direction of the engineer.

  - Engineering surveys include all survey activities required to support the sound conception, planning, design, construction, maintenance, and operation of engineered projects, but exclude the surveying of real property for the establishment of land boundaries, rights-of-way, easements, and the dependent or independent surveys or resurveys of the public land survey system.

  - A person shall be construed to practice or offer to practice engineering, within the meaning and intent of this Act, who practices any discipline or branch of the

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profession of engineering; or who, by verbal claim, sign, advertisement, letterhead, card, or in any other way represents the person to be a professional engineer, or through the use of some other title implies that the individual is a professional engineer or that the person is licensed or authorized under this Act; or who holds the person out as able to perform, or who does perform any engineering service or work or any other service designated by the practitioner which is recognized as engineering.

Based on these definitions, many decisions regarding the selection, application, operation, maintenance, and removal of TCDs are engineering activities and require that the person making such decisions be a professional engineer or be working under the supervision of a professional engineer. Any aspect TCD use that would be included in a plan set is also an engineering activity that must be performed by a professional engineer or under the supervision of such. Some aspects of traffic control device activities can be executed by non-engineers if one or more of the following conditions apply:

- The activity is a routine operation or maintenance activity that is following specific procedures defined by the agency or the MUTCD
- The activity requires no exercise of judgment for its execution – it precisely follows the MUTCD and/or agency policy

Given the information described above, for the purposes of the MUTCD strategic planning effort, the target audience of MUTCD users is described below.

The target audience of MUTCD users is professional traffic engineers with the appropriate level of experience and expertise related to traffic control devices. MUTCD content should be addressed to this audience and the content should assume the knowledge base associated with this audience.