



# Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

## BDE PROCEDURE MEMORANDUM

**NUMBER:** 20-02

**SUBJECT:** BDE Manual Revision – Chapters 38 and 64

**DATE:** February 14, 2020

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Chapter 38 of the BDE Manual has been revised to provide clarification on several design elements and procedures, and to correct an issue identified within an example problem. Rounding of guardrail quantities has been modified in Chapter 64 for consistency with Chapter 38. Please see these chapters of the BDE Manual on-line to view the revisions.

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### Background

Section 38-6.01 clarifies the procedures to be used for determining guardrail locations and for reporting guardrail quantities in contract plans. The text now states that the examples provided in the section are intended to illustrate location procedures and quantity calculation techniques, but that actual MASH devices are not reflected in the calculations. Reference to Chapter 64 has been added for guardrail quantity specifications.

Also in this section, unique considerations related to shielding within divided highway medians are briefly discussed.

Section 38-6.01(b) now provides a reminder that flare rates for guardrail terminals must not exceed the maximum allowable rates as determined through crash testing. The requirement to specify no more than the maximum allowable flare rate for traffic barrier terminals has also been added in Section 38-6.06(a), and notes on this issue have also been added on Figures 38-6.AA to 38-6.CC. Those figures also now show a correct representation of a Traffic Barrier Terminal Type 1.

In Section 38-6.01, Example Problem 4 was corrected to calculate the barrier length of need for opposing side traffic by applying the centerline scale rather than the edge of traveled way scale. Figures 38-6.M and 38-6.N have been revised to be consistent with this revised example problem.

Section 6.03 has been edited to clarify that the typical location of the barrier face at the edge of shoulder will result in the need for a 1:10 or flatter slope in the first four feet beyond the shoulder, in order to properly support the posts. Notes have also been added in Section 38-5.01 to refer to Standard 630001 for grading requirements behind guardrail posts.

**BDE PROCEDURE MEMORANDUM 20-02**

**February 14, 2020**

**Page 2**

Discussion of ways to provide compatibility between Traffic Barrier Terminals (Type 1 or Type 2) and barrier curbs has been added to Section 38-6.05. Alternate design techniques are identified.

Clarification has been added in Section 38-7.03(b) regarding the longitudinal overlap and transverse gap that should typically be used for transitioning from high tension cable to other barrier systems.

In Chapter 64, Figure 64-1.A has been revised to show guardrail quantities rounded to the nearest foot, consistent with the recently-revised procedures in Chapter 38.



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