CHAPTER 30-4. DRAINAGE

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ARTICLE 1. GENERAL PROVISIONS.

§ 30-4-1 DEFINITIONS

In this chapter:

(1) ADVERSE FLOODING IMPACT means an increase in flood risk or hazards.

(2) DEVELOPMENT APPLICATION means an application required under Title 25 for development, such as an application for subdivision, site plan, or building permit.

(3) DIRECTOR, when used without a qualifier, means the director of the Watershed Protection Department, or the director's designee.

(4) DRAINAGE EASEMENT means an easement or right-of-way for a drainage facility required by Section 25-7-152 (*Dedication of Easements and Rights-Of-Way*).

(5) EROSION HAZARD ZONE means an area where future stream channel erosion is predicted to occur using an analysis of land cover, hydrology, geology, and soils and taking into consideration protective works to be provided as prescribed in the Drainage Criteria Manual. An erosion hazard zone provides a boundary outside of which resources are not expected to be threatened as a result of future stream erosion.

(6) FEMA means the Federal Emergency Management Agency.

(7) FEMA FLOODPLAIN means a special flood hazard area delineated on a flood insurance rate map.

(8) FLOOD INSURANCE RATE MAP means an official map of a community on which FEMA has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

(9) 100 YEAR FLOODPLAIN means the 100-year floodplain calculated under fully developed conditions as prescribed by the Drainage Criteria Manual.

(10) 25 YEAR FLOODPLAIN means the 25-year floodplain calculated under fully developed conditions as prescribed by the Drainage Criteria Manual.

(11) WATERWAY means a watercourse, drainage way, branch, creek, or stream including, but not limited to, the limits of the 100-year and 25-year floodplains.

§ 30-4-2 [1] OBSTRUCTION OF WATERWAYS PROHIBITED.

Unless authorized by a subdivision construction plan approved under [this title, City Code Title 25 *(Land Development),* or] County Code Chapter 64 *(Regulations For Flood Management And Guidelines For Development Permits),* or a development application [site plan] approved under City Code Title 25 [City Code Chapter 25-5 *(Site Plans)*], a person may not place, or cause to be placed, an obstruction in a waterway.

§ 30-4-3 [2] DUTY TO MAINTAIN UNOBSTRUCTED WATERWAYS.

The person in control of real property traversed by a waterway shall keep the waterway free from an obstruction that is not authorized by a development application approved under Title 25 or County Code Chapter 64 [site plan].

§ 30-4-4 [3] STANDING WATER DECLARED A NUISANCE.

A pool of standing water in a waterway that is caused by an unauthorized obstruction in the waterway is declared to be a nuisance.

[§ 30-4-4 25-YEAR AND 100-YEAR FLOODPLAIN DETERMINATION.

In this chapter, a reference to the 25-year floodplain or the 100-year floodplain means the 25-year or 100-year floodplain as that floodplain is calculated to exist under fully developed conditions as determined under the Drainage Criteria Manual.]

§ 30-4-5 COMPUTATION OF STORMWATER RUNOFF.

Stormwater runoff shall be computed on the basis of a fully developed contributing drainage area or watershed as determined under the Drainage Criteria Manual.

ARTICLE 2. DRAINAGE STUDIES; EROSION HAZARD ANALYSIS;

FLOODPLAIN [~~AND FLOODWAY~~] DELINEATION.

§ 30-4-31 SINGLE OFFICE AUTHORIZED TO REQUIRE DRAINAGE STUDIES.

(A) The single office may require the owner of real property to provide, at the owner's expense and as a condition for development application approval, a drainage study for the total area to be ultimately developed. [~~This requirement is a condition of approval for a preliminary plan or for a final plat if a preliminary plan is not required.~~]

(B) The drainage study must be in accordance with the [~~Administrative Manual and the~~] Drainage Criteria Manual.

