

Chapter 29 STORMWATER MANAGEMENT AND DRAINAGE¹

ARTICLE I. IN GENERAL

Sec. 29-1. Definitions.

The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Agriculture means all farm enterprises such as crop land, forage production, animal husbandry, dairy and poultry, and floriculture.

Base flood means the flood profile used as the basis for the National Flood Insurance Program ("NFIP") regulations. The federal government has selected the one (1) percent chance flood as the base flood, also referred to as the 100-year flood.

Bond means any form of security for the completion or performance of the stormwater management and drainage plan or the maintenance of drainage improvements, including surety bond, collateral, property or instrument of credit, or escrow deposit in an amount and form satisfactory to the department of planning and development.

Building means any structure built for the support, shelter or enclosure of persons, animals, chattels or movable property of any kind.

Channel means a course of perceptible extent which periodically or continuously contains moving water, or which forms a connected link between two (2) bodies of water, and which has a definite bed and banks.

Clear cutting means removing of substantially all merchantable standing trees.

Clearing means the act of cutting, harvesting, removing from the ground, burning, damaging or destroying trees, stumps, hedge, brush, roots, logs, or scalping existing vegetation.

Conduit means any open or closed device for conveying flowing water.

Control means the hydraulic characteristic which determines the stage-discharge relationship in a conduit. The control is usually critical depth, tailwater depth, or uniform depth.

Detention means the temporary detaining or storage of floodwater in reservoirs, on parking lots, on rooftops and other areas under predetermined and controlled conditions accompanied by controlled release of the stored water.

Detention basins means any manmade area which serves as a means of controlling and temporarily storing stormwater runoff. The facility normally drains completely between spaced runoff events, e.g., parking lots, rooftops, athletic fields, dry wells, oversized storm drain pipes.

¹Cross reference(s)—Buildings and building regulations, Ch. 8; landscaping and tree protection, Ch. 15; fills for storm sewers, drains, etc., § 30-166; subdivisions, Ch. 31; zoning, Ch. 36.

State law reference(s)—Authority to legislate on matters pertaining to municipal affairs, A.C.A. § 14-43-601 et seq.

Detention pond means a stormwater detention facility which maintains a fixed minimum water elevation between runoff events except for the lowering resulting from losses of water due to infiltration or evaporation.

Developer means a person engaged in land alteration activities which are not excluded by section 29-187.

Development means any change of land use or improvement on any parcel of land.

Differential runoff means the volume and rate of flow of stormwater runoff discharged from a parcel of land or drainage area which is or will be greater than the volume and rate which pertained prior to proposed development or redevelopment existed.

Drainage approval means approval given by the department of planning and development in coordination with appropriate departments, based upon an approved final stormwater management and drainage plan. The final stormwater management and drainage plan must accompany the building permit application or be submitted with the proposed construction plans.

Drainage easement means authorization by a property owner for use by another party for all or any portion of his land for a drainage and adjoining utility purposes.

Engineer of record means a registered professional engineer in the state who shall supervise the design and construction of the project.

Erosion means the wearing away of land by action of wind, water or gravity.

Floodplain means any land area susceptible to inundation by floodwaters from any source. For the purposes of this Code, floodplain refers to the land area susceptible to being inundated by the base flood.

Floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without a cumulative increase of the water surface elevation more than a designated height.

Forestry operation means an operation conducted on land owned or leased by a major forestry industry corporation for the systematic harvest of timber.

Freeboard means a factor of safety expressed as the difference in elevation between the top of the detention basin dam, levees, top of road, top of bank at channels, culvert entrances and other hydraulic structures, and the design flow elevation.

Frequency means the reciprocal of the exceedance probability.

Grading and drainage plan means the plan required before a grading permit can be issued.

Grading permit means the permit issued for grading, clearing, harvesting, filling, excavating, quarrying, tunneling, trenching, construction, or similar activities in the city.

Habitable dwelling unit means a dwelling unit intended and suitable for human habitation.

Imminent construction means the installation of a foundation or erection of a structure within six (6) months following land-alteration activities or as approved by the department of planning and development in coordination with appropriate departments.

Land alteration means the process of grading, clearing, filling, excavating, quarrying, tunneling, trenching, construction or similar activities.

Major storm easement means a privately maintained area designed to carry the one-hundred-year storm with no obstructions allowed such as fill or fences that would impede floodwater flow. Properly designed landscaping that does not impede floodwater or endanger adjacent property may be allowed.

Minor storm easement means a publicly maintained area designed to carry the twenty-five-year (or fifty-year for a central business district (CBD) area) storm, provide access for maintenance and prevent channel obstructions.

Mulching means the application of plant or other suitable materials on a soil surface to conserve moisture, reduce erosion, and aid in establishing plant cover.

Municipal separate storm sewer system (MS4) means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

(1) Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, stormwater or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the Clean Water Act that discharges to waters of the United States;

(2) Designed or used for collecting or conveying stormwater from public and private property;

(3) Which is not a combined sewer; and

(4) Which is not part of a publicly owned treatment works (POTW) as defined at 40 CFR 122.2.

Off-stream detention means temporary storage accomplished off-line, i.e., not within a principal drainage system.

One-hundred-year peak flow means the peak rate of flow of water at a given point in a channel, watercourse or conduit resulting from the base flood.

One-hundred-year storm means a rainstorm of a specified duration having a one (1) percent chance of occurrence in a given year.

On-site detention means temporary storage of runoff on the same land development site where the runoff is generated.

On-stream detention means temporary storage of runoff within a principal drainage system, i.e., in the receiving streams or conduits.

Permittee means a person to whom a permit is granted.

Plat means a legally recorded plat of a parcel of land subdivided into lots with streets, alleys, easements and other land lines drawn to scale.

Project means any development involving the construction, reconstruction or improvement of structures and/or grounds.

Rational method means an empirical formula for calculating peak rates of runoff resulting from rainfall.

Responsible party means any person or entity having control of the property subject to this chapter.

Retention facility means any type of detention facility not provided with a positive outlet.

Sediment means rock, sand, gravel, silt, clay or other material deposited by action of wind, water or gravity.

Sedimentation basin means the storage area created by a barrier or dam built across a waterway or at other suitable locations to retain rock, sand, gravel, silt, clay or other material.

Stormwater control measure ("SCM") refers to non-structural measures and structural controls used to meet the flood control detention and water quality requirements of the Little Rock Stormwater Management and Drainage manual by managing the long-term quantity and quality of stormwater runoff from development. Water quality SCMs are also sometimes called best management practices.

Stormwater management and drainage manual or drainage manual means the set of drainage policies, analysis methods, design charts, stormwater runoff methods, and design standards used by the city as the official design guidelines for drainage improvements consistent with this chapter.

Stormwater runoff means water that results from precipitation which is not absorbed by the soil, evaporated into the atmosphere or entrapped by ground surface depressions and vegetation, which flows over the ground surface.

Stream buffer means vegetated areas along and adjacent to natural stream channels, including ephemeral, intermittent, and perennial streams, where the clearing, grading, filling, building of structures, and other activities are limited or prohibited to protect and enhance water quality and stream health.

Structure means any object constructed above or belowground. Pipes, manholes and certain other utility structures which exist underground may be excluded from this definition.

Swale means a shallow waterway.

Time of concentration means the estimated time in minutes required for runoff to flow from the most remote section of the drainage area to the point at which the flow is to be determined.

Tributary area means all of the area that contributes stormwater runoff to a given point.

Undisturbed perimeter strip means a perimeter or boundary strip around land areas which have been cleared, cut or filled, which is required to remain in a natural state, including topography, trees and vegetation. Enhancements such as additional landscaping or other treatments may be used if approved by the department of planning and development.

Uniform channel means a channel with a constant cross section and roughness.

Watercourse means any surface stream, creek, brook, branch, depression, reservoir, lake, pond or drainageway in or into which stormwater runoff flows.

Wet bottom basin means a detention basin intended to have a permanent pool.

(Code 1961, § 35A-6; Ord. No. 15,243, § 1(5A-14), 2-17-87; Ord. No. 15,833, § 1, 4-3-90; Ord. No. 18,361, § 1, 9-26-00; Ord. No. 19,353, § 1, 7-19-05; Ord. No. 21,867, § 1, 5-19-20)

Cross reference(s)—Definitions and rules of construction generally, § 1-2.

Sec. 29-2. Penalty.

Any person convicted of a violation of any of the provisions of this chapter shall be punished as provided in section 1-9.

Sec. 29-3. Purpose.

In order to promote the public health, safety and general welfare of the citizens of the city, the provisions of this chapter are intended to:

- (1) Reduce property damage and human suffering.
- (2) Minimize the hazards of personal injury and loss of life due to flooding, to be accomplished through the approval of a stormwater management and drainage plan that:
 - a. Establish the major and minor stormwater management systems.
 - b. Define and establish stormwater management practices and use restrictions.

