

Memorandum



CITY OF DALLAS

DATE September 16, 2021

TO Honorable Mayor and Members of the City Council

SUBJECT **Article V. Section 51A, 5.100-5.105 “Floodplain” Ordinance Revision and Update**

The City of Dallas is regulated by the Federal Emergency Management Agency (FEMA) for a number of broad reaching programs to prevent, respond, and recover from natural and man-made disasters. Through this agency, cities are also held to various standards that reduce and mitigate ahead of the disaster. The manner in which the City manages floodplains and floodways is through regulatory requirements issued by the National Flood Insurance Program (NFIP). The NFIP regulates the flood insurance policies for residential and commercial properties.

The City of Dallas, under Article V. Section 51A-5.100-5.105 governs over 39,000 acres of public and private floodplain. A floodplain is defined as an area of low lying ground, adjacent to a river, formed mainly of river sediments, subject to flooding. Natural floodplains provide risk reduction benefits by slowing runoff and storing flood water. They also provide other benefits of considerable economic, social, and environmental value such as fish and wildlife protection, natural flood and erosion control, surface water quality maintenance, and higher quality of recreational activities (fishing, boating, etc.). The City of Dallas contains approximately 661 stream miles with approximately 39,000 acres of floodplain area.

The Floodplain Regulations for the City are included in the Dallas Development Code in Article V. Division 51A-5.100 and are a requirement for the City’s participation in the NFIP. The City is required to adopt all the Federal Emergency Management Agency’s minimum standards, and as a Class 5 participant in the Community Rating System (CRS) program, the City has adopted higher standards to protect life and property in the event of a flood. Benefits to participation in the NFIP and CRS programs include:

- Eligibility for federally backed mortgage loans,
- City adoption of floodplain regulations to participate in the NFIP is a requirement of state law,
- Participation in the NFIP aids the City in the ability to receive FEMA assistance for any natural disaster,
- Residents of the City of Dallas receive subsidized and discounted rates on their federally backed flood insurance.

Most floodplain within the City of Dallas is privately owned. Public and private floodplain areas are regulated the same under Article V. Section 51A – Floodplain Regulations. Over the last 10 years, floodplain related permits have increased from approximately 10-20 per year to 50-60 per year.

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Over the years, as floodplain maps have been updated through Cooperating Technical Partners partnerships with FEMA, it has become necessary to update the regulations to provide more clarity and align more closely to the Code of Federal Regulations, and the requirements outlined by the Community Rating System. The reasons for these updates include the following:

- To continue to provide protection to life and property in the event of a flood
- To implement a faster, more streamlined development process for both public and private entities.
- To provide clarity in areas that have consistently caused confusion
- To revise some terminology from the 1980’s, such as changing the word “flood plain” to “floodplain” and updating definitions to match FEMA definitions.
- Providing references to federal FEMA documents.
- Reduce the cost limitation timeframe on renovations of structures within the floodplain from 10-years to 5-years to better allow for general maintenance.

The proposed updates will help the City to regulate floodplains with more clearly outlined processes and procedures, while providing for a more streamlined building permit process. Dallas Water Utilities has provided the proposed floodplain revisions online to facilitate public feedback at <http://www.dallascitynews.net/>. The public comment period was advertised through DallasCityNews.net, the DWU website, the DWU Facebook page, and the Trinity River Corridor Twitter handle.

DWU staff requests City Council’s approval of the updated regulations so that the City can continue to provide clear direction for safe and efficient development within the floodplain, compliant with FEMA and NFIP standards. Attached for your consideration is the marked up ordinance. This ordinance will be presented on the October 13, 2021 agenda. The new regulations will go into effect after City Council approval.

Please contact Terry Lowery, Director of Dallas Water Utilities, at 214-670-3143 should you have any questions or require further information.



Majed Al-Ghafry, P.E.
Assistant City Manager

c: T.C. Broadnax, City Manager Chris Caso, City Attorney Mark Swann, City Auditor Biliera Johnson, City Secretary Preston Robinson, Administrative Judge Kimberly Bizzor Tolbert, Chief of Staff to the City Manager	Jon Fortune, Assistant City Manager Joey Zapata, Assistant City Manager Dr. Eric A. Johnson, Chief of Economic Development and Neighborhood Services M. Elizabeth Reich, Chief Financial Officer M. Elizabeth (Liz) Cedillo-Pereira, Chief of Equity and Inclusion Directors and Assistant Directors
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Attachment – Article V. Section 51A-5.100-5.105 markup

ORDINANCE NO. _____

An ordinance amending Chapter 51A, “Dallas Development Code: Ordinance No. 19455, as amended,” of the Dallas City Code by amending Division 51A-5.100, “Flood Plain Regulations,” of Article V, “Flood Plain and Escarpment Zone Regulations”; changing “flood plain” to “floodplain”; adding and clarifying definitions; clarifying the existence of regulatory floodplain maps and FEMA maps; adding 500-year floodplain elevation requirements; editing tree requirements to reference Article X; providing references to FEMA documents; clarifying the role of the board of adjustment; providing clarification for parking requirements within a floodplain area; providing clarification for fences in a floodplain area; providing elevator requirements within floodplains; reducing the substantial improvement timeframe from 10 years to five years to allow for general maintenance; allowing a director-approved fill permit process; providing pre-application conference requirements to the floodplain alteration permit; providing cantilevering requirements; amending the 130 acre limitations to 100 acres throughout to maintain consistency with the updated City of Dallas Drainage manual; eliminating the fill permit extension option; providing that fill permits expire five years after issuance; clarifying requirements for a building permit; providing a penalty not to exceed \$2,000; providing a saving clause; providing a severability clause; and providing an effective date. Now, Therefore,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

SECTION 1. That Article V, “Flood Plain and Escarpment Zone Regulations,” of Chapter 51A, “Dallas Development Code: Ordinance No. 19455, as amended,” of the Dallas City Code is retitled to read, “Floodplain and Escarpment Zone Regulations.”

SECTION 2. That Division 51A-5.100, “Flood Plain Regulations,” of Article V, “Floodplain and Escarpment Zone Regulations,” of Chapter 51A, “Dallas Development Code: Ordinance No. 19455, as amended,” of the Dallas City Code is amended to read as follows:

“Division 51A-5.100. Floodplain [~~Flood-Plain~~] Regulations.

SEC. 51A-5.101. DEFINITIONS AND INTERPRETATIONS APPLICABLE TO THE FLOODPLAIN [~~FLOOD-PLAIN~~] REGULATIONS.

(a) Definitions. The following definitions are applicable to the floodplain [~~flood-plain~~] regulations in this article:

(1) AREA OF SPECIAL FLOOD HAZARD means the land in the floodplain [~~flood-plain~~] within a community that is subject to a one percent or greater chance of flooding in any given year.

(2) BASEMENT means any area of a building, including any sunken room or sunken portion of a room, having its floor below ground level (subgrade) [~~or below ground level,~~] on all sides.

(3) BASE FLOOD means the flood event having a one percent chance of being equaled [~~equalled~~] or exceeded in any given year.

(4) BASE FLOOD ELEVATION means the water surface elevation from a flood event having a one percent chance of being equaled [~~equalled~~] or exceeded in any given year, which is shown on the flood insurance rate map (FIRM) and in the accompanying flood insurance study (FIS) for Zones A, AE, AH, A1 - A30, AR, V1-V30, or VE, or on the regulatory floodplain maps.