(C) If a drainage study is required under this Section [~~Until the single office receives the drainage study~~], the single office may not accept for review a development application [~~construction plan~~] for any portion of the proposed development until the single office has received the required drainage study.

§ 30-4-32 SINGLE OFFICE AUTHORIZED TO REQUIRE EROSION HAZARD ZONE ANALYSIS.

(A) The single office may require the owner of real property to provide, at the owner's expense and as a condition for development application approval, an analysis to establish the erosion hazard zone if the proposed development is:

(1) within 100 feet of the centerline of a waterway with a drainage area of 64 acres or greater; or

(2) located where significant erosion is present.

(B) The erosion hazard zone analysis must be in accordance with the Drainage Criteria Manual.

(C) If an erosion hazard zone analysis is required under this section, the single office may not accept for review a development application for any portion of the proposed development until the single office has received the required erosion hazard zone analysis.

§ 30-4-33 [~~32~~] FLOODPLAIN MAPS, DELINEATION, AND DEPICTION.

(A) [~~In this section:~~

~~(1) DRAINAGE EASEMENT means an easement or right-of-way for a drainage facility required by Section 30-4-152 *(Dedication Of Easements And Rights-Of-Way).*~~

~~(2) FEMA FLOODPLAIN means a special flood hazard area delineated on a flood insurance rate map.~~

~~(3) FLOOD INSURANCE RATE MAP means an official map of a community on which the Federal Emergency Management Agency has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.~~

~~(B)~~] The director shall designate and maintain official floodplain maps[~~ delineating the 100-year floodplain~~].

(B) [~~(C)~~] If an official floodplain map is not delineated [~~available~~], the owner of property to be developed shall calculate the boundaries of the 100-year floodplain in accordance with the Drainage Criteria Manual and submit the calculation to the single office for approval.

(C) [~~(D)~~] If the single office determines that FEMA [~~Federal Emergency Management Agency~~] regulations require a submission to the agency of a request for a flood insurance rate

map revision, the single office may require that the revision request to FEMA be submitted by the owner of property to be developed [~~submit the revision request~~].

(D) [~~(E)~~] A person who files a development application [~~an application for approval of a preliminary plan, final plat, or subdivision construction plan~~] shall depict, as applicable:

(1) on a preliminary plan or subdivision construction plan:

(a) a 100-year floodplain;

(b) a FEMA floodplain; and

(c) a drainage easement or proposed drainage easement; [~~or~~]

(2) on a final plat:

(a) a drainage easement; and

(b) a portion of a FEMA floodplain that is outside a drainage easement.

(E)[~~(F)~~] If a portion of a FEMA floodplain is outside a drainage easement, the owner of property to be developed shall, on a final plat:

(1) identify the portion of the FEMA floodplain that is outside the drainage easement, including the community and panel number of the flood insurance rate map; and

(2) include a note that:

(a) refers the reader to federal and local regulations governing development in a FEMA floodplain;

(b) states that flood insurance may be required; and

(c) describes efforts to revise the flood insurance rate map.

ARTICLE 3. REQUIREMENTS FOR APPROVAL.

§ 30-4-61 CRITERIA FOR APPROVAL OF DEVELOPMENT APPLICATIONS [~~PLATS AND CONSTRUCTION PLANS~~].

(A) A development application [~~final plat or subdivision construction plan~~] may not be approved unless:

(1) the proposed development application demonstrates[~~plat or construction plan provides a~~] sufficient capacity [~~waterway~~] for the design flood, as determined under the Drainage Criteria Manual;

(2) each proposed improvement is sufficiently strong to resist:

(a) external pressure caused by earth or building; and

(b) internal pressure or abrasion caused by water or debris;

(3) the proposed grades will not permit water to gather in a pool that may become stagnant, excluding variable pools in creek beds as a result of natural channel design;

(4) temporary and permanent measures to control erosion are sufficient to minimize siltation of the waterway, as determined under the Environmental Criteria Manual; and

