

UNIT 5 - OBJECT MARKINGS AND DELINEATION

ASSIGNMENT

Read and study parts IIIC and IIID of the MUTCD and 1261.01 thru 1265.01 of the Roadway Standard Drawings. Answer review questions. Take and pass the written test.

KEY POINTS

Object markers are used to mark obstructions within or adjacent to the roadway.

Approved object markers consist of three types, which are shown on page 3C-3 of the 1988 edition of the MUTCD.

When used for marking objects in the roadway or eight feet or less from the shoulder or curb, the mounting height to the bottom of the object marker should ***normally be four feet*** above the surface of the nearest traffic lane. In North Carolina, a W23-10 delineator is installed on both sides of the approach ends of bridges with restricted widths, and they are normally placed ***two feet*** above the roadway but may be placed as high as ***four feet*** above the roadway to prevent damage and dirt accumulation.

Obstructions within the roadway shall be marked with a Type 1 or a Type 3 object marker while obstructions adjacent to the roadway should be marked with a Type 2 or a Type 3 object marker.

According to the Roadway Standard Drawings, Type 1 object markers typically mark objects within the roadway, such as sign supports or raised islands. Type 3 object markers typically mark bridge piers, abutments and rails, culvert head walls, narrow shoulder drop-offs, or other hazardous roadside conditions.

Road delineators are light-retroreflecting devices mounted at the side of the roadway, in series, to indicate the roadway alignment.

Road delineators aid nighttime driving and are considered as guidance devices rather than warning devices.

One advantage of road delineators is that they remain visible when the roadway is wet or snow-covered.

The color of delineators, in all cases, shall conform to the color of the edge lines.

Single delineators shall be provided on the right side of expressway and freeway roadways and on at least one side of interchange ramps.

Red delineators may be used on the reverse side of any delineator whenever it would be viewed by a driver traveling in the wrong direction on that particular ramp or roadway.

According to the Roadway Standard Drawings, roadside delineators are not required when any of the following conditions occur:

- 1) Where they fall behind guardrail.
- 2) Where adequate fixed source lighting is provided.
- 3) On main line tangent roadways, including curves of zero degrees 30 minutes or less, where reflective pavement markers are provided.

Delineators shall be mounted on suitable supports so that the top of the reflecting head is about *four feet* above the near roadway edge.

Delineators may be placed from *two to eight feet* outside the outer shoulder edge, or in line with the roadside barrier that is eight feet or less outside the outer shoulder edge.

Normally, delineators should be spaced from 200 feet to 528 feet.

According to the Roadway Standard Drawings, guardrail end delineation is required on all approach and trailing end guardrail buffer end sections, including temporary and permanent installations.

Yellow reflective sheeting eight inches by three feet will be used for guardrail end delineation. High Intensity sheeting is required along interstate and other fully controlled facilities; whereas, engineering grade sheeting can be used along all other types of roads.

REVIEW QUESTIONS

- 1) What are object markers used for?
- 2) When used for marking objects in the roadway or eight feet or less from the shoulder or curb, the mounting height to the bottom of the object marker should normally be _____ feet above the surface of the nearest traffic lane.
- 3) What type of object marker ***shall be used*** to mark objects in the roadway?
- 4) For Type 3 object markers, the stripes slope downward at 45 degrees toward the side of obstruction which traffic is to pass.

TRUE FALSE

- 5) What is the minimum size of a Type 1 object marker or an *end of the road* marker?
_____ inches by _____ inches
- 6) Define road delineators as used by the MUTCD.
- 7) According to the Roadway Standard Drawings, list three conditions that do not require the use of roadside delineators.
- 8) What is the minimum mounting height of a roadside delineator?
_____ feet
- 9) What is the normal spacing of a roadside delineator?
_____ feet to _____ feet

10) Is guardrail delineation required?

YES

NO

11) What size u-channel post is typically used for post mounted roadside delineators?

_____ lb/ft steel, galvanized

12) What is the minimum spacing between holes on the u-channel posts?

_____ inches

13) Which standard drawing gives information about proper spacing requirements for roadside delineators?

Strd Drgw # _____

ANSWERS TO REVIEW QUESTIONS

- 1) To mark obstructions within or adjacent to the roadway. (*Page 3C-1 of the MUTCD*)
- 2) Four feet (*Page 3C-1 of the MUTCD*)
- 3) Type 1 or Type 3 (*Page 3C-1 of the MUTCD*)
- 4) True (*Page 3C-2 of the MUTCD*)
- 5) 18 inches by 18 inches (*Page 3C-2 of the MUTCD*)
- 6) Road delineators are light-retroreflecting devices mounted at the side of the roadway, in series, to indicate the roadway alignment. (*Page 3D-1 of the MUTCD*)
- 7) Where they fall behind guardrail, where adequate fixed source lighting is provided, or on mainline tangent roadways, including curves of 0°30' or less, where reflective pavement markers are provided. (*1263.03, sheet 1 of 1 of the Roadway Standard Drawings*)
- 8) about four feet above the near roadway edge. (*Page 3D-3 of the MUTCD*)
- 9) 200 feet to 528 feet (*Page 3D-3 of the MUTCD*)
- 10) Yes (*1262.01, sheet 1 of 1 of the Roadway Standard Drawings*)
- 11) 1.12 lb/ft steel, galvanized (*1263.01, sheet 1 of 1 of the Roadway Standard Drawings*)
- 12) One inch (*1263.01, sheet 1 of 1 of the Roadway Standard Drawings*)
- 13) 1263.03, sheet 1 of 1 (*Roadway Standard Drawings*)