

Section 100 General Provisions

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Section 100 General Provisions

101 SHORT TITLE

These regulations, together with all future amendments, shall be known as the Boulder County Storm Drainage Criteria Manual (referred to herein as MANUAL) as referenced in the Boulder County Land Use Code (referred to as CODE).

102 JURISDICTION

This MANUAL shall apply to all land within the unincorporated areas of Boulder County.

103 LEGAL BASIS

Because the legal basis and practice of establishing drainage policy and criteria is well established, a discussion on it is not presented herein. If a reader is interested in the history of case law regarding establishing drainage policy, the Drainage Law chapter of the Urban Storm Drainage Criteria Manual, available through the Urban Drainage and Flood Control District, offers a lengthy and detailed review.

104 PURPOSE

Presented in this MANUAL are the minimum design and technical criteria for the analysis and design of storm drainage and water quality facilities. All proposed construction submitted for approval under the provisions of the CODE shall include adequate storm drainage system analyses and appropriate drainage system design. Such analyses and design shall conform to the criteria set forth herein. Individuals using this MANUAL are assumed to possess a working knowledge of hydrology and hydraulics and to have experience in storm drainage design and analysis. Publications referenced in this MANUAL can provide additional guidance as needed. Where the criteria in this MANUAL vary from those found in other Boulder County publications, the criteria in this MANUAL shall govern.

105 ENACTMENT AUTHORITY

The CODE has been adopted pursuant to the authority conferred within the following sections of the Colorado Revised Statutes, as amended:

1. Article 32 of Title 22 (Zoning, Planning, and Building Code Duties of School District Boards)
2. Article 65.1 of Title 24 (Areas and Activities of State Interest)
3. Article 67 of Title 24 (Planned Unit Development Act of 1972)

4. Article 68 of Title 24 (Vested Property Rights)
5. Article 6 of Title 28 (Division of Aviation)
6. Article 20 of Title 29 (Local Government Land Use Control Enabling Act)
7. Article 11 of Title 30 (County Powers and Functions)
8. Article 15 of Title 30 (County Regulations under Police Power)
9. Article 28 of Title 30 (County Planning and Building Codes)
10. Article 1 of Title 32 (Special District Act/Provisions)
11. Article 1 of Title 34 (Preservation of Commercial Mineral Deposits)
12. Article 30.5 of Title 38 (Conservation Easements)
13. Article 2 of Title 43 (State, County, and Municipal Highways)
14. Article 4 of Title 41 (Airports).

The CODE refers to this MANUAL as the authoritative reference for drainage. The Urban Storm Drainage Criteria Manual (USDCM), available through the Urban Drainage and Flood Control District (UDFCD) (<http://udfcd.org/criteria-manual>), may be used as an authoritative supplement to the MANUAL. The Boulder County Multimodal Transportation Standards shall be used for design standards and specifications; however, any drainage criteria included in the Boulder County Multimodal Transportation Standards is superseded by the criteria contained in this MANUAL. All sections, paragraphs, and subparagraphs enumerated in this MANUAL shall be considered incorporated into the CODE by reference.

106 AMENDMENT AND REVISIONS

These policies and criteria are basic guidelines, which may be amended as new technology is developed or experience is gained through use of this MANUAL that indicates the need for revision. Amendments and revisions to this MANUAL will be recommended by the County Engineer and submitted to the Board of County Commissioners for acceptance.

107 ENFORCEMENT RESPONSIBILITY

The enforcement of the provisions of this MANUAL will be in accordance with the most recent version of the CODE.

108 INTERPRETATION

The principles set forth in the most recent version of the CODE shall be used in interpreting the provisions of this MANUAL.

109 DESIGN EXCEPTIONS

The county recognizes that in certain limited instances, such as in, but not limited to, the county's historic townsites, environmentally significant areas, or areas with significant view sheds, it may be exceptionally difficult to both conform to these criteria and maintain the special character and environmental values associated with such areas. In these instances, the applicant will document in writing, good and sufficient cause for a requested Design Exception on the most recent Boulder County Design Exception Request Form, which is available from the Boulder County Department of Transportation (<http://www.bouldercounty.org/doc/transportation/designexceptionrequestform.pdf>). It shall be stamped and signed by a Colorado Professional Engineer. The rationale for the Design Exception Request shall demonstrate the following:

1. It is not likely to unacceptably compromise public safety;
2. It is not contrary to best engineering practices, as reflected by the approach outlined in the latest version of the USDCM, an authoritative supplement to this MANUAL;
3. It is not contrary to the intent and general purpose of this MANUAL, including without limitation an appropriate balancing of safety, multimodal mobility, and pursuit of the environmental, community, and sustainability goals outlined in the Comprehensive Plan;
4. It does not result in a significant impact to the public due to maintenance of the improvements;
5. It is the minimum exception from the criteria in this MANUAL necessary to afford relief, given the context;
6. It reflects special conditions or exceptional characteristics of the proposal, not created by the applicant, that justify an exception from strict and literal interpretation of this MANUAL to avoid unusual difficulties or unnecessary hardship; and
7. It is reasonably necessary for the health, safety, and welfare of the public.