(5) the proposed development:

(a) will not result in additional [~~identifiable~~] adverse flooding impact on other property;

(b) except as provided by Subsection (B), to the greatest extent feasible preserves the natural and traditional character of the land and the waterway located within the 100-year floodplain; [~~and~~]

(c) except as provided by Subsection (C), includes on-site control of the two-year peak flow, as determined under the Drainage Criteria Manual and the Environmental Criteria Manual;[~~.~~]

(d) will not result in additional erosion impacts on other property; and

(e) locates all proposed improvements outside the erosion hazard zone, unless protective works or bank stabilization is provided as prescribed in the Drainage Criteria Manual.

(B) A development application that proposes floodplain[~~This subsection provides for~~] modification shall comply with Section 30-5-364 (*Floodplain Modification*).[~~of the natural and traditional character of land or a waterway located within the 100-year floodplain.~~

~~(1) An applicant who seeks to modify the natural and traditional character of land or a waterway must:~~

~~(a) provide the single office with an analysis that:~~

~~(i) is prepared by a qualified environmental professional;~~

~~(ii) is based on a field investigation; and~~

~~(iii) assesses the suitability of maintaining the land's or waterway's natural and traditional character and the effects of the proposed modification on the natural and traditional character; and~~

~~(b) submit a request to the Federal Emergency Management Agency for a revision to the applicable flood insurance study; and~~

~~(c) provide assurances satisfactory to the floodplain administrator that the waterway's flood carrying capacity is maintained.~~

~~(2) The single office shall permit a modification if the single office determines that:~~

~~(a) the waterway is subject to accelerated streambank erosion;~~

~~(b) the waterway is subject to scouring, erosion, or sediment deposition that alters the flow of the fully-developed two-year storm event;~~

~~(c) a modification is necessary to provide a reasonable location for an outlet into the waterway from an upland drainage system;~~

~~(d) the natural and traditional character has already been significantly altered by human activity; or~~

~~(e) the modification is outside of:~~

~~(i) the critical water quality zone;~~

~~(ii) the floodway; and~~

~~(iii) a riparian ecosystem associated with the waterway, if any.~~

~~(3) The single office may permit a modification for the construction of a structural flood control measure, including a flood wall or levee, if the single office determines that:~~

~~(a) an existing structure is within the 100-year floodplain; or~~

~~(b) the 100-year floodplain is more than 500 feet wide.~~]

(C) A proposed development may provide off-site control of the two-year peak flow if the off-site control does not cause:

(1) an adverse water quality impact from increased in-stream peak flow; or

(2) streambank erosion.

§ 30-4-62 CERTIFICATE OF PROFESSIONAL ENGINEER REQUIRED FOR CERTAIN ALTERATIONS AND IMPROVEMENTS.

(A) The single office may not accept a plan or specification for a proposed alteration or improvement of a bed or bank of a waterway unless the plan or specification is accompanied by a certificate bearing the seal of a Texas professional engineer certifying that:

(1) the hydraulic and structural design is adequate; and

(2) the proposed alteration or improvement complies with the ordinances of the city and county, the Drainage Criteria Manual, and the laws of this state.

(B) Subsection (A) does not prohibit the single office from accepting a plan or specification for a minor alteration or improvement that, in the judgment of the single office, does not require certification by a Texas professional engineer.

§ 30-4-63 APPROVAL BY SINGLE OFFICE OF CERTAIN PERMITS AND CERTIFICATES.

If a development application [~~plat or subdivision construction plan~~] requires the completion or partial completion of a drainage improvement before a building may be constructed on a lot, a building permit, certificate of compliance, or development permit may not be issued for the lot unless the single office approves the issuance.

[~~ARTICLE 4. DESIGN AND CONSTRUCTION STANDARDS~~.]

§ 30-4-64 [~~121~~] DESIGN AND CONSTRUCTION OF DRAINAGE FACILITIES AND IMPROVEMENTS.