(5) DESIGN FLOOD (City’s Design Standard) means the 100-year frequency (one percent chance of being equaled or exceeded in any given year) flood [~~frequency~~] discharge as calculated for fully developed watershed conditions. [~~For the Dallas Floodway Levee System, the design flood is the standard project flood as calculated for the Corridor Development Certificate process.~~]

(6) DEVELOPMENT means any manmade change in improved and unimproved real estate, including but not limited to the construction of buildings or other structures, mining, dredging, filling, grading, paving, excavation, drilling operations, or storage of equipment or materials unless approved by the city on a temporary basis in connection with authorized construction activities.

(7) ENVIRONMENTALLY SIGNIFICANT AREA means an area in the floodplain [~~flood-plain~~]:

(A) [~~with slopes greater than three to one;~~

(B)] containing endangered species of either flora or fauna;

(B[~~C~~]) which is a geologically similar area [~~geologically similar to the Escarpment Zone~~], as defined in Division 51A-5.200, “Escarpment Regulations,” of this article;

(C[~~D~~]) identified as wetlands or waters of the United States; or

(D[~~E~~]) determined to be an archaeological or historic site. [~~;~~ ~~or~~]

[~~(F) containing more than 1,000 square inches of trunk area of protected trees, in the aggregate, within a 10,000 square foot land area. Trunk diameter is measured at a point 12 inches above grade. To be included in the calculation of trunk area, a tree must have a trunk equal to or greater than six inches. For purposes of this subparagraph, a protected tree is defined in Section 51A-10.101 of this chapter.~~]

(8) EQUAL CONVEYANCE REDUCTION means the ability of the property on the opposite side of the stream to construct a project that alters conveyance by the same amount as the proposed fill permit or floodplain alteration permit project.

(9) EXISTING MANUFACTURED HOME PARK means a manufactured home park or subdivision for which the construction of facilities for servicing the lots was completed before March 16, 1983, the effective FIRM date.

(10[9]) FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) means [~~the Federal Emergency Management Agency, which is~~] the federal agency responsible for administering the National Flood Insurance Program (NFIP).

(11) FILL PERMIT means the process of reclaiming a portion of land in the floodplain to create a developable area including but not limited to a habitable structure or parking area, raising any area of land out of a floodplain area on fill, or creating an area that can be developed in the future. The fill permit process removes the floodplain (FP) designation and is applicable in areas with an upstream drainage area greater than 100 acres, even if the land has not been formally designated as an FP area.

(12) FIVE HUNDRED YEAR FREQUENCY FLOOD (500-YEAR FLOOD) means the flood event having a 0.2 percent chance of being equaled or exceeded in any given year. The 500-year flood in Dallas is based upon fully developed land uses within the watershed as defined by the current zoning designation.

(13[40]) FLOOD OR FLOODING means a general and temporary condition of partial or complete inundation of normally dry land areas from the unusual and rapid accumulation or runoff of surface waters from any source.

(14[44]) FLOOD INSURANCE RATE MAP (FIRM) means an official map of a community on which the Federal Emergency Management Agency (FEMA) has delineated the areas of special flood hazards and the insurance risk premium zones applicable to the community.

(15[12])FLOOD INSURANCE STUDY (FIS) means the official report provided by FEMA containing flood profiles, water surface elevation of the base flood, and the Flood Boundary-Floodway Map.

(16[13])FLOODPLAIN [~~FLOOD PLAIN~~] (FP) means any land area susceptible to inundation by the design flood, even if the land has not been formally designated as an FP area on the Regulatory Floodplain Maps.

(17[14])FLOODPLAIN [~~FLOOD PLAIN~~] ALTERATION means the construction of uninhabitable [~~buildings or other~~ structures, alterations to existing structures within a floodplain area complying with Section 51A-5.104(b), mining, dredging, filling, grading, or excavation in the floodplain that [~~flood plain which~~ does not remove or alter an FP designation. (Examples include, but are not limited to, the construction of a tennis court, a playground, a gazebo, a swimming pool, a fence, a deck, an erosion control wall, or the installation of significant landscaping.)

(18[15])FLOODPLAIN [~~FLOOD PLAIN~~] OR FP ADMINISTRATOR means the director of water utilities, who is responsible for administering the federal flood insurance program, or the director's designated representative.

(19[16])FLOODPROOFING [~~FLOOD PROOFING~~] means any combination of structural and non-structural additions, changes, or adjustments to structures that [~~which~~] reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, or structures and their contents. If floodproofing is utilized, the design must be certified by a licensed professional engineer.

(20[17])FLOODWAY (OR REGULATORY FLOODWAY) means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the design flood without cumulatively increasing the water surface elevation [~~or to discharge~~] more than a designated height [~~or rate~~].

(21) FLOODWAY EASEMENT means a drainage area dedicated to the city as an easement to prevent obstructions of floodway capacity in a floodplain.

(22) FUNCTIONALLY DEPENDENT USE means a use that cannot perform its intended purpose unless it is located or carried out in close proximity to water. This term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and shipbuilding and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

(23) HABITABLE STRUCTURE means any structure with electric, heat, or plumbing that can be used for living, sleeping, eating, or assembly purposes.

(24) HIGHER STANDARDS means community requirements that exceed the minimum FEMA standards for participating in the National Flood Insurance Program (NFIP).

(25[18])INTERIOR DRAINAGE AREAS means the geographical areas that act as a watershed for the sumps.

(26) LETTER OF MAP CHANGE (LOMC) means a letter that reflects an official change in an effective Flood Insurance Rate Map (FIRM). LOMCs are issued in response to a request to FEMA to revise or amend its effective flood map to remove a property or reflect changed flooding conditions on the effective map and can include Letter of Map Revisions (LOMRs), Letter of Map Amendments (LOMAs), and Letter of Map Revisions based on Fill (LOMR-F's) as amended by FEMA.

(27[19])LEVEE means a manmade structure (usually an earthen embankment) designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water for protection from temporary flooding.

(28[20])LEVEE SYSTEM means a flood protection system consisting of a levee or levees and associated structures accredited by FEMA pursuant to 44 CFR 65, as amended, such as closure and drainage devices constructed and operated in accordance with sound engineering practices.

(29) LICENSED PROFESSIONAL ENGINEER means a person who is duly licensed and registered to engage in the practice of engineering in the State of Texas in accordance with state law.

(30) LOWEST ADJACENT GRADE means the lowest point of the ground level immediately next to a building.

(33[24])LOWEST FLOOR means the lowest floor of the lowest enclosed area of a building (including its basement). An unfinished or flood resistant enclosure that is useable solely for parking of vehicles, building access, or storage in an area other than a basement area, is not considered a building's lowest floor.

(32[22])MANUFACTURED HOME means a structure, transportable in one or more sections, that [which] is built on a permanent chassis and designed for use with or without a permanent foundation when connected to the required utilities. In this article only, the term "manufactured home" includes park trailers, travel trailers, and similar vehicles placed on a site for more than 90 [180] consecutive days, but does not include recreational vehicles.

(33[23])MANUFACTURED HOME PARK OR SUBDIVISION means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

(34[24])NATIONAL FLOOD INSURANCE PROGRAM (NFIP) means the federal program administered by FEMA that [which] enables property owners to purchase flood insurance against damage to or loss of property resulting from a flood.

(35[25])ONE HUNDRED YEAR FREQUENCY FLOOD (100-year flood) [ONE-PERCENT ANNUAL CHANCE FLOOD FREQUENCY (one percent annual chance flood)]

means the flood event having a one percent chance of being ~~equaled~~ ~~[equalled]~~ or exceeded in any given year. The 100-year ~~[one-percent annual chance]~~ flood in Dallas is based upon fully developed land uses within the watershed as defined by the current zoning designation.

