What is the Purpose of the MUTCD?

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As described in the Code of Federal Regulations1, “The MUTCD is the national standard for all traffic control devices installed on any street, highway, or bicycle trail open to public travel.” But what does it mean to be a “national standard.” When initially published in 1935, the MUTCD was intended primarily to provide uniformity in the meaning and appearance of traffic control devices (TCDs). This was an important advancement, as at the time, there was great variation in the appearance and meaning of TCDs. The current MUTCD has expanded the concept of uniformity to include application/selection, installation, operation, maintenance, and safety aspects of TCDs. Although defined as a national standard, the current MUTCD includes not only standard statements (requirements), but also guidance (recommendations), option (options), and support (background) statements.

There is little doubt to the value of uniformity with respect to TCDs. Section 1A.06 of the 2009 MUTCD states that:

> “Uniformity of devices simplifies the task of the road user because it aids in recognition and understanding, thereby reducing perception/reaction time. Uniformity assists road users, law enforcement officers, and traffic courts by giving everyone the same interpretation. Uniformity assists public highway officials through efficiency in manufacture, installation, maintenance, and administration. Uniformity means treating similar situations in a similar way. The use of uniform traffic control devices does not, in itself, constitute uniformity. A standard device used where it is not appropriate is as objectionable as a non-standard device; in fact, this might be worse, because such misuse might result in disrespect at those locations where the device is needed and appropriate.”

From this statement, it is clear that uniformity should be an objective that extends throughout all aspects of TCD use. The key question is the relationship between the national standard definition of the MUTCD and how that relates to uniformity. The answer to this question defines the basic purpose of the MUTCD.

The key activities or aspects of TCDs are: meaning, appearance (design), application (selection), installation (infrastructure and location/placement), operation, maintenance, and removal. Uniformity in meaning and appearance are inviolate. There can be no variation in the meaning or appearance of a TCD. Some aspects of operation may also need to be uniform, without the potential for variation. But there can be variations in the other aspects of TCDs, including application, installation, some aspects of operation, maintenance, and removal. These are the activities where engineering judgment is used to make the optimal decision for a specific situation. In many cases, site specific conditions mandate the need for the use of engineering judgment in order to apply a TCD where it provides the optimum benefit to road users. Examples

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include location/placement, use of secondary or supplemental devices and combinations of
devices used to prepare a road user for the message to be displayed by the primary device.

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

As the national standard for all traffic control devices installed on any street, highway,
or bicycle trail open to public travel, the purpose of the MUTCD is to establish national
uniformity for the meaning and appearance of traffic control devices from which there can
be no variation. In this context, “meaning” is the definition of a device (the message it is
intended to convey and the expected response from the road user) and “appearance” is how
color, shape, symbols, and words are combined to represent what the devices looks like to
the road user.

Implicit in this definition of the purpose is that other aspects of TCDs allow some flexibility in
the decision making process. As such, they should not be included as part of the national
standard. This leads toward dividing the current MUTCD into at least two documents:

- The MUTCD that defines the national standard for meaning and appearance of TCDs.
- A companion document (or multiple documents) that address aspects of TCDs other
  than meaning and appearance. Some areas which may be included are:
  - Application information regarding the device,
  - “Best Practices” regarding application of the device,
  - Variations in the location or placement of the device,
  - Technical support regarding operation of active devices,
  - Drawings or photographs depicting the device in a variety of applications, and/or
  - Links to other support information regarding the device.

An issue of potential controversy is whether locational aspects of TCD placement should be
included as part of the “national standard,” or the official MUTCD. There is merit to the
statement that a standard device placed in a non-expected location has little value, so the location
of devices should be standardized. But there is also merit in the statement that TCD location has
a range of acceptable practice as opposed to a standardized specific location. The challenge in
presenting TCD location and placement as a standard are the variations in location and
placement that may be appropriate based on a variety of circumstances. For the initial draft of
this white paper, TCD location and placement is not included as part of the national standard.
Comments are encouraged on whether location/placement should be included in the official
“national standard” for TCDs. Similar concerns are associated with other aspects of TCDs such
as application, operation, maintenance, and removal.

White paper #5 addresses the potential organization of the MUTCD. The purpose of the
MUTCD and its organizational structure are closely aligned and may be the most critical of the
issues to be addressed in the strategic planning process.