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- c. Establish guidelines for handling increases in volume and peak discharges of runoff.

(3) Reduce the discharge of pollutants to protect water quality

(Code 1961, § 35A-5)

Sec. 29-4. Interpretation and conflict.

- (a) In their interpretation and application, the provisions of this chapter shall be held to be the minimum requirements for the promotion of the public health, safety and general welfare.
- (b) This chapter is not intended to interfere with, abrogate, or annul any other ordinance, rule or regulation, statute or other provision of law. Where any provision of this chapter imposes restrictions different from those imposed by any other provision of this chapter or any other ordinance, rule or regulation, or other provision of law, whichever provisions are more restrictive or impose higher standards shall control.
- (c) This chapter is not intended to abrogate any easement, covenant or any other private agreement or restriction; provided, that where the provisions of this chapter are more restrictive or impose higher standards than such easement, covenant or other private agreement or restriction, the requirements of this chapter shall govern. Where the provisions of the easement, covenant or private agreement or restriction imposed duties and obligations more restrictive, or higher standards than the requirements of this chapter, and such private provisions are inconsistent with this chapter or determinations thereunder, then such private provisions shall be operative and supplemental to this chapter and determinations made under this chapter.

(Code 1961, § 35A-7)

Sec. 29-5. Amendments.

For the purpose of providing for the public health, safety and general welfare, the board of directors may amend the provisions of this chapter. The planning and development department, in coordination with the public works department, has the responsibility for updating on a continuing basis the drainage manual.

(Code 1961, § 35A-9; Ord. No. 15,988, § 4, 12-18-90; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-6. Appeals.

Any person aggrieved by a decision of the department of planning and development may appeal any order, requirement, decision or determination to the planning commission. Should a person be aggrieved by the decision of the planning commission, he may appeal to a court of competent jurisdiction in accordance with law.

(Code 1961, § 35A-10; Ord. No. 17,697, § 1a, 3-17-98; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-7. Disclaimer of liability.

The performance standards and design criteria set forth in this chapter and in the drainage manual establish minimum requirements which must be implemented with good engineering practice and workmanship. Use of the requirements contained herein shall not constitute a representation, guarantee or warranty of any kind by the city, or its officers and employees, of the adequacy or safety of any stormwater management structure or use of the land. The approval of the stormwater management and drainage plan does not imply that the land uses permitted

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will be free from damages caused by stormwater runoff. The degree of protection required by this chapter is considered reasonable for regulatory purposes and is based on historical records, engineering and scientific methods of study. Larger storms may occur or stormwater runoff heights may be increased by manmade or natural causes. This chapter, therefore, shall not create liability on the part of the city or any officer or employee with respect to any legislative or administrative decision lawfully made hereunder.

(Code 1961, § 35A-11)

Sec. 29-8. Enforcement generally.

- (a) It shall be the duty of the department of planning and development to bring to the attention of the city attorney any violation or lack of compliance herewith.
- (b) The department of planning and development, in coordination with appropriate departments, shall be responsible for determining whether the stormwater management and drainage plan is in conformance with the requirements specified in the stormwater management and drainage manual. The department of planning and development shall be responsible for determining whether the development plan is proceeding in accordance with the approved drainage plan. Periodic inspection of the development site shall be made by the department of planning and development to ensure that the stormwater management and drainage plan is properly implemented and that the improvements are maintained.

(Code 1961, §§ 35A-23, 35A-24; Ord. No. 17,697, § 1a, 3-17-98; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-9. Remedial work.

If it is determined through inspection that the development is not proceeding in accordance with the approved stormwater management and drainage plan, and drainage and/or building permit, the department of planning and development shall issue written notice to the permittee and the surety of the nature and location of the alleged noncompliance, accompanied by documentary evidence demonstrating noncompliance and specifying what remedial work is necessary to bring the project into compliance. The permittee so notified shall immediately, unless weather conditions or other factors beyond the control of the permittee prevent immediate remedial action, commence the recommended remedial action and shall complete the remedial work within a reasonable time as determined in advance by the department of planning and development. Upon satisfactory completion of remedial work, the department of planning and development shall issue a notice of compliance and the development may proceed.

(Code 1961, § 35A-25; Ord. No. 17,697, § 1a, 3-17-98; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-10. Revocation of permits or approvals; stop orders.

The department of planning and development, in coordination with appropriate departments, after giving seven (7) days' written notice may revoke the permit issued for any project or portion thereof which is found upon inspection to be in violation of the provisions of this chapter, and for which the permittee has not agreed to undertake remedial work as provided in section 29-9. Drainage permits may also be revoked if remedial work is not completed within the time allowed. Upon revocation of a permit or approval, the department of planning and development shall issue a stop work order. Such stop work order shall be directed to the permittee and he shall immediately notify persons owning the land, the developer and those persons actually performing the physical work of clearing, grading and developing the land. The stop work order shall direct the parties involved to cease and desist all or any portion of the work on the development or a portion thereof which is not in compliance, except such remedial work necessary to bring the project into compliance.

(Code 1961, § 35A-26; Ord. No. 17,697, § 1a, 3-17-98; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-11. Modifications to stormwater management and drainage manual.

Any modifications to the stormwater management and drainage manual will be made by the department of planning and development. All modifications will be coordinated with the public works department. Modifications must be consistent with stated policies and the intent of this chapter.

(Code 1961, § 35A-6; Ord. No. 17,697, § 1a, 3-17-98; Ord. No. 21,867, § 1, 5-19-20)

Secs. 29-12—29-35. Reserved.

**ARTICLE II. STORMWATER
MANAGEMENT AND
DRAINAGE SYSTEM**

Sec. 29-36. Generally.

This article establishes the stormwater runoff management system of the city which shall be composed of a major system and a minor system, management controls and management practices. This article shall apply in the minor system.

(Code 1961, § 35A-40)

Sec. 29-37. Major system.

The major system is the area in any drainageway within the limits of flow of a one-hundred-year storm.

(Code 1961, § 35A-41)

Sec. 29-38. Minor system.

The minor system shall be composed of all watercourses and drainage structures, both public and private, that are not part of the major system, because of lower design storm frequencies.

(Code 1961, § 35A-42)

Sec. 29-39. Management controls.

Management controls are requirements applicable to the major system under the provisions of this chapter. Such controls shall limit any activity which adversely affect hydraulic function of open channels, drainage swales, detention facilities or enclosed stormwater conveyance systems. The drainage manual shall be the official document used for designing stormwater management controls and drainage systems.

(Code 1961, § 35A-43)

Sec. 29-40. Management practices.

The following practices may be used on approval by the department of planning and development.

- (1) *Storage.* Runoff may be stored in temporary or permanent detention basins, or ~~through rooftop, parking lot ponding, or percolation storage, or by other means by other stormwater control measures~~ in accordance with the design criteria and performance standards set forth in ~~this chapter~~ the drainage manual.
- (2) *Open channels.* Maximum feasible use shall be made of existing drainageways, open channels and drainage swales that are designed and coordinated with the design of building lots and streets in accordance with the design criteria and performance standards set forth in the drainage manual.
- (3) *Curbs.* Streets, curbs and gutters shall be an integral part of the stormwater runoff management system. To the maximum extent possible, drainage systems, street layout and grades, plotting patterns and the location of curbs, inlets and site drainage and overflow swales shall be concurrently designed in accordance with design criteria and performance standards set forth in the drainage manual.
- (4) *Enclosed conveyance systems.* Enclosed conveyance systems consisting of inlets, conduits and manholes may be used to convey stormwater runoff. Where used, such systems must be designed and performance standards set forth in the drainage manual.
- (5) *Other practices.* The stormwater runoff management practices enumerated herein shall not constitute an exclusive listing of available management practices. Other generally accepted practices and methods may be approved by the department of planning and development, if the purposes, design criteria and minimum performance standards of this chapter are complied with.

(Code 1961, § 35A-44; Ord. No. 17,697, § 1a, b, 3-17-98; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-41. Public responsibilities.

Administration of this chapter shall be the responsibility of the department of planning and development, which shall review the stormwater management plans to determine the approval, disapproval or modification of these plans as provided herein. The public works department shall be responsible after construction for the operation and maintenance of all drainage structures and improved courses which are part of the stormwater runoff management system under public ownership and which are not constructed and maintained by or under the jurisdiction of any state or federal agency.

(Code 1961, § 35A-45(a); Ord. No. 15,988, § 4, 12-18-90; Ord. No. 17,697, § 1a, 3-17-98; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-42. Private responsibilities.

- (a) Each developer of land within the city has a responsibility to provide on the developer's property all approved stormwater runoff management facilities to ensure the adequate drainage and control of stormwater on the developer's property both during and after construction of such facilities.
- (b) Each developer or owner has a responsibility and duty before and after construction to properly operate and maintain any on-site stormwater runoff control facility which has not been accepted for maintenance by the public. Such responsibility is to be transmitted to subsequent owners through appropriate covenants.