(36[26])POOL-RIFFLE SEQUENCES mean the alternating deep and shallow flow conditions caused by a moving, nonuniform channel grade.

(37) REGULATORY FLOODPLAIN MAPS means the most updated floodplain maps available, as accepted by the City of Dallas, regardless of adoption by FEMA. These include, but are not limited to, maps resulting from floodplain update studies, Letter of Map Revisions (LOMRs), and floodplain studies resulting from current and proposed construction projects.

(38[27])SEEP means a location where natural groundwater makes its way in a non-continuous flow to the surface, creating a wet soil condition.

(39[28])SPECIAL EXCEPTION means a grant of relief to a property owner permitting reconstruction in a manner otherwise prohibited by this division.

(40[29])STANDARD PROJECT FLOOD means the flood caused by the most severe combination of meteorological and hydrological conditions reasonably characteristic of the region. The standard project flood is defined by the U.S. Army Corps of Engineers for use in major flood control projects.

(41[30])STRUCTURE means, for purposes of this division, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home.

(42[31])SUBSTANTIAL DAMAGE means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

(43[32])SUBSTANTIAL IMPROVEMENT means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market or tax appraisal value of the structure, whichever is greater, as determined by an independent appraiser or the last official City tax roll, either before the improvement or repair is started, or, if the structure has been damaged and is being restored, before the damage occurred. For the purpose of this definition “substantial improvement” occurs when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include any project for improvement of a structure for the sole purpose of complying with federal, state, or local health, sanitary, or safety code specifications which have been identified in writing by the local code enforcement official as necessary to assure safe living conditions prior to the start of the proposed improvement, or any alteration of a historic structure as defined by FEMA [listed on the National Register of Historic Places or a state inventory of historic places]. See Section 51A-5.104(b)(2) for city of Dallas limitations.

(44[33])SUMPS mean drainage features of levee systems that temporarily store storm water runoff before it is conveyed to a river system by pumping over or draining through a levee.

(45[34])SWALES mean low lying areas in the floodplain [~~flood plain~~] that convey flood waters when flow exceeds channel capacity.

(46[35])VALLEY STORAGE means the measure of a stream's ability to store water as it moves downstream.

(47[36])VARIANCE means a grant of relief by a community from the terms of a floodplain [~~flood plain~~] management regulation.

(48[37])WATER SURFACE ELEVATION means the height, in relation to the North American Vertical Datum (NAVD), of floods of various magnitudes and frequencies in the floodplain [~~flood plain~~].

(b) Interpretations. The intent of this division [~~ordinance~~] is to equal or exceed the minimum federal criteria for participation in the National Flood Insurance Program, located in 44 Code of Federal Regulations, Chapter I, Part 60.3[~~(d)~~], as amended; and FEMA 480, as amended. All higher standards and FEMA minimum standards apply. The City of Dallas must also enforce any more restrictive state requirements. The City of Dallas has exceeded the minimum standards by adopting more comprehensive floodplain management regulations. In some instances, community officials may have access to information or knowledge of conditions that require, particularly for human safety, higher standards than the minimum NFIP criteria. Any floodplain management regulations adopted by a state or community that are more restrictive than the criteria set forth in the NFIP regulations take precedence. All FEMA minimum standards in the Code of Federal Regulations also apply.

SEC. 51A-5.102.

DESIGNATION OR REMOVAL OF FP AREAS.

(a) In general.

(1) A floodplain designation is not a zoning classification, but refers to a specific area subject to flooding.

(2) When an FP [~~this~~] designation is noted by an "FP" prefix on the official zoning district map, or on the FEMA effective maps, the area designated is referred to in this article as an FP area.

(3) FP areas include those areas:

(A) identified as special flood hazards by FEMA in the:

(i) current scientific and engineering report entitled, “The Flood Insurance Study (FIS) for Dallas County,” dated March 21, 2019, with accompanying Flood Insurance Rate Maps and/or Flood Boundary-Floodway Maps (FIRM and/or FBFM) dated March 21, 2019, and any revisions thereto are hereby adopted by reference and declared to be a part of this paragraph,

(ii) current scientific and engineering report entitled, “The Flood Insurance Study (FIS) for Rockwall County,” dated September 26, 2008, with accompanying Flood Insurance Rate Maps and/or Flood Boundary-Floodway Maps (FIRM and/or FBFM) dated September 26, 2008, and any revisions thereto are hereby adopted by reference and declared to be a part of this paragraph,

(iii) current scientific and engineering report entitled, “The Flood Insurance Study (FIS) for Collin County,” dated June 7, 2017, with accompanying Flood Insurance Rate Maps and/or Flood Boundary-Floodway Maps (FIRM and/or FBFM) dated June 7, 2017, and any revisions thereto are hereby adopted by reference and declared to be a part of this paragraph,

(iv) current scientific and engineering report entitled, “The Flood Insurance Study (FIS) for Denton County,” dated April 18, 2011, with accompanying Flood Insurance Rate Maps and/or Flood Boundary-Floodway Maps (FIRM and/or FBFM) dated April 18, 2011, and any revisions thereto are hereby adopted by reference and declared to be a part of this paragraph, or

(v) current scientific and engineering report entitled, “The Flood Insurance Study (FIS) for Kaufman County,” dated July 3, 2012, with accompanying Flood Insurance Rate Maps and/or Flood Boundary-Floodway Maps (FIRM and/or FBFM) dated July 3, 2012, and any revisions thereto are hereby adopted by reference and declared to be a part of this paragraph, and

(B) other areas that the director of Dallas Water Utilities has identified as flood risk areas.

(4) The floodplain administrator shall regulate according to both the FEMA effective maps and the regulatory floodplain maps, regardless of adoption by FEMA. The floodplain administrator shall notify the director of sustainable development and construction of all map updates.

(b) Initiation. The addition to or removal from the official zoning district map of an FP prefix may be initiated in the following ways:

(1) An owner of property located within an FP area may apply for the review of an FP designation based upon evidence of a mapping error provided by the owner.

(2) The director of water utilities may, upon his or her own initiative, review the status of an FP designation.

(3) An owner of property located within an FP area may apply for a fill permit and removal of the FP prefix by following the procedure outlined in Section 51A-5.105.

(c) Engineering studies. Hydraulic and hydrologic engineering studies or a field survey must support any changes to an FP designation. The engineering study must be signed and sealed by a licensed professional engineer. The director may require geotechnical core borings as part of his or her investigations under this subsection.

(d) Decision on designation. The director of water utilities shall make a final decision on whether to add or remove an FP prefix on the official zoning district map only after the director determines that engineering studies support the change in the FP designation.

(e) Zoning map revision. The director of water utilities must notify the director of sustainable development and construction in writing that an FP prefix is to be removed from or added to the official zoning district map. The written notification must contain a description of the property affected and the reasons why the FP prefix is being changed. ~~[The director of water utilities shall keep a copy of the notification in a permanent file and send a copy of the notification to the city secretary, who shall keep the copy in a permanent file.]~~

(f) Letter of Map Change (LOMC) [Revision (LOMR)]. A letter of map change ~~[revision]~~ from FEMA is required for removal of an FP prefix from the official zoning map if the area is designated as a flood hazard area on the FIRM.

