



U.S. Department
of Transportation
**Federal Highway
Administration**

1200 New Jersey Ave., SE
Washington, D.C. 20590

FEB 23 2018

In Reply Refer To:
HOTO-1

Robert R. Limoges, P.E.
Director, Office of Traffic Safety & Mobility
New York State DOT
50 Wolf Road
Albany, NY 12232

Dear Mr. Limoges:

Thank you for your February 16 letter requesting an official interpretation of the meaning of the required flash rate for beacons as provided in Paragraph 3 of Section 4L.01 of the 2009 Edition of the *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD).

You were prompted to request this official interpretation because your agency had become aware that other agencies across the country have been exploring using a flash pattern that uses two quarter-second flashes in the first second and then one full-second flash in the next two seconds.

It is the Federal Highway Administration's (FHWA's) official interpretation that the flash pattern described in your letter and in the previous paragraph of this reply does not comply with the provisions of Paragraph 3 of Section 4L.01. The described flash pattern is a combination of two different flash rates, neither of which complies with the MUTCD. The flash rate during the first second features short flashes that would result in 120 flashes per minute, which is not within the required rate of 50 to 60 flashes per minute. The flash rate during the next two seconds features long flashes that would result in 30 flashes per minute, which also is not within the required rate of 50 to 60 flashes per minute. In simple terms, a "flash" as provided in the MUTCD is a period of illumination, at a constant intensity, that is followed by a period of darkness. Similarly, a "flash rate" is a constant value, rather than a variable one that would be a combination of more than one rate.

It is also important to note that Definition 73 in Section 1A.13 defines a "flasher" as a device that is used to turn highway traffic signal indications on and off at a repetitive rate of approximately once per second. Using a combination of flash rates that turn highway traffic signal indications on and off at a repetitive rate of approximately twice per second and at a repetitive rate of approximately once per two seconds would not be consistent with this definition.

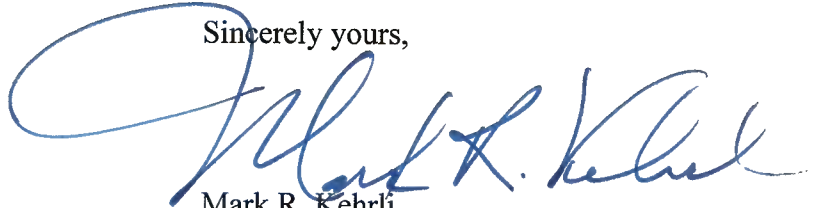
In addition to the flash rate for beacons as provided in Paragraph 3 of Section 4L.01, this same official interpretation would also apply to the flash rate for traffic control signals as provided in Paragraph 1 of Section 4D.28 of the MUTCD.

You asked whether the FHWA would be willing to consider experimentation with alternative flash rates for warning beacons. Any requests for experimentation would be evaluated on their merits and would be addressed separately from this official ruling. The criteria and procedures for experimentation are described in Section 1A.10 of the MUTCD.

For recordkeeping purposes, we have assigned this interpretation the following official ruling number and title: "4(09)-64 (I) – Flash Rate for Traffic Control Signals and Beacons." Please refer to this number and title in any future correspondence regarding this topic.

Thank you for your interest in improving the clarity of the provisions contained in the MUTCD.

Sincerely yours,

A handwritten signature in blue ink, appearing to read "Mark R. Kehrl", with a large, stylized initial "M" and "K".

Mark R. Kehrl
Director, Office of Transportation
Operations