(Code 1961, § 35A-45(b))

Sec. 29-43. Unpermitted discharges of dry and wet weather overflows from sanitary sewers into the city's municipal separate storm sewer system.

The operator of the Little Rock Water Reclamation Authority shall eliminate unpermitted discharges of dry and wet weather overflows from sanitary sewers into the city's municipal separate storm sewer system.

(Ord. No. 19,497, § 1, 3-7-06; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-44. Infiltration from sanitary sewers into the city's municipal separate storm sewer system

The operator of the Little Rock Water Reclamation Authority shall limit the infiltration from sanitary sewers into the city's municipal separate storm sewer system.

(Ord. No. 19,497, § 2, 3-7-06; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-45. Discharge of nonstormwater to the city's municipal separate storm sewer system.

- (a) Except as provided in paragraph (b) below, it shall be unlawful to discharge nonstormwater to the city's municipal separate storm sewer system.
- (b) Unless identified by the city, the U.S. Environmental Protection Agency, or the state as significant sources of pollutants to waters of the state, it shall not be unlawful to discharge the following nonstormwater into the city's municipal separate storm sewer system:
 - (1) Water line flushing;
 - (2) Landscape irrigation;
 - (3) Diverted stream flows;
 - (4) Rising ground waters;
 - (5) Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to separate storm sewers;
 - (6) Uncontaminated pumped ground water;
 - (7) Discharges from potable water sources;
 - (8) Foundation drains;
 - (9) Air conditioning condensate;
 - (10) Irrigation water;
 - (11) Springs;
 - (12) Water from crawl space pumps;
 - (13) Footing drains;
 - (14) Lawn watering;
 - (15) Individual residential car washing;
 - (16) Flows from riparian habitats and wetlands;

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- (17) Dechlorinated swimming pool discharges;
 - (18) Street wash waters; and
 - (19) Discharges or flows from emergency firefighting activities.

(Ord. No. 19,497, § 3, 3-7-06)

Sec. 29-46. Discharge of used motor vehicle fluids and household hazardous wastes into the city's municipal separate storm sewer system.

It shall be unlawful to discharge used motor vehicle fluids and household hazardous wastes into the city's municipal separate storm sewer system.

(Ord. No. 19,497, § 1, 3-7-06)

Secs. 29-47—29-60. Reserved.

ARTICLE III. STORMWATER MANAGEMENT AND DRAINAGE PLANS

Sec. 29-61. Generally.

- (a) Any person proposing to construct buildings or develop land within the city's planning jurisdiction shall submit drainage plans to the department of planning and development for approval of a stormwater management and drainage plan before building permits are issued or subdivisions are approved. No land shall be developed except upon approval by the department of planning and development, in coordination with appropriate departments.

Cross reference(s)—Planning area, § 23-2.

- (b) All construction subdivision approvals or remodeling activities shall have a stormwater management and drainage plan approved before a building permit is issued or subdivision is approved except for the following:
 - (1) One (1) new or existing single-family structure.
 - (2) One (1) new or existing duplex family structure.
 - (3) One (1) new commercial or industrial structure located on less than a one-acre individual lot.
 - (4) One (1) existing commercial or industrial structure where additional structural improvements are less than five hundred (500) square feet.

(Code 1961, §§ 35A-3, 35A-4; Ord. No. 17,697, § 1a, 3-17-98; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-62. Preparation.

The stormwater management and drainage plan shall be prepared by the engineer of record [in accordance to the City of Little Rock Stormwater Management and Drainage Design Manual](#). No building permits or subdivision approvals shall be issued until and unless the stormwater management and drainage plan has been approved by the department of planning and development.

(Code 1961, § 35A-55; Ord. No. 17,697, § 1a, 3-17-98; Ord. No. 21,867, § 1, 5-19-20)

Editor's note(s)—Ord. No. 21,867, § 1, adopted May 19, 2020, changed the title of § 29-62 from preparation and approval to preparation.

Sec. 29-63. Pre-preliminary drainage plan review.

A pre-preliminary drainage plan review with staff is suggested before preliminary platting for the purpose of overall general drainage concept review.

(Code 1961, § 35A-56; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-64. Review of preliminary ~~storm-water~~stormwater and drainage plan.

A preliminary stormwater and drainage plan, and accompanying information, shall be submitted at the time of preliminary plat submittal. If needed, a review meeting will be scheduled by the department of planning and development with representatives of the developer, including the engineer of record, to review the overall concepts included in the preliminary stormwater and drainage plan. The purpose of this review shall be to jointly agree upon an overall stormwater management concept for the proposed development and to review criteria and design parameters which shall apply to final design of the project.

(Code 1961, § 35A-57; Ord. No. 17,697, § 1a, 3-17-98; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-65. Final stormwater management and drainage plan.

Following the preliminary stormwater management and drainage plan review, the final stormwater management and drainage plan shall be prepared for each phase of the proposed project as each phase is developed. The final plan shall constitute a refinement of the concepts approved in the preliminary stormwater and drainage plan with preparation and submittal of detailed information as required in the drainage manual. This plan shall be submitted at the time construction drawings are submitted for approval. No final plat is to be approved until the drainage structures approved on the construction plans are in place and approved by the department of planning and development.

(Code 1961, § 35A-58; Ord. No. 17,697, § 1a, 3-17-98; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-66. Review and approval of final stormwater management and drainage plans.

- (a) Final stormwater management and drainage plan shall be reviewed by department of planning and development. If it is determined according to present engineering practice that the proposed development will provide control of stormwater runoff in accordance with the purposes, design criteria, and performance standards of this chapter and will not be detrimental to the public health, safety and general welfare, the department of planning and development shall approve the plan or conditionally approve the plan, setting forth the conditions thereof.
- (b) If it is determined that the proposed development will not control stormwater runoff in accordance with this chapter, the department of planning and development shall disapprove the final stormwater management and drainage plan.
- (c) If disapproved, the application and data shall be returned to the applicant for resubmittal.
- (d) Time frames for filing, review and approval of stormwater management and drainage plans shall coincide with time periods applicable in chapter 31.

(Code 1961, § 35A-59; Ord. No. 17,697, § 1a, 3-17-98; Ord. No. 21,867, § 1, 5-19-20)

Secs. 29-67—29-85. Reserved.

**ARTICLE IV. DESIGN CRITERIA AND
PERFORMANCE STANDARDS**

DIVISION 1. GENERALLY

Secs. 29-86—29-95. Reserved.

DIVISION 2. DESIGN CRITERIA

Sec. 29-96. Generally.

The City of Little Rock Stormwater Management and Drainage Design Manual ~~drainage manual~~ shall be the accepted design document. Unless otherwise provided, the provisions of this division shall govern the design and improvements with respect to managing stormwater runoff.

(Code 1961, § 35A-70)

Sec. 29-97. Method of determining storm-water runoff.

- (a) Methods for determining stormwater run-off shall be those designated by the latest City of Little Rock Stormwater Management and Drainage Manual.
- (b) All such development proposals shall be prepared by a professional engineer licensed in the state.

(Code 1961, § 35A-70(a); Ord. No. 17,697, § 1a, 3-17-98; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-98. Development design.

Streets, lots, depths of lots, parks, and other public grounds shall be located and laid out in such a manner as to minimize the velocity of overland flow, allow maximum opportunity for infiltration of stormwater to the ground, and to preserve and utilize existing and planned streams, channels, extension-detention basins, and include, wherever possible, streams and floodplains within parks and other public grounds.

(Code 1961, § 35A-70(b))

Sec. 29-99. Detention.

Developments also shall include ~~temporary~~ detention of stormwater runoff in order to minimize downstream flooding conditions. The following design criteria shall govern the design of temporary-permanent drainage facilities:

- (1) *Storage volume.* The volume of storage provided in the detention basin shall be sufficient to control the differential runoff from the 2-, 25-, and 100-year, 24-hour duration storm frequency. ~~the twenty-five-year storm frequency of six-hour duration.~~ The differential runoff is the volume and rate of

flow of stormwater runoff discharged from a parcel of land or drainage area which is or will be greater than the volume and rate which pertained prior to proposed development for redevelopment.

- (2) *Freeboard.* Detention storage areas shall have adequate capacity to contain the storage volume of tributary stormwater runoff with at least six (6) inches of freeboard above the water surface of flow ~~and over~~ the emergency spillway in a ~~twenty-five~~one-hundred-year storm. ~~The entire structure should be designed for discharging the major storm.~~
- (3) *Outlet control works.* Outlet works shall be designed to limit peak out-flow rates from detention storage areas to or below peak flow rates for a ~~twenty-five-year~~design storm that would have occurred prior to the proposed development. Outlet works shall not include any mechanical components or devices and shall function without requiring attendance or control during operation. Size and hydraulic characteristics shall be such that all water and detention storage is released to the downstream storm sewer systems within ~~twenty-four (24)~~seventy-two (72) hours after the end of the design rainfall. Normal time for discharge ranges from three (3) to ~~twenty-four (24)~~seventy-two (72) hours.
- (4) *Spillway.* Emergency spillways shall be provided to permit the safe passage of runoff generated from a one-hundred-year storm or greater, if appropriate because of downstream high hazard, such as loss of life or damage to high-value property. Emergency spillways shall be sized assuming all other outlet control works are blocked.
- (5) *Design data submittal.* In addition to complete plans, all design data shall be submitted as required in the detention design data submittal section of the drainage manual.
- (6) *Detention methods.* Depending upon the detention alternatives selected by the engineer of record, the design criteria for detention ponds shall follow those given in the drainage manual.