SEC. 51A-5.103. COMPLIANCE IN UNDESIGNATED FLOODPLAIN ~~[FLOOD PLAIN]~~ AREAS.

(a) A person shall comply with the requirements of this article for FP areas before developing land within the design flood line of a creek or stream having a contributing drainage area of 100 ~~[430]~~ acres or more, even if the land has not been formally designated as an FP area.

(b) Except as provided in Subsection (c), a[A]lterations of the natural floodplain [flood plain] in areas with less than 100 [430] acres must comply [be approved by the director of water utilities for compliance] with the Dallas Development Code and city drainage standards but are not subject to the engineering requirements for filling in Section 51A-5.105(g).

(c) If the proposed alteration includes moving, eliminating, or enclosing the natural stream channel, then the engineering requirements for filling in Section 51A-5.105(g) must be met, regardless of the upstream drainage area size.

SEC. 51A-5.103.1. VEGETATION ALTERATION IN FLOODPLAIN ~~[FLOOD PLAIN]~~ PROHIBITED.

(a) Except as provided in this section, the urban forest conservation requirements in Division 51A-10.130 apply. Protected trees removed in the floodplain are not subject to exceptions to Article X.

(b) A person commits an offense if he removes or injures any vegetation within a floodplain ~~[flood plain]~~.

(c~~[b]~~) It is a defense to prosecution under Subsection (b~~[a]~~) if the act is:

- (1) authorized in advance in writing by the director of water utilities;
- (2) in conformance with a landscape plan approved by the director of water utilities;
- (3) routine maintenance of vegetation such as trimming or cutting designed to maintain the healthy or attractive growth of the vegetation; or
- (4) routine maintenance performed, required, or authorized by the city in order to maintain the floodwater conveyance capacity of the floodplain ~~[flood plain]~~.

SEC. 51A-5.104.

USES AND IMPROVEMENTS PERMITTED.

(a) Uses permitted. To allow for the appropriate development of land that ~~[which]~~ is subject to flooding without unduly endangering life and property, the following uses are permitted in an FP area provided they are permitted in the underlying zoning district and comply with the requirements of Section 51A-5.105(g) and all applicable elevation requirements of the Federal Emergency Management Agency:

- (1) Farm or ranch (excluding habitable structures).
- (2) Utility services, electrical substation, detention basin, water reservoir or pumping station, and water treatment plant.
- (3) Sanitary landfill and refuse transfer station.
- (4) Public park or playground~~[, private recreation club or area, private community center,]~~ and golf course (excluding habitable structures).
- (5) ~~[Outside]~~ C~~[e]~~ommercial amusement (outside) approved by specific use permit.
- (6) Helistop approved by specific use permit.

(7) Radio, television, or microwave tower, ~~[and]~~ amateur communications tower, and tower/antenna for cellular communication.

(b) Improvements permitted.

(1) Structures. An uninhabitable structure customarily associated with a use listed in Subsection (a) may be constructed within an FP area only if the director of water utilities determines that the proposed structure meets the same engineering requirements applicable to filling ~~[filling]~~ in Section 51A-5.105(g) and issues a floodplain ~~[flood plain]~~ alteration permit.

(2) Improvements. The owner of a structure in an FP area shall not make any improvements to the structure without first obtaining approval from the director of water utilities. The director of water utilities may approve proposed improvements if the cumulative value of all improvements for the previous five ~~[ten]~~ years is less than 50 percent of the market or tax appraisal value of existing improvements on the property, whichever is greater. No substantial improvements are permitted. Improvement values are calculated per guidelines outlined in FEMA P-758 as revised. All ~~[Any]~~ improvements must comply with the requirements of Section 51A-5.105(g), including additions. Substantially damaged structures are considered substantial improvements.

(3) Completion of vested structures. The building official shall not withhold a final inspection or certificate of occupancy for a structure in an FP area if building permits for the structure were issued by the building official ~~[before FEMA's FIRM becomes effective]~~ designating such areas as A~~[A]~~ or AE, and the structure otherwise complies with all applicable requirements.

(4) Board of adjustment. The board of adjustment may only grant a special exception to allow the reconstruction of a structure in an FP area if the structure is a historical structure as defined by FEMA, or the property is zoned for a functionally dependent use. The board may grant a special exception upon a showing of good and sufficient cause~~[, a determination that failure to all the reconstruction would result in exceptional hardship to the property owner,]~~ and a determination that the reconstruction will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with other local, state, or federal laws. The reconstructed structure must be protected by methods that minimize flood damage. The board may not grant a special exception to authorize reconstruction within any designated floodway if any increase in flood levels during the base flood discharge would result. Any special exception granted must be the minimum necessary, considering the flood hazard, to afford relief. The reconstruction of a structure in an FP area may not increase the lot coverage of the structure.

(A) The director of water utilities shall notify in writing the owner of a structure in an FP area that:

(i) the granting of a special exception to reconstruct the structure below the base flood level will result in increased premium rates for flood insurance that will be commensurate with the increased risk; and

(ii) the construction below the base flood level increases risks to life and property. The notification letter must be maintained with the record of the board's action.

(B) The FP administrator shall maintain a record of all actions involving applications for special exceptions and shall report special exceptions to FEMA upon request.

(5) Parking.

(A) Surface parking. All surface parking spaces must be constructed at a minimum elevation of two feet above the design flood elevation.

(B) Underground parking garages. The entrance elevation and any openings on underground parking garages constructed within or adjacent to a flood prone area may not be lower than two feet above the design flood elevation.

(C) Parking on piers. Parking lots elevated on piers such that the low chord is two feet above the design flood elevation are permitted if all engineering requirements for filling in Section 51A-5.105(g) are met, and do not violate any other part of the Dallas Development Code. A habitable structure may not be placed on piers. [Elm Fork, West Fork, and Trinity River flood plain. The minimum elevation requirements do not apply to parking in the flood plain of Elm Fork, West Fork, and main stem of the Trinity River.]

(D) Parking in interior drainage (sump) areas. All surface parking spaces within an interior drainage area must be constructed at a minimum elevation of one foot above the design flood elevation.

(6) Storage in the floodplain [flood plain] is prohibited.

(A[i]) A person shall not place, store, or maintain a shipping container, trailer, boat, inoperable vehicle, recreational vehicle, construction materials, waste materials, hazardous materials, or construction equipment in the floodplain [flood plain]. For purposes of this paragraph, the term "vehicle" includes but is not limited to automobiles, buses, and recreational vehicles. It is a defense to prosecution that the placement, storage, or maintenance of shipping containers, trailers, boats, inoperable vehicles, recreational vehicles, construction materials, waste materials, hazardous materials, or construction equipment is otherwise permitted by or in connection with a valid federal, state, county, or city permit, or is otherwise authorized by those entities.

(B[ii]) The director of water utilities shall give written notice and allow persons in violation of Subparagraph (A[i]) a period of 90 [180] days to come into compliance.

(Z[6]) Manufactured homes. Manufactured homes may not be placed within a floodplain [flood plain] area. Recreational vehicle camping and parking locations are not permitted within a floodplain [flood plain] area.

(8) Fences. Fences must comply with all applicable construction codes at the time of construction.

(A) Fences are not permitted within floodway easement areas without engineering analysis addressing Section 51A-5.105(g), regardless of fence type.

(B) Except as provided in this paragraph, fences in a floodplain area not designated as a floodway easement must be:

(i) constructed of wrought iron;

(ii) constructed with a one-foot gap along the bottom if located in areas where flooding is less than three feet of depth; or

(iii) constructed using flood vents, as outlined in the NFIP Technical Bulletin 1, as amended, if located in areas where flooding is greater than one foot and less than four feet of depth.

