

11-5-5: DRAINAGE AND STORM SEWERS:

- A. General Requirements: The developer shall comply with the storm sewer code as contained in [title 8, chapter 5](#) of this code. The planning commission shall not recommend for approval any plat of subdivision that does not make adequate provision for storm and floodwater runoff channels or basins. The stormwater drainage system shall be separate and independent of any sanitary sewer system. Storm sewers shall be designed for a 100-year storm occurrence by the rational method, or other methods as approved by the planning commission, and a copy of design computations shall be submitted along with plans. Inlets shall be provided so that surface water is not carried across or around any intersection, nor for a distance of more than six hundred feet (600') in the gutter. When calculations indicate that curb capacities are exceeded at a point, no further allowance shall be made for flow beyond that point, and basins shall be used to intercept flow at that point. Surface water drainage patterns shall be shown for each and every lot and block.
- B. Grading And Drainage Plan: A grading and drainage plan shall be prepared by a professional engineer registered in the state and shall be submitted and approved by the city engineer prior to the approval of the final plat for the subdivision. The plan shall include at least the following:
1. A map of the entire site with existing and proposed contours using a minimum of five foot (5') contour intervals at the same scale as the concept plan.
 2. Proposed plans and locations of all surface and subsurface drainage devices, walls, dams, sediment basins, storage reservoirs and other protective devices to be constructed to control stormwater runoff and soil erosion.
 3. A plan showing temporary erosion control measures.
 4. A written statement by the person or firm preparing the report identifying any grading and drainage problems of the development and further stating an opinion as to the ability of the proposed plan to mitigate or eliminate such problems in a manner as to prevent hazard to life or property, adverse effects on the safety, use or stability of a public way or drainage channel, and adverse impact on the natural environment.
- C. Nature Of Stormwater Facilities:
1. Location: The applicant may be required by the planning commission to carry away by pipe or open ditch any spring or surface water that may exist either previously to, or as a result of, the subdivision. Such drainage facilities shall be located in the road right of way where feasible, or in perpetual unobstructed easements of appropriate width, and shall be constructed in accordance with the design standards and construction specifications.

2. Accessibility To Public Storm Sewers:

- a. Where a public storm sewer is accessible, the applicant shall install storm sewer facilities, or if no outlets are within a reasonable distance, adequate provision shall be made for the disposal of stormwaters, subject to the specifications of the city engineer. However, in subdivisions containing lots less than fifteen thousand (15,000) square feet in area and in business and industrial districts, underground storm sewer systems shall be constructed throughout the subdivisions and be conducted to an approved outfall. Facilities shall be approved and inspected by the city engineer.
- b. If a connection to a public storm sewer will be provided eventually, as determined by the city engineer, the applicant shall make arrangements for future stormwater disposal by a public utility system at the time the plat receives final approval. Provision for such connection shall be incorporated by inclusion in the subdivision improvement agreement required for the subdivision plat.

3. Accommodation Of Upstream Drainage Areas: A culvert or other drainage facility shall in each case be large enough to accommodate potential runoff from its entire upstream drainage area, whether inside or outside the subdivision. The city engineer shall determine the necessary size of the facility, based on the provisions of the construction standards and specifications assuming conditions of maximum potential watershed development permitted by the zoning ordinance.

4. Effect On Downstream Drainage Areas: The city engineer shall also study the effect of each subdivision on existing downstream drainage facilities outside the area of the subdivision. City drainage studies, together with such other studies as shall be appropriate, shall serve as a guide to needed improvements. Where it is anticipated that the additional runoff incident to the development of the subdivision will overload an existing downstream drainage facility, the planning commission may withhold approval of the subdivision until provision has been made for the expansion of the existing downstream drainage facility. No subdivision shall be approved unless adequate drainage will be provided to an adequate drainage watercourse or facility.

5. Areas Of Poor Drainage: Whenever a plat is submitted for an area that is subject to flooding, the planning commission may approve such subdivision to an elevation sufficient to place the elevation of streets and lots at a minimum of twelve inches (12") above the elevation of the 100-year floodplain, as determined by the city engineer. The plat of the subdivision shall provide for an overflow zone along the bank of any stream or watercourse, in a width that shall be sufficient in times of high water to contain or move the water, and no fill shall be placed in the overflow zone, nor shall any structure be erected or placed in the overflow zone. The boundaries of the overflow zone shall be subject to approval by the city engineer. The planning commission may deny subdivision approval for areas of extremely poor drainage.

6. Floodplain Areas: The planning commission may, when it deems it necessary for the health, safety or welfare of the present and future population of the area and necessary to the conservation of water, drainage and sanitary facilities, prohibit the subdivision of any portion of the property that lies within the floodplain of any stream or drainage course. These floodplain areas shall be preserved from any and all

destruction or damage resulting from clearing, grading or dumping of earth, waste material or stumps, except at the discretion of the planning commission.

D. Dedication Of Drainage Easements:

1. General Requirements: When a subdivision is traversed by a watercourse, drainageway, channel or stream, there shall be provided a stormwater easement or drainage right of way conforming substantially to the lines of such watercourse, and of such width and construction as will be adequate for the purpose. Wherever possible, it is desirable that the drainage be maintained by an open channel with landscaped banks and adequate width for maximum potential volume of flow as approved by the city engineer.
2. Drainage Easements:
 - a. Where topography or other conditions are such as to make impractical the inclusion of drainage facilities within road rights of way, perpetual, unobstructed easements at least fifteen feet (15') in width for drainage facilities shall be provided across property outside the road lines and with satisfactory access to the road. Easements shall be indicated on the final plat. Drainage easements shall extend from the road to a natural watercourse or to other drainage facilities.
 - b. When a proposed drainage system will carry water across private land outside the subdivision, appropriate drainage rights must be secured and indicated on the final plat.
 - c. The applicant shall dedicate, either in fee or by a drainage or conservation easement, land on both sides of existing watercourses to a distance to be determined by the planning commission.
 - d. Low lying lands along watercourses subject to flooding or overflowing during storm periods, whether or not included in areas for dedication, shall be preserved and retained in their natural state as drainageways. Such land or lands subject to periodic flooding shall not be computed in determining the number of lots to be utilized for average density procedures, nor for computing the area requirement of any lot. (Ord. 2007-05, 5-16-2007)