(Code 1961, § 35A-70(e))

Sec. 29-100. Reductions in coefficient of runoff.

If an existing site with an existing coefficient of runoff of 1.0 (totally impervious) is developed, no on-site detention or in-lieu fee for detention is required unless the site is within an area known to have existing flooding problems and detention is feasible. Also, if an existing site is developed whereby the coefficient of runoff is reduced to a lesser value, no on-site detention or in-lieu fee is required unless the site is within an area known to have existing flooding problems and detention is feasible.

(Code 1961, § 35A-70(f))

Sec. 29-101. Enclosed systems and open channels.

Enclosed systems and open channels shall be designed using the design drainage manual.

(Code 1961, § 35A-70(c))

Sec. 29-102. Evaluation of downstream flooding.

The engineer of record should evaluate whether the proposed plan will cause or increase downstream flooding conditions. This evaluation should be made on the basis of existing downstream development and an analysis of stormwater runoff with and without the proposed development. When it is determined that the proposed development will cause or increase downstream flooding conditions, provisions to minimize such flooding conditions should be included in the design of storm management improvements. Such provisions may

include downstream improvements and/or detention of stormwater runoff and its regulated discharge to the downstream storm drainage system.

(Code 1961, § 35A-70(d))

Sec. 29-103. Alternatives to on-site detention.

Alternatives to on-site detention are as follows:

- (1) *Generally.* Where on-site detention is deemed inappropriate due to local topographical or other physical conditions, alternate methods for accommodating increases in stormwater runoff shall be permitted. The methods may include:
 - a. Off-site detention or comparable improvements.
 - b. In-lieu monetary contributions for channel improvements or off-site detention improvements by the city within the same watershed. Channel improvements shall only be used if they are an integral part of a detailed watershed study.
- (2) *In-lieu contributions to regional or subregional detention.* An owner may contribute to the construction of a regional or subregional detention site constructed or to be constructed in lieu of constructing on-site detention. However, no in-lieu contributions are allowed when existing flooding occurs downstream from the development, or if the development will cause downstream flooding.
- ~~(3) *In-lieu fees.* The in-lieu fee contribution shall be based upon an amount of ten thousand dollars (\$10,000.00) per acre-foot of stormwater storage.~~
- (4) *Excess stormwater storage credit.* An owner may receive credit for excess stormwater storage (in acre-feet) created on one (1) site that may be applied to another site within the same watershed. The transfer of storage volume credit (in acre-feet) shall not be allowed if the site where credited storage is proposed to be transferred has an existing flooding condition downstream or the proposed development will produce downstream flooding.
- (5) *Regional or subregional detention sites.* The acquisition of regional or subregional detention sites and construction of facilities thereon will be financed by the city. Monies contributed by the owners as above provided shall be used for regional and subregional detention site studies, land acquisition and facility construction thereof in the watershed in which the development is located.
- (6) *Watershed boundaries.* The boundaries of watersheds and priority of acquisition of regional and sub-regional detention sites in construction of detention facilities and location thereof shall be established by the department of planning and development and approved by the planning commission.

(Code 1961, § 35A-70(g); Ord. No. 17,697, § 1a, 3-17-98; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-104. Water Quality.

The stormwater management system should be designed to remove at least 80% of the total suspended solids (TSS) from stormwater flows which exceed predevelopment levels and be able to meet any other additional watershed or site-specific water quality requirements. The drainage manual shall be used to design and select appropriate structural stormwater controls to provide treatment of the Water Quality Volume (WQv). The water quality treatment volume shall be based on the local 80th percentile storm event (1.05 inches of rainfall) for new development and for re-development.

Secs. 29-~~104~~105—29-125. Reserved.

DIVISION 3. PERFORMANCE STANDARDS

Sec. 29-126. Stormwater channel location.

Generally acceptable locations of stormwater runoff channels in the design of a subdivision may include, but not be limited to, the following:

- (1) In a depressed median of a double roadway, street or parkway provided the median is wide enough to permit maximum three (3) to one (1) side slopes.
- (2) Along the roadway, street or parkway.
- (3) Located along lot lines or entirely within the rear yards of a single row of lots or parcels.
- (4) In each of the foregoing cases, a drainage easement to facilitate maintenance and design flow shall be provided and shown on the plat. Drainage easement required dimensions are shown in the drainage manual and shall conform to the dimensions given. No structures shall be constructed within or across stormwater channels without the approval of the public works department.

Sec. 29-127. Easements.

- (a) Drainage easements required to facilitate maintenance, detention and conveyance of stormwater shall be provided and shown on the preliminary and final plat. There are two (2) types of easements that are to be determined by the engineer of record and shown on the preliminary final plat. These are:
 - (1) *Minor storm easements.* Easements designed to carry the minor storm (twenty-five-year design frequency). The minor storm easements are primarily for carrying flow from the twenty-five-year storm, maintenance access, utility locations and are to be kept clear of any obstructions.
 - (2) *Major storm easements.* Privately maintained easements designed to carry the major storm (one hundred-year design frequency). All stormwater control measures shall be contained in an easement or open tract of land dedicated for the sole purpose of containing and maintaining SCMs. The major storm easements shall be kept free of obstructions, such as fill or fences that would impede the flow of the one hundred-year design storm. Properly designed landscaping that does not impede the flow of floodwater or endanger adjacent property is acceptable.
- (b) Drainage easements shall be dedicated to the city when required through the development review and approval process.

(Code 1961, §§ 35A-6, 35A-71(b); Ord. No. 17,697, § 1a, 3-17-98; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-128. Storm sewer outfall.

The storm sewer outfall shall be designed so as to provide adequate protection against downstream erosion and scouring.

(Code 1961, § 35A-71(c))

Sec. 29-129. Lot lines.

Whenever the plans call for the passage and/or storage of floodwater, surface runoff or stormwater along lot lines involving the major storm system, grading of all such lots shall be prescribed and established for the passage and/or storage of waters. No structure may be erected which will obstruct the flow of stormwater, no fences, shrubbery, or trees planted, or changes made to the prescribed grades and contours of the specified floodwater or stormwater runoff channels.

(Code 1961, § 35A-71(d))

Sec. 29-130. Manholes.

All sanitary sewer manholes constructed in a floodplain or in an area designed for the storage or passage of flood or stormwater shall be provided with either a watertight manhole cover or be constructed with a rim elevation of a minimum one (1) foot above the high water elevation of the base flood, whichever is applicable to the specific area.

(Code 1961, § 35A-71(e))

Sec. 29-131. Floor elevations.

The floor elevation of any occupied residence or commercial building shall be a minimum of twelve (12) inches above the land immediately surrounding the building. The minimum floor elevation for a structure located on the uphill side of a street shall be at or above the crown of the adjacent street.

(Code 1961, § 35A-71(f))

Sec. 29-132. Stream Buffer Requirements.

Natural stream channels shall be preserved to enhance water quality and stream stability. The stream buffer shall be measured from the streambank of the active channel. Buffer widths shall be meet or exceed the distances specified in the drainage manual. No clearing, grading, filling, or structures are allowed in stream buffer zones other than as authorized in the drainage manual.

Secs. 29-~~132~~133—29-145. Reserved.

**ARTICLE V. BONDS, MAINTENANCE
ASSURANCES AND DRAINAGE
APPROVALS**

Sec. 29-146. Maintenance agreement.

- (a) A maintenance agreement, assuring perpetual maintenance of stormwater management improvements shall be agreed upon by the city and the applicant.

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- (b) Maintenance of detention ponds (wet type) shall be the responsibility of the owner of record and/or the property owners' association.
 - (c) Maintenance of detention basins (dry type) shall be the responsibility of the owner of record and/or property owners' association. The city shall have the primary right to remove sediment, at the owner's expense, when the basin's function is impaired. The owner of record and/or property owners' association shall be responsible for all other maintenance, plantings, reseeding or resodding. The owner shall also be responsible for removing and replacing any landscaping, playground equipment or other facilities within the basin.
 - (d) Maintenance of stormwater control measures (SCM) shall be the responsibility of the owner of record and/or property owners' association. The owner of record and/or property owners' association shall be responsible for all maintenance, debris removal, plantings, reseeding or resodding to maintain the water quality treatment functionality of the SCM.