(C) Fences in a floodplain area not designated as a floodway easement that do not comply with Subparagraph (B) must be analyzed as an obstruction for compliance with Section 51A-5.105(g).

(c) Construction standards. All improvements and construction permitted in an FP area must comply with the following requirements:

(1) Structures must be:

(A) securely anchored to the foundation and otherwise designed to prevent flotation and collapse during inundation; and

(B) designed to prevent damage to nonstructural elements during inundation.

(2) Thermal insulation used below the first floor level must be of a type that does not absorb water.

(3) Adhesives must have a bonding strength that is unaffected by inundation.

(4) Doors and all wood trim must be sealed with a water-proof paint or similar product.

(5) Electrical, heating, ventilation, plumbing, air-conditioning equipment, and other mechanical service facilities must be designed and located at least three feet above the design flood elevation to prevent water from entering or accumulating in the components during flooding.

(6) Transportation systems such as elevators and escalators must be protected from flooding, and enclosures must be safe from flooding and protect life safety. See Code of Federal Regulations Title 44, Part 60.3 and the NFIP Technical Bulletin 4 as amended for more information.

(7) Basements.

(A) Basements are permitted only in nonresidential construction and only if they are designed to preclude inundation by the design flood level, either by:

(i) locating any exterior opening at least three feet above the level of the design flood elevation; or

(ii) using water-tight closures, such as bulkheads and flood shields.

(B) All basements must be constructed so that any enclosure area, including utilities and sanitary facilities below the flood-proofed design level, is watertight with impermeable walls.

(C) Basement walls must be built with the capacity to resist hydrostatic and hydrodynamic loads and the effects of buoyancy resulting from flooding to the flood-proofed design level so that minimal damage will occur from floods that exceed the flood-proofed design level.

(D) The area surrounding the structure must be filled to or above the elevation of the design flood. The fill must be compacted, and slopes must be protected by vegetative cover.

(E) Basements must be designed by a licensed professional engineer.

(F) Basement ceilings must consist of a sufficient wet strength and be installed to survive inundation.

(8[7]) Plywood used at or below the first floor level must be of an “exterior” or “marine” grade and of a water-resistant or waterproof variety.

(9[8]) Wood flooring used at or below the first floor level must be installed to accommodate a lateral expansion of the flooring, perpendicular to the flooring grain, without incurring structural damage to the building.

~~[(9) Basement ceilings must consist of a sufficient wet strength and be installed to survive inundation.]~~

(10) Paints or other finishes used at or below the first floor level must be capable of surviving inundation.

(11) All air ducts, large pipes, and storage tanks located at or below the first floor level must be firmly anchored to prevent flotation.

(12) Tanks must be vented at a location above the 100-year [~~one-percent annual chance~~] flood level.

(d) 500-year frequency flood. All new construction located in a 500-year frequency flood zone must comply with the following:

(1) Building pad site must be filled to an elevation of at least two feet above the 100-year flood elevation.

(2) The lowest floor of any structure must be constructed at least three feet above the 100-year flood elevation.

SEC. 51A-5.105. FILLING IN THE FLOODPLAIN [~~FLOOD PLAIN~~].

(a) Permit required.

(1) A person shall not deposit or store fill, place a structure, excavate, or engage in any other development activities in an FP area without first obtaining:

(A) a fill permit or a floodplain [~~an FP~~] alteration permit from the director of water utilities; and

(B) all other permits required by county, state, and federal agencies.

(2) A fill permit allows the property to be developed at a specified elevation in compliance with this section.

(3) The director of water utilities shall maintain a record of all fill permits and floodplain [~~FP~~] alteration permits.

(b) Floodplain [~~Flood plain~~] alteration permit process.

(1) The director of water utilities may issue a floodplain [~~flood plain~~] alteration permit if he or she determines that:

(A[1]) the alteration does not remove an FP designation; and

(B[2]) the alteration complies with all applicable engineering requirements in Subsection (g).

(2) The floodplain alteration permit may require hydrologic or hydraulic modeling as determined by the director of water utilities. Examples of situations that may require hydrologic or hydraulic modeling include, but are not limited to:

(A) A pool, tennis court, patio, cook area, deck, or other outdoor amenity above existing grade, but not above the base flood elevation.

(B) A fence that will block the flow of flood water during the 100-year flood event.

(C) A retaining wall projecting into the channel as compared to the existing grade.

(D) Elevated utilities that block the flow of flood water during the 100-year flood event.

(E) Additions to existing structures.

(c) Initiation of the fill permit process.

~~[(4) Application.]~~ An applicant for a fill permit shall submit an application to the director of water utilities on a form approved by the director and signed by all owners of the property.

~~[(2) Notification signs. Except as provided in Section 51A 5.105(f)(2), an applicant is responsible for obtaining the required number of notification signs and posting them on the property that is subject of the application. Notification signs must be obtained from the director of water utilities at the time the application is made.~~

~~(A) Number of signs required. For tracts of five acres or less, only one notification sign is required. An additional notification sign is required for each additional five acres or less, except that no applicant is required to obtain and post more than five notification signs on the property, regardless of its size.~~

~~(B) Posting of signs. The applicant shall post the required number of notification signs on the property at least 15 days before the date of the scheduled public hearing before the city council. The signs must be posted at a prominent location adjacent to a public street and be easily visible from the street.~~

~~(C) Failure to comply. If the city council determines that the applicant has failed to comply with the provisions of this section, it may postpone the public hearing.]~~

(d) Preapplication conference.

(1) An applicant for a fill permit or a floodplain alteration permit that will require hydrologic or hydraulic modeling shall request a preapplication conference with representatives from the department of water utilities.

(2) At the preapplication conference, the director of water utilities shall determine what information is necessary for a complete evaluation of the proposed fill project. The applicant ~~[director]~~ may be required ~~[require the applicant]~~ to submit all necessary information, including, but not limited to the following:

(A) A vicinity map.

(B) The acreage figures for the entire tract, the area located in the floodplain ~~[flood plain]~~, and the area proposed to be filled.

(C) A description of existing and proposed hydrologic and hydraulic analysis conducted.

(D) ~~[A landscape and erosion control plan. The landscape plan]~~ Plans that [must] comply with the Landscape and Urban Forest Conservation ~~[Tree Preservation]~~ Regulations in Article X of the Dallas Development Code, as amended.

(E) A table of values for analysis of the engineering criteria listed in Subsections (h)(1), (h)(2), and (h)(~~5~~4).

(F) A water surface profile.

(G) A plan view showing existing and proposed contours and grading.

(H) Plotted cross-sections.

(I) An overall map of the project area.

(J) Drainage area map.

(e) Filling to remove an FP designation.

(1) In general. This subsection applies to applications to remove an FP designation from any regulatory floodplain ~~[other than applications to remove an FP designation from an interior drainage area pursuant to Subsection (f)].~~

(2) Review of application by departments.

(A) If the application is to remove an FP designation, the director of water utilities shall forward copies of the application to the director of sustainable development and construction, the chief planning officer, and the director of park and recreation for review.

(B) The director of sustainable development and construction, the chief planning officer, and the director of park and recreation shall review the application and advise the director of water utilities of the environmental impacts of the project, zoning concerns, or other concerns. If concerns are raised by one of these departments, the concerns must be addressed by the property owner prior to issuance of the fill permit. These departments [They] shall also determine whether the applicant's property should be considered for public acquisition due to its ecological, scenic, historic, or recreational value. [The director of water utilities shall provide a report to the city council on each application regarding environmental impacts and public acquisition issues.]

