



**Letter to Industry
LTI #2022-01**

Date: June 1, 2021

DCSM Reference: Article 8

Summary of Issue/Topic: Storm Systems

Effective Date: July 1, 2021

**Policy/
Design
Requirements/
Guidelines:** Updates to Chapter 8, Storm Systems of the City of Manassas and Construction Standards Manual (DCSM) to replace the existing chapter and LTI #11 & LTI #12.

Background: These changes are required to comply with current state stormwater regulations. Please see the summary document describing the updates in detail as well as the draft document and existing chapter showing tracked changes.

Contact: Lance Kilby, P.E. or Sung Jin Chung, P.E

Department: Engineering

**Manager
Approval:** Lance Kilby, P.E.

Manager Title: Director of Engineering

DCSM Article 8 Update: Summary of Changes

Section	Proposed Changes
8-100.1: References	<ul style="list-style-type: none"> • Sec. 8-100.1: References have been updated for the current standards and regulations.
8-110: General Requirements	<ul style="list-style-type: none"> • Sec. 8-110: General requirements for the increased volume of sheet flow and MS4 has been added. • CLOMR and LOMR requirements have been added. • Wetland delineation and permit requirements have been added.
8-120: Easements	<ul style="list-style-type: none"> • Sec. 8-120: Widths of storm drainage easements were revised and categorized by the different types of applications.
8-130: General Pipe System Design	<ul style="list-style-type: none"> • Sec. 8-130: Minimum vertical clearance requirement has been added for utility crossings.
8-140: Energy and Hydraulic Gradients	<ul style="list-style-type: none"> • Sec. 8-140: Minimum hydraulic gradient line within the structure was reduced to match with VDOT standards • Computations to be shown in profiles changed from 36” or larger to all pipes.
8-170: Riprap	<ul style="list-style-type: none"> • Sec. 8-170: Reference to VDOT Drainage Manual has been updated.
8-180: Culverts	<ul style="list-style-type: none"> • Sec. 8-180: Compliance requirements for federal and state agency have been added.
8-200: Adequate Outfall	<ul style="list-style-type: none"> • Sec. 8-200: Stormwater management requirements has been moved to the revised section 8-500 and state requirements has been added. • Sec. 8-200.1: Improvement to conveyance system has been added.
8-220: Headwater Pressure	<ul style="list-style-type: none"> • Sec. 8-220: Additional design consideration has been added.
8-300: General Requirements for Storm Drainage Systems	<ul style="list-style-type: none"> • Sec.8-300.1: Additional pipe materials has been added for private developments. • Sec. 8-300.3: Separation requirements has been revised. • Sec. 8-300.6: Driveway culvert size has been changed to be consistent with Sec. 8-300.1S • Sec. 8-300.7: Additional criteria for protective railing requirements has been added. • Sec. 8-310.1: Alternate design method for grate inlet has been added. • Sec. 8-320.2: Storm events have been revised to be consistent with the revised section 8-500. • Sec. 8-320.5: Compliance with federal requirement has been added. • Sec. 8-330.2: Definition and example have been added for clarification
8-500: Stormwater Management	<ul style="list-style-type: none"> • Sec. 8-510: General requirements have been revised to include state requirements and to clarify the pro-rata share requirement and clearing and grading activities. • Sec. 8-510.1 thru 8-510.5: New section has been added to be consistent with state requirements and the City’s MS4 program. • Sec. 8-510.2 thru 8-510.11: Sections were moved to the new section 8-510.6 thru section 8-510.15 • Sec. 8-510.3: Easement requirement for underground facility has been added. • Sec. 8-510.5: Design guidance has been added for SWM and BMP facilities. • Sec. 8-510.6: Additional guidance has been added to be considered for the waiver request. • Sec. 8-520: Non-engineered plan option has been removed. • Sec. 8-520.8: Flow rate limit for conveyance channel in townhouse project has been added.

DCSM Article 8 Update: Summary of Changes

8-600: Floodplain Policy	<ul style="list-style-type: none"> • Sec. 8-610: Floodplain study requirements for sites over 100 acres or part of contributing acreage with floodplain on-site have been added. • Floodplain easements were changed to Flood Hazard Areas to be placed on plans and plats. • Sec. 8-630.2: Dam break analysis requirements has been revised to be consistent with state requirements. • Sec. 8-630.3: Placing tree and other woody vegetation requirements have been revised. • Sec. 8-630.4: Design consideration has been added. • Sec. 8-630.5: Outdated reference has been deleted. • Sec. 8-640.6 and 8-640.7: New sections for floodplain administrator have been added.
8-700: Best Management Practices and Stormwater Quality	<ul style="list-style-type: none"> • Applicable area designation has been added and the reference document has been updated. • Sec. 8-700.1: Pollutant removal rates of total nitrogen have been deleted. • Sec. 8-700.2: State requirement has been added. • Sec. 8-710.1: Type of dry pond facility has been defined to be considered. • Sec. 8-710.2: Reference has been added. • Sec. 8-730: Waiver criteria has been added. • Sec. 8-750: General plan requirement has been added. • Sec. 8-750.3 and 8-750.4: Maintenance responsibility for private facilities has been revised. • Sec. 8-750.6: Aesthetic maintenance responsibility for all regional facilities has been revised.
8-800: Stormwater Management Facilities	<ul style="list-style-type: none"> • Sec. 8-830.1: Responsible state agency has been changed to DCR from DCHR and criteria for state regulated impounding structure has been updated. • Sec. 8-840.3: Minimum pipe size for emergency spillway has been revised to 15-inch and anti-seep collar requirements have been added. • Sec. 8-870: Shoreline tree requirement has been deleted.
8-8100: Underground Detention	<ul style="list-style-type: none"> • Sec. 8-8100.1: Material for underground facility has been revised to allow HDPE and delete aluminum CMP. • Sec, 8-8120: Compliance with the City's MS4 program has been added.
8-900: Dams Design and Construction Standards	<ul style="list-style-type: none"> • Sec. 8-910: Regulatory state agency has been changed to DCR from DCHR • Sec. 8-920: Regulatory state agency has been changed to DCR from DCHR and references have been updated.
Appendix A: Storm Drainage Exhibits	<ul style="list-style-type: none"> • Exhibit No. 7 has been updated.
New sections	<ul style="list-style-type: none"> • Sec. 8-530: New sections have been added to be compliant with state requirements in addition to section 8-510.1 thru 8-510.5 • Sec. 8-540: New sections have been added for the grandfathered projects.