OBJECT MARKERS AND DELINEATORS –EXPRESS LANE MARKERS.
(REV 11-16-18)

ARTICLE 993-2 is expanded by the following new Subarticle:

993-2.7 Express Lane Markers:

993-2.7.1 Dimensions: The marker shall have a minimum diameter of 3 inches. The height of the marker above the pavement surface shall be 36 inches. At specific locations shown in the Plans, the height of the marker above the pavement surface shall be 24 inches.

993-2.7.2 Post Base: Markers shall be installed as tested and in accordance with the manufacturers recommendations.

993-2.7.3 Color: The color of the posts shall be as specified in the Plans. For white posts, the yellowness index shall not exceed 12 when tested in accordance with ASTM D1925 or ASTM E313. The daylight 45 degree, 0 degree luminous directional reflectance shall be a minimum of 70 when tested in accordance with ASTM E1347 or ASTM E1164.

993-2.7.4 Retroreflective Sheeting: The retroreflective sheeting shall be white abrasion resistant Type V and meet the requirements of Section 994. Each sheet of retroreflective sheeting shall be a single wrap around the post. The total minimum projected area shall be 30 square inches in any direction. The top of sheeting shall be 1-1/2 inches plus or minus 1/2 inch below the top of the post.

993-2.7.5 Impact Performance: To resist an impact of a test vehicle, the post must restore to within 15 degrees of vertical in any direction, and not have a crack or tear through more than 50% of its cross section. List/Lean must be measured from the point the post protrudes from the base to the top edge of the post. All impacts are to be performed at 70 mph with an ambient temperature greater than or equal to 65 degrees Fahrenheit.

For acceptance purposes, the markers, installed according to manufacturer's recommendations, must be capable of resisting an average of 45 bumper impacts per sample. In addition, the post must be capable resisting an average of 150 tire impacts per sample.

Impact testing must be performed in accordance with NTPEP Evaluation of Temporary Traffic Control Devices: Flexible Delineators, for the category of High Speed Applications. Testing must be performed by a facility that is listed on the Laboratories Accredited to Crash Test Roadside Safety Hardware (http://www.tf13.org/Subcommittee_7_Test_Facilities.php). Submit independent test lab data to the Engineer and to the State Roadway Design Engineer for product approval.