(3) Neighborhood meeting. The water utilities department shall schedule and conduct a virtual or in-person neighborhood meeting on each application. The applicant or the applicant's representative must attend the neighborhood meeting. The director shall send written notice of the meeting to the applicant, to all owners of real property within 500 feet from the boundary of the subject property, and to persons and organizations on the early notification list on file with the department of sustainable development and construction. Measurements include the streets and alleys. The notice must be given not less than 10 days before the date set for the neighborhood meeting by depositing the notice properly addressed and postage paid in the United States mail to the property owners as evidenced by the last approved city tax roll. This notice must be written in English and Spanish if the area of request is located wholly or partly within a census tract in which 50 percent or more of the inhabitants are persons of Spanish origin or descent according to the most recent federal decennial census.

(4) Notice of ~~and~~ public hearing and city council approval. If the city council is required to approve a fill permit in accordance with this paragraph, a[After the neighborhood meeting, the director of water utilities shall schedule a public hearing on the application. The city secretary shall give notice of the public hearing in the official newspaper of the city at least 15 days before the date of the public hearing. The director shall also send written notice of the public hearing to the applicant, to all owners of real property within 500 feet from the boundary of the subject property, and to persons and organizations on the early notification list on file with the department of sustainable development and construction. Except as provided in this paragraph, the city council may only deny an application if the application does not meet the requirements of Sections 51A-5.105(f) or (g) or required state or federal permits have been denied [Written notice must be given in the same manner required in Paragraph (2) for the neighborhood meeting].

(A) Variance requested. If a variance to one of the engineering criteria outlined in Subsection (g) is requested, the fill permit will require city council approval. The city council may grant a variance to the requirements of Subsection (g) if the variance will not violate any provision of federal or state law or endanger life or property.

(B) Property acquisition. If the department of sustainable development and construction or park and recreation recommend public acquisition of property due to its ecological, scenic, historic, or recreational value, they must make a written recommendation to city council, and the director of water utilities shall provide a report to the city council on the application regarding environmental impacts and public acquisition issues. Once the recommendation is made, the city council may vote to approve a resolution authorizing the

acquisition of the property under the laws of eminent domain and deny the fill permit to preserve the status quo until the property is acquired.

(5) Director approval ~~[Decision on application]~~.

(A) After the applicant has satisfied all requirements of Subsections (f) and (g), and it is determined that city council approval is not necessary under Paragraph (4), ~~[notice and a public hearing in compliance with Paragraph (3), the city council]~~ the director of water utilities shall approve or deny the application for a fill permit. The director ~~[city council]~~ may only deny an application if:

(i) the application does not meet the requirements of Sections 51A-5.105(f) or (g); or

(ii) required state or federal permits have been denied ~~[the city council has, by resolution, authorized acquisition of the property under the laws of eminent domain, and denial of the application is necessary to preserve the status quo until the property is acquired].~~

(B) The director of water utilities may postpone the approval of a fill permit if:

(i) required state and federal permits have not been addressed or obtained; or

(ii) concerns from the department of sustainable development and construction or the park and recreation department have not been addressed. ~~[In connection with its approval of a fill permit, the city council may grant a variance to the requirements of Subsection (h) if the variance will not violate any provision of federal or state law or endanger life or property.]~~

~~[(C) If the city council approves a fill permit application, the FP designation for the filled area may be removed from the official zoning district map upon compliance by the applicant with the specifications for filling.]~~

(6) Zoning map revision. ~~[Upon compliance with all applicable requirements of this section by the applicant, the director of water utilities shall notify the director of sustainable development and construction, who shall remove the FP designation for the filled area from the official zoning district map.]~~

(7) Letter of Map Revision (LOMR). ~~[LOMR.]~~ A letter of map revision must be obtained from FEMA, if applicable, before an FP prefix may be removed from the official zoning district map. A building permit may be issued for construction of underground utilities ~~[if a conditional letter of map revision (CLOMR) is obtained]~~; however, no building permit for construction of a structure may be issued until a final letter of map revision (LOMR) is obtained. Upon approval and receipt of a letter of map revision, the director of water utilities shall notify the

director of sustainable development and construction, who shall remove the FP designation for the subject area from the official zoning district map.

(f) ~~Removal of an FP designation from an interior drainage area.~~

(1) ~~Review of application by director.~~ ~~The director of water utilities may approve an application for removal of the FP designation in interior drainage areas if:~~

(A) ~~the director determines the subject area is no longer at risk for flooding based on minimum fill and finished floor elevation;~~

(B) ~~removal of the FP designation will not negatively affect valley storage; and~~

(C) ~~the removal of the FP designation is for the purpose of constructing structures that conform to existing zoning.~~

(2) ~~Notification signs not required.~~ ~~The applicant is not required to post notification signs.~~

(3) ~~Zoning map revision.~~ ~~A letter of map revision must be obtained from FEMA, if applicable, before an FP prefix may be removed from the official zoning district map. A building permit may be issued for construction of underground utilities if a conditional letter of map revision is obtained; however, no building permit may be issued until a final letter of map revision is obtained. Upon approval and receipt of a letter of map revision, the director of water utilities shall notify the director of sustainable development and construction, who shall remove the FP designation for the subject area from the official zoning district map.~~

(g) Filling operations. If ~~[the city council approves]~~ a fill permit or floodplain alteration permit is approved, the filling operations must comply with the following requirements:

(1) Any excavation required by the specifications of the approved application must be conducted before or at the same time as placing fill. Excavated areas are required to maintain a minimum depth of one foot at the deepest point.

(2) For fill permits, the entirety of the b[B]uilding pad site[s] must be filled to an elevation of at least two feet above the design flood elevation. Habitable structures elevated on piers in floodplain areas are prohibited.

(3) For fill permits, t[F]the lowest floor of any structure must be constructed at least three feet above the design flood elevation.

(4) For fill permits within interior drainage (sump) areas, the building pad site must be filled to a minimum elevation of one foot above the design flood elevation. Habitable structures elevated on piers in floodplain areas are prohibited.

(5) Fill material must consist of natural material including but not limited to soil, rock, gravel, or broken concrete. Decomposable matter, including but not limited to lumber, sheetrock, trees, tires, refuse, or hazardous, toxic material ~~[matter]~~, is prohibited as fill material. Fill must be compacted to 95 percent standard proctor density.

(6~~5~~) Before construction, erosion and sediment control devices such as straw hay bales, silt fences, or similar items must be installed to eliminate any transportation of sediment downstream. The property owner is responsible for removal of any sediment deposited by runoff as a result of filling.

(7~~6~~) If compliance with a Texas ~~[National]~~ Pollutant Discharge Elimination System (TPDES) ~~[(NPDES)]~~ permit is required for construction activities, a copy of the Notice of Intent (NOI) or the individual NPDES permit must be submitted to the director of water utilities and the director of the office of environmental quality and sustainability before beginning fill operations. The Stormwater Pollution Prevention Plan required by TPDES must be implemented no later than two days prior to commencement of construction activities.

(8~~7~~) Fill shall be placed no more than five feet above the design flood elevation, except where necessary to match the existing elevation of the adjacent property as determined by the director of water utilities. In determining when it is necessary to match the existing elevation, the director shall consider the effects on local drainage and storm water management, the access needs of the property, and other public health and safety concerns.

