



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

BDE PROCEDURE MEMORANDUM

NUMBER: 14-13

SUBJECT: BDE Manual Revision – Chapters 49 and 50

DATE: November 17, 2014

Chapter 49 and Chapter 50 of the BDE Manual have been revised to recognize the new types of culvert end sections and traversable pipe grates in the *Highway Standards*. Please see Chapters 49 and 50 of the BDE Manual on-line to view the revisions.

Background

The flared end section headwall design (Standard 542301) is being phased out due to the tendency for erosion around the flared end section, inefficient hydraulic drainage properties of the grate (Standard 542311-03), and the vertical drop-off typical for flared end sections (with or without grates). A parallel wingwall design (Standard 542001) will replace the flared end section.

The parallel wingwall design allows a grate (Standard 542311-04) to be installed for pipe culverts up to 84 inches in diameter with little disruption to the hydraulics and little evidence of erosion around the culvert headwall or wingwalls. Parallel wingwalls and grates are more compatible with traversable front slopes, parallel drainage structures, multi-cell drainage structures, elliptical pipes, pipe arches, and box culverts than flared end sections.

The following revisions were made to Chapters 49 and 50.

Section 49-3.07(e), "Culverts", and Section 50-3.03(a) "Cross Drainage Structures" were revised with new direction for culvert end treatments for cross drainage and parallel drainage structures.

A handwritten signature in black ink, appearing to read "Omer M. Osman". Below the signature, the number "3" and the initials "AAW" are written.

Omer M. Osman, P.E.
Director of Highways
Chief Engineer