(Code 1961, § 35A-80; Ord. No. 17,697, § 1a, 3-17-98; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-147. Maintenance bond.

A one-year maintenance bond against defects in workmanship shall be required for any portion of the stormwater management improvements dedicated to the public.

(Code 1961, § 35A-81; Ord. No. 17,697, § 1a, 3-17-98; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-148. Drainage permits and/or approvals.

Upon approval of the final stormwater management and drainage plan, and acceptance and the applicant's assurances of performance and maintenance as provided in this chapter, the department of planning and development, in coordination with appropriate departments, shall approve the plan. Project approval shall be issued in the name of the applicant who shall then be known and thereafter be referred to as the permittee. An approved permit shall set forth the terms and conditions of the approved stormwater management and drainage plan.

(Code 1961, § 35A-82; Ord. No. 17,697, § 1a, 3-17-98; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-149. Engineer of record.

Should the original engineer of record be prevented from completing the project, the permittee shall employ another qualified engineer and notify the department of planning and development immediately.

(Code 1961, § 35A-83; Ord. No. 17,697, § 1a, 3-17-98; Ord. No. 21,867, § 1, 5-19-20)

Secs. 29-150—29-165. Reserved.

ARTICLE VI. LAND ALTERATION REGULATIONS²

DIVISION 1. GENERALLY

Sec. 29-166. Penalty.

Any person convicted of a violation of any of the provisions of this chapter shall be punished as provided in section 1-9.

(Ord. No. 19,353, § 2, 7-19-05)

Sec. 29-167. Findings.

The city has experienced development activity causing the displacement of large amounts of earth and tree cover. Significant problems resulting from such development include flooding, soil erosion and sedimentation, unstable slopes, and impaired quality of life. These problems are a concern because of their negative effects on the safety and general welfare of the community.

(Ord. No. 19,353, § 2, 7-19-05)

Sec. 29-168. Purpose.

The purposes of this chapter are to:

- (1) Prohibit the indiscriminate clearing of property.
- (2) Prevent excessive grading, clearing, filling, cutting or similar activities.
- (3) Substantially reduce flooding, erosion and sediment damage within the city.
- (5) Safeguard the safety and welfare of citizens.
- (6) Establish reasonable standards and procedures for development which prevent potential flooding, erosion and sediment damage.
- (7) Prevent the pollution of streams, ponds and other watercourses by sediment.
- (8) Minimize the danger of flood loss and property loss due to unstable slopes.
- (9) Preserve natural vegetation which enhances the quality of life of the community.
- (10) To conceal hillside scars.
- (11) To preserve the contours of the natural landscape and land forms.

²Editor's note(s)—Ord. No. 19,353, § 2, adopted July 19, 2005, amended Art. VI in its entirety and enacted similar provisions as set out herein. The former Art. VI derived from Ord. No. 18,361, § 2, adopted Sept. 26, 2000.

State law reference(s)—Buffers and screening, § 36-520 et seq.

(Ord. No. 19,353, § 2, 7-19-05)

Sec. 29-169. General requirements.

Persons engaged in land alteration activities regulated by this chapter shall take measures to protect neighboring public and private properties from damage by such activities. The requirements of this chapter, however, are not intended to prevent the reasonable use of properties as permitted by chapter 36 of this Code.

(Ord. No. 19,353, § 2, 7-19-05)

Sec. 29-170. Violation, enforcement and penalties.

- (a) Violations of any provisions of this chapter shall be punishable as provided in section 1-9 of this Code, except that the continuing violation provisions of subsection 1-9(c) shall not apply unless:
 - (1) An approved plan for correction of the violation(s) has not been implemented by the responsible party within the time specified in the plan, or
 - (2) The responsible party fails to submit a required plan within the time specified.
- (b) The responsible party shall be liable for all fines levied and remedial action required under this chapter. Each tree removed or improperly preserved or any other activity proscribed by this chapter shall be a separate violation. Each violation shall be considered a separate offense.
- (c) Any person who engages in land alteration activities regulated by this chapter without obtaining a grading permit shall be required to restore the land to the maximum extent practicable to its original condition in accordance with section 29-196.
- (d) When a violation of this chapter is determined to exist, the city official shall issue written notice of violation to the responsible party. The notice shall specify those sections of this chapter which are determined to be violated and shall include the time and conditions under which the violation(s) shall be corrected. If it is determined that the restoration is not feasible due to imminent construction, (1) a citation may be issued and fines may be levied; (2) the site shall be graded to obtain positive drainage; and (3) the site shall be stabilized with vegetation and the addition of erosion controls. If the responsible party has been issued either a notice of violation or stop work order within the previous twelve-month period, the notice may require the violation(s) to be corrected within twenty-four (24) hours.
- (e) The responsible party shall have a maximum of ten (10) calendar days from the date of the written notice to appeal the finding of the violation(s) to the planning commission as provided in section 29-172.
- (f) If the responsible party fails to comply with the written notice of violation the city official may issue a stop-work order and citation, as provided in section 29-10 and revoke all permits including the grading permit, building permit, and certificate of occupancy. Additionally, when the city official determines that trees to be protected are in the process of being removed or damaged or other emergencies exist, a stop work order to immediately cease and desist may be issued.
- (g) The permit applicant shall have on the project site at all times an agent who is a competent superintendent capable of reading and thoroughly understanding the plans, specifications and requirements for areas of tree protection for the type of work being performed. The superintendent shall have full authority to issue orders or direction to employees working on site, without delay and to promptly supply such materials, labor, equipment, tools, and incidentals as may be required to complete the work in a proper manner. If no superintendent is on site, the city official may issue the notice of violation and stop work order to the person conducting the violation.

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- (h) Removal of trees with a diameter of six (6) inches or greater measured four and one-half (4.5) feet above the ground that have been removed without a grading permit or trees required in an approved plan that have been removed or which die shall be considered a violation.
 - (i) If a land alteration activity causes damage to off-site property or water, the responsible party shall be required to mitigate the damage and install such additional erosion controls, as approved by the city official, to prevent further damage.
 - (j) Damage to private or public property due to hauling operations or operation of construction related equipment from a nearby construction site shall be repaired by the responsible party prior to issuance of a certificate of occupancy.

(Ord. No. 19,353, § 2, 7-19-05)

Sec. 29-171. Conflicts.

Where provisions of this chapter conflict with any other ordinance, regulation, or resolution of the city, the most stringent provision shall be enforced. The provisions of this chapter are considered minimum requirements.

(Ord. No. 19,353, § 2, 7-19-05)

Sec. 29-172. Hearing before planning commission.

Appeals of a notice of violation as provided for in subsection 29-170(e), a grading and drainage plan decision, or a restoration plan requirement as provided in section 29-196 shall be heard by the planning commission provided an appeal is filed by the applicant within ten (10) calendar days after the date of the notice of violation, administrative fee(s) are paid and proper public notice is given. Any hearing before the planning commission regarding such appeal will be conducted in the following manner:

- (a) The appellant shall submit an application and fee as provided in section 29-193 to the department of planning and development within the time limits provided for in subsection 29-170(e). The appellant shall provide:
 - (1) A cover letter that clearly sets forth the provisions of the article that are being appealed; and
 - (2) A copy of all pertinent graphic materials or correspondence.

Appealable issues are as follows:

- 1. For a notice of violation, appealable issues are the determination that a violation has occurred, the time frame for correcting the violation, and the corrective action to be required.
 - 2. For a grading and drainage plan decision, appealable issues are the denial of a grading permit and the terms of a grading permit.
 - 3. For a restoration plan, appealable issues are any requirements of section 29-196.
- (b) Certified mail notice of all appeals shall be given by the applicant to adjacent property owners, including those across a street or alley from the subject property, at least ten (10) days prior to the planning commission meeting at which the appeal is to be considered. At least three (3) business days prior to the hearing, the appellant shall provide proof of notice to the director of the planning and development department. Failure to provide the required notice will cause the appeal to the planning commission to be dismissed, although minor irregularities in the giving of notice may be waived by the commission.
 - (c) At the conclusion of questioning and statements, the chairman will call the appeal to a vote as follows:

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1. For an appeal of the finding of a violation, either to affirm or overturn the finding of violation; upon affirmation of a finding of violation, a citation may be issued to the appellant;
 2. For an appeal of the time to correct the violation, either to affirm the time or determine a new time;
 3. For an appeal of the corrective action, either to affirm, determine a new corrective action, or decide that a corrective action is not feasible. A finding that a corrective action is not feasible or appellant's refusal to comply with the commission's decision may result in a citation being issued to the appellant.
 4. For an appeal of a grading and drainage plan decision, either affirm or overturn the decision to deny a grading permit, either affirm the permit term or establish a new permit term.
 5. For an appeal of a restoration plan or plan provision, either to affirm, determine a new provision or provisions, or decide that restoration is not feasible. A citation may be issued after finding that restoration is not feasible or upon appellant's refusal to fully comply with the restoration measures required by the planning commission.

