

ARTICLE 19

STORMWATER MANAGEMENT

19.1 Title

This Article may be cited as the Village of Marvin Stormwater Ordinance.

19.2 Purpose

This Article is adopted for the purposes of:

- A. The stormwater management regulations of this Article protect, maintain, and enhance the public health, safety, environment and general welfare by establishing minimum requirements and procedures to control the adverse effects of stormwater runoff associated with new development. Proper management of stormwater runoff will protect property, control stream channel erosion, prevent increased flooding associated with new development, protect floodplains, wetlands, water resources, riparian and aquatic ecosystems, and otherwise provide for environmentally sound use of the Village's natural resources; and
- B. Establishing procedures through which these purposes can be fulfilled.

19.3 Stormwater Drainage and Stormwater Detention

19.3-1 The Village of Marvin hereby adopts and incorporates herein the provisions contained in the Charlotte-Mecklenburg Stormwater Manual, as amended (hereinafter referenced as the Stormwater Manual), with the following exceptions:

- A. Necessary deviations from the Stormwater Manual as may be necessary to accommodate soil types found in the county, and standards and specifications appearing elsewhere in the Marvin Development Ordinance (MDO). When discrepancies are found between the Stormwater Manual and the MDO, the stricter regulation shall apply.
- B. In order to prevent flooding and damage to properties, all developments disturbing an acre or more of land and having net increased impervious built-upon area exceeding 24% of the total area of the development site minus all built-upon area that was developed before the adoption of the MDO, shall provide stormwater detention to control the peak runoff from the two-, ten-, 25-, 50- and 100-year, 24-hour storm events to pre-development levels. Developments disturbing less than one acre and are not part of a common plan of development are exempted from this stormwater detention regulation.
- C. A design professional shall certify documents demonstrating that construction of the project or subdivision will not increase the rate of runoff from the site nor cause any adverse impacts on downstream facilities or property.

- D. Where ponds are proposed to be constructed, the owners, heirs, assigns or successors of the land shall agree to perpetual maintenance of the pond and shall release and hold harmless the Village from any liability, claims, demands, attorney’s fees and costs or judgments arising from the pond. At a minimum, ponds shall be inspected on a yearly basis.
- E. No certificate of occupancy or release of performance guarantee shall be issued for any development until a registered land surveyor has surveyed the as-built detention facilities and the revised calculations have been submitted and approved by the Village Engineer. The revised calculations must be sealed by a design professional. In addition, the Village *Planning, Zoning & Subdivision Administrator* shall not grant final plat approval unless the Village Engineer has approved the as-built detention plans and/or a performance guarantee has been secured.
- F. When a detention facility serves more than one property, a permanent detention easement which encompasses the detention facility shall be shown on a recorded plat. This easement shall be described by metes and bounds description.
- G. There shall be a note placed on the recorded plat that clearly describes who is responsible for maintenance of the detention facilities, pipes and/or channels located within the permanent detention facility and said responsibility shall transfer with title to the property without further action necessitated on the part of the Village.

19.3-2 New and relocated watercourses. Where a subdivider proposes to create a new watercourse in order to relocate an existing watercourse or to handle road runoff, a drainage easement along the proposed new watercourse shall be indicated on the preliminary site & civil design plans and the final plat. Any channels, diversions or other improvements needed to carry water to or along this new course shall be constructed or guaranteed prior to final plat approval.

19.3-3 Minimum drainage easement requirements for storm drainpipes and open channels.

- A. Drainage easements shall be established and recorded for all lots containing storm drainage pipes or channels. No structure, with the exception of a fence, shall be erected across or within a drainage easement.
- B. Fences are allowed provided that at least 80% of the fence shall be open area, and shall be elevated at a minimum, one foot above the ground to prevent the restriction or obstruction of the natural flow of water. The following table shall be used as a minimum for drainage easements for all open channels and streams:

<25 acres	20 feet
<50 acres	30 feet
<75 acres	40 feet*
≥75 acres	50 feet*

- C. Drainage pipes shall have a minimum drainage easement width of 20 feet . The strip of land in the drainage easement to a stream or river shall be retained in its natural vegetative state unless prior approval from the *Planning, Zoning & Subdivision Administrator* is obtained. The table appearing in 19.3-3.B above is a minimum, accepted engineering practice shall be applied to specific easement situations and may vary depending upon

depth of pipe and other field conditions, as deemed necessary by the Village Engineer. The following table shall be used as a minimum for drainage easements for drainage pipes:

Easement Requirements for Storm Drain Pipe	
Pipe Size	Easement Requirement
15 inches	20 feet
18 inches	20 feet
24 inches	20 feet
30 inches	20 feet
36 inches	20 feet
42 inches	25 feet
48 inches	25 feet
54 inches +	30 feet min (varies)

- D. Each plat containing drainage easements for watershed areas exceeding $Q 100 = 50$ cubic feet per second will require the following engineering certification:
“I, _____, a duly registered professional engineer, licensed in the State of North Carolina, do hereby certify that the drainage easements shown on this plat are sufficient to carry the 100-year storm runoff within the easement limits as shown. N.C. Professional Engineer # _____ Date _____ Signature & Seal _____”
- E. Open channels the minimum easement must contain the width of the stream from top of bank to top of bank.
- F. Wider easement widths may be required for pipe depths greater than ten feet.
- G. Pipe systems and open channels on private property shall be placed in a storm drainage easement.
- H. Plastic pipe shall not be allowed for any public storm drain pipes. Corrugated metal pipe shall be approved by the Village Engineer.

19.4 Modifications by Village Engineer

The Village Engineer, on a case-by-case basis, is hereby authorized to approve other deviations from the Stormwater Manual based upon engineering principles and alternative design solutions that will achieve an equal or enhanced outcome.