(9~~8~~) A copy of the approved fill permit must be posted and maintained at the fill site for inspection purposes until fill operations have been completed.

(10~~9~~) After filling operations have been completed, the applicant shall submit a certification to the director of water utilities that proper fill elevations in the form of signed and sealed as-built topographic survey, compaction requirements, and all other specifications of the approved application have been followed. In addition, ~~[the applicant shall submit] a [copy of the]~~ letter of map revision (LOMR) submittal to [issued by] FEMA and approval by FEMA is required~~[- if applicable].~~

(11) Encroachment into the floodway is prohibited unless FEMA issues a conditional letter of map revision (CLOMR).

(g~~h~~) Engineering requirements for filling.

(1) Except for detention basins and ponds, alterations of the FP area may not increase the water surface elevation of the design flood of the creek upstream, downstream, or through the project area. Detention basins and ponds may increase the water surface elevation of the design flood provided the increase is within the detention basin's or pond's boundaries as approved by the director of water utilities.

(2) Alterations of the FP area may not create or increase an erosive water velocity on or off-site. The mean velocity of stream flow at the downstream end of the site after fill may not exceed the mean velocity of the stream flow under existing conditions.

(3) The effects of the existing and proposed public and private improvements will be used in determining water surface elevations and velocities. Any alteration of the FP area necessary to obtain a removal of an FP prefix may not cause any additional expense in any current or projected public improvements.

(4) The FP area may be altered only to the extent permitted by equal conveyance reduction on both sides of the natural channel.

(5) A valley storage agreement might be required. Additionally, t[F]he following valley storage requirements apply to all FP areas except those governed by a city council-adopted management plan that contains valley storage regulations, in which event the valley storage regulations contained in the plan apply:

(A) ~~[Except as otherwise provided in Subparagraph (B):~~

~~(i)]~~ no loss of valley storage is permitted along a stream in which the upstream [with-a] drainage area is [of] three square miles or more;

~~(B[ii])~~ valley storage losses along streams in which the upstream [with-a] drainage area is between 100 [130] acres and three square miles may not exceed 15 percent, as calculated on a site by site basis; and

~~(C[iii])~~ valley storage losses along streams in which the upstream [with-a] drainage area is [of] less than 100 [130] acres are [is] not limited.

~~[(B) Hydrologic computations may be performed to evaluate basin-wide valley storage loss impacts on the design flood discharge. If the computations demonstrate that valley storage losses do not result in increases in the design flood discharge at any point downstream of the project, valley storage losses are permitted even though they exceed the limits provided in Subparagraph (A).]~~

~~(6[5])~~ An environmental impact study and a complete stream rehabilitation program must be approved before relocation or alteration of the natural channel or alteration of an environmentally significant area, or area deemed to house threatened or endangered species. The net environmental impacts of the proposal may not be negative. The environmental impact study must contain the following items:[:]

(A) A description of the existing conditions of the site, adjacent properties, upstream and downstream creek sections for approximately 1,000 feet (unless conditions require additional information in the opinion of the director of water utilities), and creek and overbank areas. The description of these conditions must include:

(i) the characterization of creek features such as bed quality and material, pool-riffle sequences, natural ground water, springs, seeps, magnitude and continuity of flow, water quality [~~(including biological oxygen demand, dissolved oxygen, and nutrient loadings)~~], bank quality and material, vegetative cover and patterns, bank erosion, topographic relief, disturbances to the natural character of the creek, animal and aquatic life, and the extent and character of wetland areas; and

(ii) soil types and land uses of the site and surrounding area.

(B) A description of the proposed project. This description must include:

(i) the intended ultimate use of the site, or if that is not known, a description of the interim site plan, including construction access;

(ii) reasons why the creek or floodplain [~~flood plain~~] alteration is necessary; and

(iii) a site plan showing the floodplain [~~flood plain~~] and construction access necessary to perform the work.

(C) A description of at least three possible ways of handling the creek and floodplain [~~flood plain~~], including:

(i) an alternative that assumes the creek and floodplain [~~flood plain~~] are not changed;

(ii) the applicant's proposed action; and

(iii) alternatives proposed by the director of water utilities.

(D) An identification of the impacts created by each alternative, describing in detail all of the positive and negative impacts upon the existing conditions described in Subparagraph (A), that would be created by each alternative.

(E) A recommended course of action based upon evaluation of the alternatives.

(F) Proposed strategies to mitigate adverse impacts. Examples of strategies include tree wells, temporary construction and permanent erosion and sedimentation controls, vegetative buffers, and replacement planting.

(Z[6]) The toe of any fill slope must parallel the natural channel to prevent an unbalanced stream flow in the altered FP area.

(8[7]) To insure maximum accessibility to the FP area for maintenance and other purposes and to lessen the probability of slope erosion during periods of high water, maximum

slopes of the filled area may not exceed four to one for 50 percent of the length of the fill and six to one for the remaining length of the fill. The slope of any excavated area may not exceed four to one unless the excavation is in rock. Vertical walls, terracing, and other slope treatments may be used provided no unbalancing of stream flow results and the slope treatment is approved as a part of a landscaping plan for the property.

(9[8]) The elevation of excavated areas in the FP area may not be lower than one-third of the depth of the natural channel, as measured from the adjacent bank, except for excavation of lakes. Excavation must be at least 50 feet from the bank of the natural channel, except as necessary to provide proper drainage. ~~[The excavated area may not exceed 25 percent of the total area of the tract's unfilled flood plain].~~

(10[9]) A landscape and erosion control plan must be submitted and approved. Landscaping must incorporate natural materials (such as earth[, and stone[, and wood]]) on cut and filled slopes when possible. The definitions of Section 51A-10.101 ~~[of this chapter]~~ apply to this subsection. Except as otherwise provided, the installation, removal, and maintenance ~~[preservation and mitigation]~~ requirements contained in the urban forest conservation ~~[tree preservation]~~ regulations, Division 51A-10.130 of the Dallas Development Code, apply. Each soil resource ~~[landscape]~~ and erosion control plan must comply with the following criteria:

(A) ~~[The size, type, and location of all trees within the existing flood plain that are six-inch caliper and larger must be shown. The plans must indicate which of the trees are to be preserved and which will be lost due to development activities in the flood plain.]~~

(B) ~~Trees must be protected if they are more than six inches in caliper and located in sloped areas of flood plain fill with a depth of four feet or less. If trees are protected by tree wells, the wells must be at or beyond the drip line of the tree and must provide positive drainage. A well may not exceed four feet in depth unless designed and certified by a registered landscape architect. Tree wells are required if either of the following conditions occur at the base of a tree to be protected:~~

(i) ~~a fill of greater than six inches; or~~

(ii) ~~a cut greater than six inches.~~

(C) The size, type, and location of all proposed replacement trees to mitigate the loss of existing trees must be shown. The tree types must be selected in accordance with the provisions of Section 51A-10.134 and must be approved by the city arborist as suitable for use under local climate and soil conditions.

~~[(D) Where a swale is proposed, tree replacement is required for the loss of existing trees with a six-inch caliper or greater located within the proposed swale. The applicant must indicate replacement of either 35 percent of the number of trees displaced, or the minimum number of trees necessary to provide a spacing equivalent to 50 feet on center, whichever is less. At least 50 percent of the replacement trees must have a caliper of at least six inches. The remainder of the trees must have a caliper of at least three inches.]~~

(B[E]) The specific plant materials proposed to protect fill and excavated slopes must be indicated. Plant materials must be suitable for use under local climate and soil conditions. In general, hydroseeding or sodding native grasses [~~Bermuda grass~~] is acceptable during the summer months (May 1st to August 30th). Winter rye or fescue grass may be planted during times other than the summer months as a temporary measure until such time as the permanent planting can be accomplished.