(d) Decisions by the commission shall be final and are not appealable to the city board of directors.

(Ord. No. 19,353, § 2, 7-19-05; Ord. No. 21,867, § 1, 5-19-20)

Secs. 29-173—29-185. Reserved.

DIVISION 2. GRADING PERMIT AND GRADING AND DRAINAGE PLAN

Sec. 29-186. Grading permit required.

- (a) Any person proposing to engage in clearing, filling, cutting, harvesting, quarrying, construction or similar activities regulated by this chapter shall apply for a Grading Permit by means of a grading permit application obtained from the city as specified in this chapter. The city shall review the submitted documentation within ten (10) working days. Grading permits shall not be issued while applications are incomplete. A landscape permit as required in chapter 15 shall be obtained from the city before constructing or expanding a vehicular use area. Additionally, a permit is required when expanding or rehabilitating a building and landscaping is required under this chapter. Except as otherwise provided in chapter 15, the responsible party shall not allow the removal of more than seven (7) trees within any given twelve-month period without first obtaining a grading permit. No land shall be altered or cleared to the extent regulated in this chapter unless approved by a permit.
- (b) No land alteration shall be permitted until all necessary city approval of all plans and permits, except building permit, have been issued and construction is imminent. Clearing and grading for streets and drainage improvements may be done on residential subdivisions provided the preliminary plat has been approved. In those cases where filling or cutting in areas with seven (7) or fewer trees is to be done, the area is to be graded suitable for mowing and shall be revegetated within twenty-one (21) calendar days of grading completion. If building construction has not commenced and been diligently pursued within six (6) months of grading permit issuance or as approved by appropriate city officials, then all disturbed areas must be restored in accordance per the approved landscape plan. Landscaping and tree requirements in the buffers shall be installed, unless the city official determines that the existing buffers on the site meet the landscape planting requirements of chapter 15 and zoning requirements of chapter 36 of this Code.

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- (c) A grading permit is required for land alteration activities specified in this section. All construction work shall include appropriate drainage and erosion control measures to protect neighboring properties. All land alteration on properties within the designated floodplain requires a grading permit without exception.
 - (d) Grading permits, which may be obtained as part of a building permit, shall be required for any of the following activities:
 - (1) A top of hill or hillside cuts or fills greater than ten (10) feet vertical.
 - (2) Any construction activity where the total volume of cut or fill is equal to or greater than one thousand (1,000) cubic yards.
 - ~~(3) Any construction activity greater than one (1) acre in size or less than one (1) acre that is part of a larger common plan of development.~~
 - ~~(34) Clearing or cutting of trees on property in the city except for:~~
 - i. Those districts zoned agriculture and forestry (AF);
 - ii Mining (M); and
 - iii. Properties ~~abutting on a collector street of two (2) acres or less zoned single or two family districts R1, R2, R3, R4, or R7A, and residentially zoned properties of five (5) acres or less fronting on a residential street less than one (1) acre regardless of zoning.~~
 - (e) Prior to issuance of a grading permit, a grading and drainage plan shall be submitted to and approved by the city for activities specified in subsections (d)(1), (2), ~~(3)~~ and ~~(34)~~.
 - (f) When the application is for a planned zoning district, conditional use permit or subdivision, a sketch grading and drainage plan shall be required in the application to the planning commission only if any of the activities specified in subsection (d) are involved.
 - (g) Utility organizations may obtain a one-time approval from the city for all routine tree trimming and installation, maintenance, replacement and repair of fence and sign posts, telephone poles and other kinds of posts or poles and overhead or underground electric, water, sewer, natural gas, telephone or cable facilities. The approval will include a utility organization and its contractors, agents or assigns and will be permanent in nature as long as the original approved procedures are followed. However, large-scale utility projects involving clearing of areas over twenty-five (25) feet in width shall not be authorized by one-time approval of all projects. In such cases, a separate grading permit must be obtained for each project.
 - (h) One-time approval may be obtained by public or private entities for the stockpiling of construction spoil material and concrete and asphalt rubble at particular locations for a limited time period, not to exceed six (6) months. Grading and replanting of grassed areas and trees is required upon removal of stockpile.

(Ord. No. 19,353, § 2, 7-19-05; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-187. Exemptions and variances.

- (a) A grading permit shall not be required for:
 - (1) Construction on properties in the city. All properties ~~two (2) acres or less zoned single or two family districts, R1, R2, R3, R4 or R7A, and residentially zoned property five (5) acres or less fronting on a residential street less than one (1) acre in size regardless of zoning.~~ All grading and erosion control requirements for these properties will fall under the building permit.
 - (2) Emergency work or repairs to protect health, safety and welfare of the public. Removal of damaged or diseased trees will be permitted by staff upon certification by the appropriate city official of the condition of the trees sought to be removed; and

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- (3) Mining and mining operations because these activities are covered by the Arkansas Open Cut Land Reclamation Act [A.C.A. § 15-57-301, et seq., as amended], which is regulated by the state department of environmental quality.

These exemptions from obtaining a permit do not relieve the property owner and/or applicant from taking measures to protect neighboring public and private properties from damage by exempted activities. If a land alteration activity causes damage to off-site property or water, the responsible party shall mitigate the damage and install such additional erosion controls, as approved by the appropriate city official, to prevent further damage.

- (b) The planning commission may grant variances from the standards set forth in this article provided that a variance request is filed by the applicant, fee(s) are paid, and proper public notice is given. The applicant shall submit a variance request application and fee as provided in section 29-193 to the director of the department of planning and development. As part of the application, the applicant shall provide:
 - (1) A cover letter that clearly sets forth the provisions of the code from which a variance is requested and
 - (2) A copy of all pertinent graphic materials or correspondence.
- (c) Certified-mail notice of all variance requests shall be given by the applicant to adjacent property owners, including those across a street or alley from the subject property, at least ten (10) days prior to the planning commission meeting at which the variance is to be considered. At least three (3) business days prior to the hearing, the applicant shall provide proof of proper notice to the director of public works. Failure to provide the required notice will cause the variance request to the planning commission to be dismissed, although minor irregularities in the giving of notice may be waived by the commission.
- (d) Appeals from the variance decision of the planning commission shall be filed with the appropriate court of jurisdiction within thirty (30) calendar days of the decision of the planning commission.
- (e) Variances may be granted, to the extent that the change will not be contrary to the purposes set forth in section 29-168:
 - (1) To clear and grade a multi-lot or multi-phase development where construction is not imminent on all phases of the development;
 - (2) To harvest timber on land not otherwise allowed under this section in accordance with a reasonable staff approved forestry management plan which is determined to be reasonable and prepared by a registered forester or certified arborist using best management practice guidelines for silviculture in urban areas, that complies with the purposes and requirements of this article; however, clear cutting or total harvests shall not be allowed;
 - (3) To exceed the cut, fill, and slope requirements of section 29-190;
 - (4) From the restoration requirements of section 29-196;
 - (5) To clear and grade property where building construction is not imminent provided that the clearing and grading is performed in accordance with the provisions of section 29-197.
- (f) The planning commission may impose conditions on the approval of variances. Where variances are granted, applicants shall otherwise comply with all other provisions of the ordinance including, but not limited to, obtaining a grading permit prior to construction or tree removal, meeting the standards for grading, drainage, tree removal, maintaining buffer zones, erosion controls, and establishing of vegetative cover following grading activities.

(Ord. No. 19,353, § 2, 7-19-05; Ord. No. 20,588, § 1, 6-5-12; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-188. Contents of grading and drainage plans.

- (a) The sketch grading and drainage plan shall identify the following:
- (1) Acreage of the proposed project.
 - (2) Land areas to be disturbed.
 - (3) Stages of grading showing the limits of sections to be graded and indicating the approximate order of development.
 - (4) The height and slope of cuts and fills. Cross sections may be required every fifty (50) feet on property where the depth of excavation or fill exceeds ten (10) feet, showing original and final grades and will include visual aids to show how the final development, including planting, and landscaping will look.
 - (5) Provisions for collecting and discharging surface water.
 - (6) Erosion and sediment measures, including structural and vegetative measures for permanent slopes and bank stability.
 - (7) Seal and signature of a registered engineer, architect, or landscape architect, qualified under state regulations to certify that the sketch grading and drainage plan complies with this chapter. However, plans for less than ~~two (2) acres, or residentially zoned areas less than five (5) acres~~ one (1) acre, where cuts or fills are not greater than ten (10) feet in height or where only tree clearing activities are to be undertaken, may be prepared by a contractor or the property owner upon city approval.
- (b) A final grading and drainage plan shall include the following information prior to issuance of grading and special flood hazard development permits:
- (1) Seal of a registered engineer, architect or landscape architect qualified under state regulations to certify that the grading and drainage plan complies with this chapter.
 - (2) A vicinity drawing showing location of property lines, location and names of all existing or platted streets or other public ways within or immediately adjacent to the tract.
 - (3) Location of all known existing sewers, water mains, culverts and underground utilities within the tract and immediately adjacent thereto; location of existing permanent buildings on or immediately adjacent to the site if right of entry can be obtained to locate the utilities.
 - (4) Identification of rights-of-way or easements affecting the property.
 - (5) Soil-loss calculations as contained in the stormwater management and drainage manual.
 - (6) A plan of the site at a minimum scale of one (1) inch equals one hundred (100) feet.
 - (7) Such other information required by city officials, including, but not limited to:
 - a. Address and telephone number of owner, permit applicant and the designated agent responsible for maintenance of erosion and sediment control measures.
 - b. The approximate location and width of existing and proposed streets.
 - c. The locations and dimensions of all proposed or existing lots.
 - d. The locations and dimensions of all parcels of land proposed to be set aside for parks, playgrounds, natural condition perimeters, public use, or for the use of property owners in the proposed development.
 - e. Existing and proposed topography at a maximum of five-foot contour intervals for steep terrain; two-foot contour intervals for ten (10) percent or less grade terrain.