The design and construction of a drainage facility or improvement must:

(1) be in accordance with the Drainage Criteria Manual; and

(2) provide for maintenance and protection from erosion in accordance with the Environmental Criteria Manual.

[~~§ 30-4-122 ENCLOSED STORM SEWER SYSTEM.~~

~~An enclosed storm sewer system is required to accommodate the portion of the design flow that exceeds street capacities as determined under the Drainage Criteria Manual.~~]

§ 30-4-65 [~~123~~] ENCLOSED STORM DRAINS [~~SEWERS~~], BRIDGES, AND CULVERTS.

(A) [~~Except as provided in Section 30-4-125 *(Open Drainage Ditches)*, the subdivider shall install enclosed storm sewers, bridges, and culverts throughout the entire length of the drainage area in a subdivision.~~

~~(B)~~]The single office must approve the plans and specifications for a storm drain [~~sewer~~], bridge, or culvert.

(B) [~~(C)~~] The county's Transportation and Natural Resources Department or the city manager may inspect [~~supervise~~] the construction of each [~~a~~] storm drain [~~sewer~~], bridge, or culvert.

[~~§ 30-4-124 MANHOLES REQUIRED FOR COVERED WATERCOURSES.~~

~~(A) If a creek, branch, drainway, or watercourse is covered, manholes shall be installed at intervals of not more than one-half the length of an average city block.~~

~~(B) Each manhole required by Subsection (A):~~

~~(1) must have a removable cover; and~~

~~(2) must be at least two feet in diameter.~~

~~(C) Work required by Subsection (A):~~

~~(1) must be done under the supervision of the county's Transportation and Natural Resources Department or the city manager; and~~

~~(2) may be inspected at any time by an officer or employee of the city or county, as applicable.~~

~~**§ 30-4-125 OPEN DRAINAGE DITCHES.**~~

~~An open drainage ditch may be constructed only if the platting official determines that the ditch will not adversely affect the public health, safety, or general welfare.~~]

ARTICLE 4 [~~5~~]. RESPONSIBILITIES OF OWNER OR DEVELOPER.

§ 30-4-151 STORMWATER CONVEYANCE AND DRAINAGE FACILITIES.

(A) The owner or developer of property to be developed is responsible for the conveyance of all stormwater flowing through the property, including stormwater that:

(1) is directed to the property by other developed property; or

(2) naturally flows through the property because of the topography.

(B) Future upstream development shall be accounted for as determined under the Drainage Criteria Manual.

(C) If the construction or improvement of a storm drainage facility is required along a property line that is common to more than one property owner, the owner proposing to develop the property is, at the time the property is developed, responsible for each required facility on either side of the common property line.

(D) The responsibility of the owner proposing to develop the property includes the responsibility to dedicate or obtain the dedication of any right-of-way or easement necessary to accommodate the required construction or improvement of the storm drainage facility.

(E) If an owner of property proposes to develop only a portion of that property, a stormwater drainage facility to serve that portion of the property proposed for immediate development or use is required, unless the platting official determines that construction or improvement of a drainage facility outside that portion of the property to be developed is essential to the development or use of the property to be developed.

(F) The owner or developer shall provide adequate off-site drainage improvements to accommodate the full effects of the development. The city or county may assist the owner or developer in the acquisition of an interest in property necessary to provide an off-site improvement, if the owner or developer:

(1) by affidavit, certifies that a bona fide attempt to provide the off-site drainage improvements has not been successful; and

(2) provides an adequate guarantee that the owner or developer will:

(a) finance the entire cost of acquiring the necessary property interest; and

(b) retain full responsibility for construction of the required off-site improvement.

§ 30-4-152 DEDICATION OF EASEMENTS AND RIGHTS-OF-WAY.