Upon receipt of a written request for a Design Exception from a particular criterion in this MANUAL, the County Engineer may issue a determination on whether a Design Exception should be granted or denied given the context. The County Engineer will provide a copy of the determination to the applicant and, if applicable, to the Land Use Department.

The Board of County Commissioners acknowledges that some judgments ought to be made by technical experts, particularly those involving public safety and prevailing engineering practice. Therefore, the Board of County Commissioners typically defers to the professional judgment of the County Engineer. However, the Board of County Commissioners retains its discretion to make the final decision on whether a Design Exception is appropriate in light of the context of a land use application and the applicable Land Use Code criteria.

110 ABBREVIATIONS

AASHTO	American Association of State Highway and Transportation Officials
ASTM	American Society of the International Association for Testing and Materials
BFE	Base Flood Elevation
BMP	Best Management Practice
CAD	Computer-Aided Design
CDOT	Colorado Department of Transportation
CDPHE	Colorado Department of Public Health and Environment
CDPS	Colorado Discharge Permit System
cfs	Cubic Feet per Second
cfs/ft	Cubic Feet per Second per Foot
CLOMR	Conditional Letter of Map Revision
CMP	Corrugated Metal Pipe
CMPA	Corrugated Metal Pipe Arch
CUHP	Colorado Urban Hydrograph Procedure
CWCB	Colorado Water Conservation Board
DPR	Development Plan Review
DRCOG	Denver Regional Council of Governments
EA	Environmental Assessment
EGL	Energy Grade Line
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHAD	Flood Hazard Area Delineation
FHWA	Federal Highway Administration
FIR	Field Inspection Review; CDOT/county Term for Preliminary Design or Review
FIS	Flood Insurance Study
FONSI	Finding of No Significant Impact
FOR	Final Office Review; CDOT/county term for Final Design or Review
fps	Feet per Second
GSB	Grouted Sloping Boulder
HDS	Hydraulic Design Series
HEC	Hydrologic Engineering Center

HERCP	Horizontal Elliptical Reinforced Concrete Pipe
LOMR	Letter of Map Revision
MDCIA	Minimizing Directly Connected Impervious Areas
MEP	Maintenance Eligibility Program
MS4	Municipal Separate Storm Sewer System
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRCS	National Resource Conservation Service
PWQ	Permanent Water Quality
RCBC	Reinforced Concrete Box Culvert
RCP	Reinforced Concrete Pipe
ROD	Record of Decision
ROW	Right-of-Way
SCS	Soil Conservation Service
SPP	Structural Plate Pipe
SPPA	Structural Plate Pipe Arch
SWMP	Stormwater Management Plan
TAPE	Technology Assessment Protocol – Ecology
TSS	Total Suspended Solids
UDFCD	Urban Drainage and Flood Control District
USACE	U.S. Army Corps of Engineers
USBR	U.S. Bureau of Reclamation
USDCM	Urban Storm Drainage Criteria Manual
USGS	U.S. Geological Survey
WQCD	Water Quality Control Division
WQCV	Water Quality Capture Volume
WADOE	Washington State Department of Ecology

111 GLOSSARY

In addition to those definitions included in the CODE, the following terms may be used throughout this MANUAL:

As-Built Drawings Certified drawings showing the actual dimensions, elevations, and other conditions of the drainage facilities after construction

CODE	The most recent version of the Boulder County Land Use Code
Culvert	A conduit that does not have a manhole or other enclosed structure at either end that conveys streamflow and stormwater runoff under a road, railroad, or other obstruction
Local Detention	Detention provided to serve only the developing area in question and not any of the area outside of the development. Also called "on-site detention"
Local Drainage System	The storm drainage system that conveys the minor and major storm runoff to the Major Drainage System and serves only the property within the development in question
Major Drainage System	The storm drainage system that conveys the minor and major storm runoff and serves areas both within and outside the development in question
Major Storm	The 100-year return period storm event
MANUAL	The Boulder County Storm Drainage Criteria Manual
Minor Drainage System	The storm drainage system that conveys runoff from storms with a 5-year return period
Minor Storm	The 5-year return period storm event
On-Site Detention	See Local Detention
Raw Water Ditch	An open channel used to move nonpotable water that is not runoff from a storm event. This water may include irrigation water, water destined for a water treatment plant, and water intended for other non-irrigation purposes.
Regional Detention	Detention provided to serve areas both within and outside of the development in question
Storm Drain System	The storm drainage system composed of storm inlets, pipes, manholes or junctions, outlets, and other appurtenant structures designed to collect and convey the minor storm runoff