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- f. An approximate timing schedule, indicating the anticipated starting and completion dates of the development; a timing schedule for the sequence of grading and application of erosion and sediment control measures.
 - g. Acreage of the proposed project.
 - h. Identification of unusual material or soils in land areas to be disturbed. If any surface indications of unusual materials or soils that would cause street or lot instability, such as nonvertical tree growth, old slides, seepage, or depressions in the soil are visible before grading, they should be noted and accompanied by the engineer's, architect's, landscape architect's, or contractor's recommendation for correcting such problem areas.
 - i. Identification of suitable material to be used for fills shall be accomplished before actual filling begins. If there are any surface indications that local material is not suitable for fills, those areas to be filled with outside material should be identified and the type and source of the fill noted.
 - j. Specification of measures to control runoff, erosion and sedimentation during the process of construction, noting those areas where control of runoff will be required during construction and indicating what will be used, such as ~~straw bales~~silt fence, sediment basins, silt dams, brush check dams, lateral hillside ditches, catch basins, etc.
 - k. Measures to protect neighboring built-up areas and city property during process of construction, noting work to be performed, such as cleaning existing ditches, storm culverts and catch basins or raising existing curbs in neighboring areas.
 - l. Provisions to stabilize soils and slopes after completion of streets, sewers and other improvements, noting on the grading plan when and where groundcover will be planted, also noting any other means to be used such as placement of reinforced turf, staked sod, stone embankments, and riprap or construction of retaining walls.
- (8) The grading and drainage plan shall include areas of tree protection, erosion and sediment control provisions meeting standards established by the city in the stormwater management and drainage manual. Tree lines and individual trees may be required to be shown.

(Ord. No. 19,353, § 2, 7-19-05; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-189. Issuance procedure.

- (a) The following procedure shall be implemented for the issuance of a grading permit:
- (1) The city official shall approve, disapprove or recommend modification of the grading and drainage plan in writing within ten (10) working days after the date of the submittal of a completed application.
 - (2) Applications for which planning commission approval is required shall be placed on the next available planning commission agenda following city staff review. Sketch grading and drainage plans shall be reviewed by the city and a report prepared by the time of the applicable subdivision subcommittee meeting, if possible, but not later than the applicable planning commission meeting.
 - (3) Except for residential subdivision work, the approval of a sketch grading and drainage plan shall not eliminate the need to submit and have approved a final grading and drainage plan prior to issuance of a building permit or the initiation of land alteration activities.
 - (4) For residential subdivision work, only a sketch grading and drainage plan shall be required, and clearing and grading work may proceed upon approval of the preliminary plat and issuance of a grading permit. The sketch plan for residential subdivisions shall indicate how runoff, erosion, and sedimentation will be controlled.

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- (b) Upon approval of the final plan, the city shall issue a grading permit contingent upon the approval of other governing agencies as applicable. A superintendent capable of understanding the plans and with authority to issue orders to employees performing the land alteration shall properly supervise the land alteration activities.
 - (c) The city official may issue a stop work order if, upon inspection, it is determined that the work is not progressing in accordance with the approved plan.
 - (d) Groups of trees and individual trees that are not to be removed or that can be preserved with reasonable effort in site design or are located within required undisturbed buffer areas shall be protected during construction by protective fencing. The buffer and any preservation areas shall not be used for material storage or for any other purpose. The fencing shall be placed and maintained by the owner until all exterior construction except landscaping has been completed. Individual trees or groups of trees to be preserved outside the buffer area shall be fenced at no less than seventy-five (75) percent of the area within the drip line of the critical root zone and shall be flagged with bright orange vinyl tape wrapped around the main trunk at a height of four (4) feet or more such that the tape is clearly visible to workers on foot or operating equipment.
 - (e) The city official may allow minor modifications of the plan to alleviate particular problems during the process of construction. In reviewing a request for modifications, the city official may require from the applicant's engineer, architect, or landscape architect appropriate reports and data sufficient to make a decision on the request.
 - (f) Substantial changes to plans as determined by the appropriate city official in sketch or final form shall only be permitted by the planning commission.

(Ord. No. 19,353, § 2, 7-19-05; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-190. Grading and drainage plan requirements.

Preparation of grading and drainage plans shall follow the stormwater management and drainage manual and shall be designed on the basis of the following considerations:

- (1) A maximum of thirty (30) vertical feet of fill or excavation (such as three (3), ten-foot vertical terraces or two (2), fifteen-foot vertical terraces) is permitted; however, additional development areas may be constructed a minimum of one hundred fifty (150) feet in width and at a slope of no more than eight (8) percent. The maximum of thirty (30) feet of fill or excavation may again be utilized.
 - a. The depth of fill or excavation shall be measured from the finish grade elevation to the original ground line elevation.
 - b. If a terrace is in a straight line more than two hundred (200) feet, a breakup of the terrace is required for each two hundred (200) feet. The break can be achieved by means of a curved section, jog, or visual aesthetic as approved by staff.
 - c. For excavations or fills constructed with slopes flatter than 3:1 (three horizontal to one vertical), terraces are not required nor is there a limit on the height of cut or fill. Planting requirements on these 3:1 slopes shall be the same as required for terraces and shall be spaced uniformly over the slope.
 - d. Cuts or fills shall be limited to ten (10) feet in height or to fifteen (15) feet if architectural stone is included to protect the vertical face. A series of smaller cuts or fills with terraces, preserving portions of natural vegetation and providing areas for planting, shall be used in situations where more than ten (10) feet of cut or fill is needed.

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- e. Terracing width shall be at a ratio of at least one (1) foot of horizontal terrace for every one (1) foot of vertical height, up to a maximum of ten (10) feet. Terraces shall be landscaped with dense evergreen plantings sufficient to screen the cut or fill slope. The terrace may be sloped to drain up to one (1) foot in ten (10) feet of width.
 - f. If the slope of the cut or fill is faced with an architectural stone wall, the terrace plantings are to consist of a minimum of two (2) rows of trees four (4) feet between the rows, staggered not more than twenty (20) feet on centers or as approved by the appropriate city official.
 - g. Shrubs and groundcover shall be required in accordance with chapter 15 of this Code.
 - h. Slopes steeper than 3:1 may be allowed for street improvements in the right-of-way due to rock outcropping or extreme slope intercepts if approved by the appropriate city official.
- (2) Development shall be planned to fit topography, soils, geology, hydrology, and other existing site conditions.
 - (3) Provisions shall be made for safety against unstable slopes or slopes subject to erosion and deterioration. The city official may require certified geotechnical analysis for sliding and global stability safety. New cuts and fills forming channel banks may require permanent provisions for erosion control upon determination by the city official.
 - (4) Grading shall complement natural landforms.
 - (5) After grading, all paving, seeding, sodding, or mulching shall be performed in accordance with a reasonable schedule approved by the city official.
 - (6) Open areas not planned for immediate use shall be seeded or sodded. Soil which is exposed for more than twenty-one (21) days with no construction activity shall be seeded, mulched or revegetated in accordance with this Code.
 - (7) Areas not well suited to development, as evidenced by existing competent soils, geology, hydrology investigations and reports, should be allocated to open space and recreational uses.
 - (8) The potential for soil loss shall be minimized by retaining natural vegetation wherever possible.
 - (9) Appropriate provisions such as those in the stormwater management and drainage manual shall be used to accommodate stormwater runoff and soil loss occasioned by changed soil and surface conditions during and after development, including the use of vegetation and limitations on soil exposure. If staff determines upon visual inspection that excessive silt from the construction has migrated on- or off-site, additional measures to reduce erosion may be required.
 - (10) Permanent improvements such as streets, storm sewers, curb and gutters, and other features for control of storm runoff shall be scheduled as soon as economically and physically feasible before removing vegetation cover from the area, so that large areas are not left bare and exposed for long periods of time beyond the capacity of temporary control measures.
 - (11) A temporary or permanent sediment basin, debris basin, desilting basin or silt trap shall be installed and maintained to substantially reduce sediment from water runoff upon determination by the city official. The volume of the sediment basin shall be three thousand six hundred (3,600) cubic feet per acre for property with average slope steeper than five (5) percent, or one thousand eight hundred (1,800) cubic feet per acre for property with an average slope five (5) percent or flatter. A properly sized sediment basin is required for each separate drainage area within the property being developed.
 - (12) Construction access shall be limited to locations as approved by the city official. Construction access points shall be paved in uniformly graded stone without fines for a minimum length of twenty (20) percent of the lot depth or fifty (50) feet, whichever is greater, up to a maximum of one hundred (100) feet to prevent tracking onto the city street.

