## <u>Reminder for Use of Type 2 Object Markers</u> <u>And Portable Vertical Panels</u>

The purpose of this reminder is to discuss the distinct difference between the use of Type 2 Object Markers and Portable Vertical Panels. This discussion is adopted from the Guidance on the Use of Type 2 Object Markers and Portable Vertical Panels put in place August 15, 2005. Additional guidance can be found at <a href="http://www.mdt.mt.gov/business/contracting/docs/memos/05/guidance\_type2.pdf">http://www.mdt.mt.gov/business/contracting/docs/memos/05/guidance\_type2.pdf</a>. The CES Bureau recognizes that the MUTCD approves various uses for the Portable Vertical panels; however, in the spirit of uniformity and driver expectancy, it has been decided to be specific in the use of these two items.

Portable Vertical Panels are to be used for channelizing devices only and according to the 2003 MUTCD and Detailed drawing #618-00. Portable Vertical Panels are not to be used to mark an object, a roadside condition adjacent to the roadway, or delineate roadside constrictions of the clear zone. Portable Vertical Panels are measured under Group 19 in the Traffic Control Rate Schedule.

According to the 2003 MUTCD and Detailed Drawing #618-00, Type 2 Object Markers are to be used to mark an object, a roadside condition adjacent to the roadway, or delineate roadside constrictions of the clear zone such as drop offs, obstacles, abrupt changes in roadway alignment, etc. Type 2 Object markers are not to be used for channelizing devices. Standard Specification Section 618.03.8, Traffic Control at Drop-Off Areas, discusses placement and spacing criteria. Type 2 Object Markers are measured under Group 18 in the Traffic Control Rate Schedule.

The following is an example calculating the device and spacing under Standard Specification Section 618.03.8, Traffic Control at Drop-Off Areas:

Spacing Factor in Feet =  $A \times C \times W / S \times D$ 

Where: A = Average Daily Traffic Adjustment according to Table 618-3

- C = Degree of Curvature Factor according to Table 618-2
- W = Recoverable width from the drop-off to the far edge of the adjacent traffic lanes(s) with the same direction of traffic.
- S = Posted Speed in MPH
- D = Average drop-off depth in inches.
- Example: ADT = 24,000, therefore A = 0.90; tangent section therefore C = 5800; W = 15 feet (12 foot lane, 1 foot shoulder, 2 foot to drop-off); S = 45

## MPH; and D = 36".

Factor = 0.90 x 5800 x 15 / 45 x 36 = 48.33.

According to Table 618-4, Traffic Control Device Based on Spacing Factor, using factor 40 feet to 360 feet, use Type 2 Object Marker spaced at 50 feet.

Jim Wingerter Construction Engineering Services Bureau