(A) The owner of real property proposed to be developed shall dedicate to the public an easement or right-of way for a drainage facility, open or enclosed, and stormwater flow to the limits of the 100-year floodplain, as prescribed in the Drainage Criteria Manual.

(B) An easement or right-of-way required by Subsection (A) must be of sufficient width to provide continuous access for the operation, maintenance, or repair of a drainage facility as prescribed in the Drainage Criteria Manual[~~:~~

~~(1) a minimum of 25 feet in width for an open drainage system; or~~
~~(2) a minimum of 15 feet in width for an enclosed drainage system.]~~

(C) The owner of the property shall dedicate any additional easement or right-of-way that is necessary to allow continuous access for the operation, maintenance, or rehabilitation of a drainage facility.

(D) A part of a lot or tract of land that is located in an easement or right-of-way required by this section may be included as part of the area of the lot or tract of land in the calculation of density or impervious cover.

§ 30-4-153 DETENTION BASIN MAINTENANCE AND INSPECTION.

(A) In this section:

(1) COMMERCIAL DEVELOPMENT means all development other than Residential Development.

(2) COMMERCIAL BASIN means a required detention basin or appurtenance that receives stormwater runoff from a Commercial Development.

(3) DCM STANDARDS means the provisions in the Drainage Criteria Manual regarding maintenance of a required detention basin or appurtenance.

(4) RESIDENTIAL DEVELOPMENT means development of two dwelling units or less per lot.

(5) RESIDENTIAL BASIN means a required detention basin or appurtenance that receives stormwater runoff from a Residential Development.

(B) The record owner of a commercial development shall maintain the commercial basin serving the commercial development in accordance with the DCM standards, whether or not the commercial basin is located on the same property as the commercial development. The record owner shall provide the City proof of the right to access and maintain the commercial basin if it is not located on the same property as the commercial development.

(C) If more than one commercial development is served by a single commercial basin, the record owners of the commercial basin and all commercial developments served by the commercial basin shall be jointly and severally responsible for maintenance of the commercial basin in accordance with the DCM standards.

(D) Alternative maintenance arrangements are authorized as follows:

(1) The director may authorize an alternative arrangement for maintenance of a commercial basin in accordance with the DCM standards. If an alternative arrangement is approved by the director, the city attorney shall determine whether an agreement is necessary; the agreement must be approved by the city attorney and filed of record.

(2) The [~~county~~] executive <u>manager</u> of the Travis County Transportation and Natural Resources Department may authorize an alternative arrangement for maintenance of a residential basin in accordance with the DCM standards. If an alternative arrangement is approved by the [~~county~~] executive <u>manager</u>, the county attorney shall determine whether an agreement is necessary; the agreement must be approved by the county attorney and filed of record.

(E) The City shall inspect each commercial basin <u>that is not a subsurface basin</u> at least once every three years to ensure that the commercial basin is being maintained in accordance with the DCM standards, but will not inspect basins maintained by the County under Subsection (G). If the commercial basin fails inspection requiring an additional inspection, the director may charge a re-inspection fee.

(F) The record owner of a subsurface commercial basin must provide the Watershed Protection Department with a maintenance plan and an annual report from a registered engineer verifying that the basin is in proper operating condition.

[~~(F)~~](G) The record owner of a residential development shall maintain the residential basin serving the residential development in accordance with the DCM standards, whether or not the residential basin is located on the same property as the residential development. The record owner may assign maintenance responsibility to a duly established Homeowner's Association upon written approval by the [~~county~~] executive manager of the Travis County Transportation and Natural Resources Department. The record owner of a subsurface residential basin must provide the Travis County Transportation and Natural Resources Department with a maintenance plan and an annual report from a registered engineer verifying that the basin is in proper operating condition.

[~~(G)~~](H) The county shall maintain a detention basin or appurtenance that is an integral part of a county road.

[~~(H)~~](I) Section 30-5-231 *(Water Quality Control Maintenance And Inspection)* provides for maintenance of water quality controls.

draft