- (13) Appropriate provisions such as the addition of water or dust retardants shall be utilized to prevent excessive particulate matter from becoming airborne.
- (14) A perimeter buffer strip shall be temporarily maintained around disturbed areas for erosion control purposes and shall be kept undisturbed except for reasonable access for maintenance. The width of the strip shall be six (6) percent of the lot width and depth. The minimum width shall be twenty-five (25) feet and the maximum shall be forty (40) feet. In no event shall these temporary strips be less than the width of the permanent buffers required for the development.
- (15) ~~A minimum strip twenty-five (25) feet wide, undisturbed except for reasonable access, shall be provided along each side of streams having a ten-year storm of greater than one hundred fifty (150) cubic feet per second. A stream buffer, undisturbed except for reasonable access, shall be provided along each side along each side of streams according to the requirements in the drainage manual. The twenty five foot stream buffer strip shall be measured from the top of the bank. An exception to this requirement is allowed where the only work being done on the site is public street construction.~~
- (16) Care shall be exercised to minimize the risk of damage from or to pedestrian and vehicular traffic in the vicinity of a cut or fill by placement of handrails, guardrails, fencing or landscaping.
- (17) Additional landscape treatment shall be provided in accordance with chapter 15 of this Code.

(Ord. No. 19,353, § 2, 7-19-05; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-191. Unified plan and permit.

One (1) plan may be submitted incorporating all provisions for compliance with the applicable city zoning, landscaping, drainage detention, grading, clearing, filling, cutting, quarrying, and construction requirements.

(Ord. No. 19,353, § 2, 7-19-05)

Sec. 29-192. Reserved.

Sec. 29-193. Fees.

A fee for each grading permit shall be paid to the city as follows:

Total Project Area	Fee
Less than ½ acre	\$100.00
½ to 1 acre	\$200.00
Greater than 1 acre	\$200.00 for first acre, \$100.00 for each additional acre.

Fees for each grading permit will double if the grading permit is issued after a notice of violation(s) has been issued for violation(s) of the land alteration regulations that have occurred on the subject property.

A fee for each appeal and variance shall be paid to the city as follows:

Flat fee \$50.00
 plus \$5.00 per acre of
 the total project area

(Ord. No. 19,353, § 2, 7-19-05; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-194. Inspection and compliance.

- (a) The department of planning and development shall be responsible for determining whether construction is proceeding according to the approved grading and drainage plan.
- (b) City officials shall perform inspections of the development site. In applying for a grading permit, the applicant shall be deemed to have consented to such inspections.
- (c) The city official, through such periodic inspections, shall ensure that all erosion control measures are implemented within one (1) week after cessation or completion of all or portions of authorized work. The city official may where necessary, order remedial work or issue a stop work order in accordance with this chapter.

(Ord. No. 19,353, § 2, 7-19-05; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-195. Reserved.

Sec. 29-196. Land restoration requirements.

All land restoration corrective action activities resulting from land alteration violations shall comply with following conditions:

- (1) Submit site restoration and erosion control plans to department of planning and development. Prior to any restoration work, a release of affected departments will be obtained.
- (2) All restoration work must be begin within ten (10) calendar days of plans approval and conclude within thirty (30) calendar days of commencement unless otherwise provided by the approved plan or other uncontrollable conditions.
- (3) Prior to commencing restoration activities, erosion controls such as silt fence, hay bales, and rock check dams shall be installed and shall remain in place until restoration activities are complete.
- (4) Return all ground surface contours to those in existence prior to land alteration violation while maintaining positive drainage. All slopes must be 3:1 or flatter. Terraces are prohibited.
- (5) All spoil materials and debris including tree debris must be removed from the property.
- (6) Replant one (1) tree for every seven hundred fifty (750) square feet of the area of violation, as determined by the city official, with an average linear spacing of not less than thirty (30) feet with at least two-inch caliper nursery- or farm-grown trees of the same species as those cleared, harvested, removed or damaged. Planting specifications shall be provided on the plan including soil preparation, staking and other necessary measures to ensure trees thrive. If the city official determines the current season of the year is not conducive to sustaining life for trees, the time compliance with these provisions may be extended for not more than one hundred eighty (180) days.
- (7) Establish a permanent vegetative cover of perennial grasses with the addition of fertilizer mixes conducive to site conditions.
- (8) For one (1) year, restored trees shall be watered once per month and additionally every ten (10) calendar days during the months of June, July, August, and September.
- (9) Final inspection and approval is required following completion of required restoration activities. All incomplete items or additional work identified during the final inspection must be completed within seven (7) calendar days following the final inspection.

(10) All restoration work is to be guaranteed by the responsible party in the form of cash, surety bond or letter of credit as referenced in subsection 31-431(2) for two (2) years following its installation and approval by the department of planning and development.

(11) All permits and approvals must be obtained from all federal, state, and local agencies prior to commencing work.

(12) All restoration work shall be required as stated above unless approved otherwise by the city official.

(Ord. No. 19,353, § 2, 7-19-05; Ord. No. 21,867, § 1, 5-19-20)

Sec. 29-197. Advanced grading plan requirements.

- (a) All advanced grading projects shall be performed under plans approved in conformance with the requirements of this section or as approved by the commission.
- (b) Once clearing and grading operations commence, the work described in the plan shall be expeditiously completed in the time frame set forth in the plan unless specifically limited by the grading permit and shall not exceed one (1) year in duration from the time work commences to installation of all final erosion control measures and vegetation.
- (c) A survey, grading and drainage plan, storm water detention basin design and line of sight illustrations from adjacent streets and properties must be provided to the planning commission for review.
- (d) Plans shall provide for visual screening of the completed area by providing undisturbed perimeter buffer strips and earthen berms. In cases where maintenance of an undisturbed buffer is deemed not practical to provide screening, earthen berms, tree plantings or other suitable measures may be required.
- (e) Undisturbed areas designated for temporary buffers shall be kept undisturbed except for reasonable access to the site. The width of the temporary buffer strip shall be six (6) percent of the lot width and depth. The minimum width shall be fifty (50) feet where the subject property is adjacent to other properties, residential streets, collector streets and industrial streets. The minimum width shall be eighty (80) feet where the subject property is adjacent to city parks, and arterial streets. In no event shall these temporary strips be less than the width of the permanent buffers required for the development. The minimum required width shall not exceed one hundred (100) feet.
- (f) All buffers required in conjunction with an advanced grading project shall be considered temporary and shall be maintained until the property is developed.
- (g) Construction access points through the perimeter buffer zones shall be limited in number and constructed to the minimum width needed to facilitate access. A curved or angled road design should be provided to limit the visibility of the interior grading work from adjacent streets.
- (h) If the property has seven (7) or fewer trees per acre, screening of the site with berms, undisturbed buffer zones, and tree plantings may be omitted if a suitable vegetative soil cover is provided.
- (i) Stormwater detention and water quality stormwater control measures must be constructed on-site in accordance with chapter 29, article IV. Design criteria and performance standards and maintained following the completion of grading activities and land stabilization.
- (j) At the completion of land alteration activities, a minimum of six (6) inches of suitable topsoil shall be placed over all disturbed areas and permanent vegetative cover shall be established. Topsoil shall be suitable clay or silt loam soil capable of supporting perennial vegetation. If on-site soil is suitable, the topsoil may be stripped from the site prior to grading, or suitable soil may be brought in from off-site.
- (k) A permanent vegetative cover of suitable perennial grass shall be established over all disturbed areas. Where indicated by soil tests, ph adjustment and the addition of fertilizer may be required.

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- (l) All erosion and stabilization controls, including permanent vegetation and plantings, and stormwater detention systems, are to be maintained by the responsible party for a period of two (2) years following the completion of site grading. Periodic mowing, generally twice per year or more often if required by the City of Little Rock Code or Ordinances, shall be provided to encourage perennial grass growth.
 - (m) Maintenance for the two-year period shall be guaranteed through posting of cash, surety bond or letter of credit as referenced in subsection 31-431(2) at the time of final inspection of the grading activities.
 - (n) All required federal, state and local permits and approvals shall be obtained prior to commencement of land alteration activities.
- (Ord. No. 20,588, § 1, 6-5-12)