



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
DESIGN DIVISION
NASHVILLE, TENNESSEE 37243-0350**

**DESIGN DIVISION DRAINAGE MANUAL
REVISION 07-01**

TO: TDOT Design Division Drainage Manual Users

FROM: Mr. Ali Hangul
CE Manager I

DATE: March 15, 2007

SUBJECT: Revisions to Chapter 6, 7 and 8.

Effective March 15, 2007, the subject chapters of the drainage manual are revised to include the use of HDPE Pipe as a drainage structure. Chapter 8 is revised to include the requirements for detention pond criteria.

Attachment

LOCATIONS WHERE UPDATES HAVE BEEN MADE TO THE TDOT DESIGN DIVISION DRAINAGE MANUAL:

CHAPTER 6

CHANGES MADE TO INCLUDE HDPE PIPE CRITERIA:

- 6.04.1.1.1.4 NON-LINEAR "BROKEN BACK" ALIGNMENTS
- 6.04.1.2 MULTIPLE OPENINGS
- 6.04.3.1.3 END TREATMENTS FOR CULVERTS UNDER PRIVATE DRIVES

Appendix, Table 6A-1
Appendix, Table 6A-3
Appendix, Table 6A-6

OTHER CHANGES:

- 6.01 INTRODUCTION
- 6.03.1 WATERWAY DATA
- 6.04.1.1.1.5 NON-LINEAR ALIGNMENTS FOR VELOCITY CONTROL
- 6.04.2.1 DESIGN FLOOD FLOW RATES
- 6.04.2.2 PIPE SELECTION CRITERIA
- 6.04.2.4.4 ALLOWABLE HEADWATER ELEVATION
- 6.04.3.1.1 END TREATMENTS FOR CULVERTS UNDER MAINLINE
- 6.04.3.4 DEBRIS CONTROL
- 6.05.2 CULVERT SIZING PROCESS
- 6.05.2.2 DETERMINE THE OUTLET CONTROL HEADWATER DEPTH, HW_0
- 6.06 ACCEPTABLE SOFTWARE

Appendix, Table 6A-2
Appendix, Table 6A-4

CHAPTER 7

CHANGES MADE TO INCLUDE HDPE PIPE CRITERIA:

- 7.03.3.4 USE OF LONGITUDINAL DRAINS
- 7.03.4.1 PIPE TYPE AND COVER CRITERIA

OTHER CHANGES:

- 7.03.5.5 PIPE CONNECTIONS TO STRUCTURES
- 7.03.9.2 STORM DRAIN INFORMATION BY PLAN SHEET
- 7.04.5.1 MANNINGS' N-VALUES FOR PIPE MATERIALS

CHAPTER 8

CHANGES MADE TO INCLUDE REQUIREMENTS FOR DETENTION:

- 8.04.1 INTRODUCTION (GUIDELINES AND CRITERIA)
- 8.04.2 HYDROLOGIC AND HYDRAULIC CONSIDERATIONS (New Title)
- 8.04.2.1 EVALUATION CRITERIA (New Section)
- 8.04.2.2 RELEASE RATE AND TIMING (Section Re-Numbered)

CHANGES RELATED TO HDPE PIPE:

- 8.04.6.3.1 MATERIALS
- 8.04.6.3.2 CONSTRUCTION CONSIDERATIONS
- 8.04.6.4.1 ANTI-SEEP COLLARS

OTHER CHANGES:

- 8.01 INTRODUCTION
- 8.02.1 MAINTENANCE NOTE ON PLANS (New Section)
- 8.04.4 GRADING AND DEPTH
- 8.04.4.1 GENERAL RECOMMENDATIONS (GRADING AND DEPTH)
- 8.04.4.3 DETENTION REQUIREMENTS
- 8.04.4.4 RETENTION REQUIREMENTS
- 8.04.5.1 GENERAL CONSIDERATIONS (EMBANKMENTS)
- 8.04.5.3 EMBANKMENT HEIGHT AND FREEBOARD
- 8.04.5.4 TOP WIDTH
- 8.04.5.6 EMBANKMENT SEEPAGE
- 8.04.6.4.2 FILTER AND DRAINAGE DIAPHRAGMS
- 8.04.6.5 DEBRIS CONTROL AND SAFETY GRATES
- 8.04.6.7 OUTLET PROTECTION
- 8.04.7.3 COMPONENT LAYOUT AND CROSS SECTION
- 8.04.7.5 PERMISSIBLE VELOCITIES
- 8.05.5.1 NATURAL BASIN VOLUMES
- 8.05.6 STAGE-DISCHARGE CURVE
- 8.05.7.2.2 BROAD-CRESTED WEIRS
- 8.05.8 MULTI-STAGE RISER DESIGN
- 8.05.9.1 STORAGE INDICATION METHOD
- 8.06.4 CONTROL STRUCTURES
- 8.06.6 INSECT AND ODOR CONTROL