(C[F]) The proposed methods of erosion and sedimentation control, such as hay bales and sedimentation basins, to be used during construction must be shown in detail.

(D[G]) The fill case applicant, current owners, and subsequent owners must maintain and assure the survival of all planted material until the property is developed and a permanent maintenance plan of record is established. Maintenance responsibility must be reflected in the submitted plans or supporting documents.

~~[(10) Any alteration of the FP area necessary to obtain a removal of an FP prefix may not cause any additional expense in any current or projected public improvements.~~

~~(i) Special criteria for the Trinity and Elm Fork. If the FP area is in the flood plain of the Trinity River, Elm Fork of Trinity River, West Fork of the Trinity River, Five Mile Creek—confluence to Bonnie View Road, White Rock Creek—confluence to Seyene Road, or the regulatory floodways established by FEMA, the following requirements must be met:~~

~~(A) Encroachment into the floodway is prohibited unless FEMA issues a conditional Letter of Map Revision.~~

~~(B) Fill elevations and first floor elevations in flood plain areas located along the Elm Fork, West Fork, or main stem of the Trinity River that would be protected from inundation by the one percent annual chance or greater flood by a federally authorized flood control project must be constructed at a minimum elevation of one foot above the design flood. The parking requirements in Section 51A-5.104(b)(4) do not apply.~~

(h[j]) Term of permit validity and extension procedures.

(A) ~~[Permits issued after October 11, 1996.] A fill permit or floodway alteration permit is valid for a five-year time period from the date of issuance. The fill permit or floodway alteration permit automatically terminates if the filling operations have not been completed within the five-year time period. [The director of water utilities may grant a one time extension of a fill permit for an additional three year time period upon receipt of a written request made at least 30 days before the expiration of the original permit. The applicant for permit extension must demonstrate that the project fully complies with the flood plain regulations that were in effect at the time that the original permit was approved.~~

(B) ~~Permits issued before October 11, 1996. Fill permits issued before October 11, 1996, shall expire on December 31, 2001. The director of water utilities shall notify owners of fill permits governed by this paragraph that:~~

(i) ~~filling must be completed no later than December 31, 2001; and~~

(ii) ~~a one-time extension of the permit for an additional three-year time period may be granted by the director of water utilities upon receipt of a written request made at least 30 days before the expiration date of the original permit. The applicant for permit extension must demonstrate that the project fully complies with the flood plain regulations that were in effect at the time that the original permit was approved.]~~

(B[C]) New permit required upon expiration. When a fill permit terminates, the applicant must apply for a new permit before filling the property. The new application must comply with the floodplain ~~[flood plain]~~ regulations that are in effect at the time that the request is considered by the director ~~[city council]~~.

(C) New permit required with site plan change. If the applicant wishes to make changes to a site plan that will change the hydraulic model or acreage of fill placed on the fill permit application after a fill permit has been approved, a new permit must be obtained.

(D) Presumption of completion. Filling operations are deemed completed when the applicant ~~[submits]~~:

(i) submits a certification in the form of a signed and sealed topographic survey to the director of water utilities that proper fill elevations have been achieved and the specifications of the approved application have been followed; ~~[and]~~

(ii) submits compaction test results indicating the site was compacted to 95 percent standard proctor density; and

(iii) obtains a letter of map revision (LOMR) from FEMA, if applicable.

SEC. 51A-5.106.

SETBACK FROM NATURAL CHANNEL REQUIRED.

(a) For purposes of this section:

(1) NATURAL CHANNEL SETBACK LINE means that setback line described below located the farther beyond the crest:

(A) That line formed by the intersection of the surface of the land and the vertical plane located a horizontal distance of 20 feet beyond the crest.

(B) That line formed by the intersection of the surface of the land beyond the crest and a plane passing through the toe and extending upward and outward from the channel at the designated slope. For purposes of this paragraph, the designated slope is:

- (i) four to one if the channel contains clay or shale soil; and
- (ii) three to one in all other cases.

(2) CREST means that line at the top of the bank where the slope becomes less than four to one.

(3) TOE means that line at the bottom of the bank where the slope becomes less than four to one.

(b) Except as otherwise provided in Subsection (c), all development [~~structures~~] must be located behind the natural channel setback line.

(c) A structurally engineered retention system approved by the director may be substituted for the setback required in Subsection (b).

SEC. 51A-5.107. TRINITY RIVER CORRIDOR DEVELOPMENT CERTIFICATE PROCESS.

(a) Definitions. In this section:

(1) CORRIDOR DEVELOPMENT CERTIFICATE (CDC) MANUAL means the manual by that title dated January 31, 1992, or its latest revision[~~, which is attached to this ordinance and kept on file in the office of the city secretary~~].

(2) FLOODPLAIN [~~FLOOD-PLAIN~~] ALTERATION means any construction of buildings or other structures, mining, dredging, filling, grading, or excavation in the floodplain.

(3) TRINITY RIVER CORRIDOR means the portion of the floodplain [~~flood plain~~] of the West Fork, Elm Fork, and mainstem [~~mainstream~~] segments of the Trinity River floodplain [~~flood plain~~] within the Dallas city limits, as delineated on the latest CDC Regulatory Map.

(b) Certificate required. A person commits an offense if he makes any floodplain [~~flood plain~~] alteration within the Trinity River Corridor without first obtaining a corridor development certificate (CDC) from the director of water utilities. It is a defense to prosecution that an exemption or variance has been obtained in accordance with CDC criteria.

(c) Application. An application for a corridor development certificate must be filed with the director of water utilities on a form furnished by the department of water utilities.

(d) Review. The director of water utilities shall deny an application for a certificate unless it complies with the standards contained in the CDC Manual or unless an exemption from or a variance to those standards is obtained in accordance with Subsection (e).

(e) Exemptions and variances.

(1) Exemptions.

(A) An exemption from the requirements of this section may be obtained if the floodplain alteration involves the following activities:

(i) Ordinary maintenance of and repair to flood control structures.

(ii) The construction of outfall structures and associated intake structures if the outfall has been permitted under state or federal law.

(iii) Discharge of material for backfill or bedding for utility lines, provided there is no significant change in pre-existing bottom contours and excess materials are removed to an upland disposal area.

(iv) Bank stabilization.

(v) Any project listed in the U.S. Army Corps of Engineers March 1990 Reconnaissance Report, which is attached as Appendix A to the CDC Manual, or any project approved under the provisions of this division, provided the approval, permit, or authorization has not expired and no significant changes have occurred since the approval, permit, or authorization was issued.

(B) Application for an exemption must be made to the director of water utilities on a form provided by the department of water utilities.

(C) If the director of water utilities determines that an application for an exemption falls within one of the categories listed in Paragraph (1), the director shall issue a written exemption from the requirements of this section.

(2) Variances. If the director of water utilities determines that the application for a corridor development certificate does not comply with all of the standards contained in the CDC Manual, the applicant may apply for a variance to any standard contained in the manual. An application for a variance must be made to the director of water utilities, who shall schedule the application for consideration by the city council.”

SECTION 5. That a person violating a provision of this ordinance, upon conviction, is punishable by a fine not to exceed \$2,000.

SECTION 6. That Chapter 51A of the Dallas City Code shall remain in full force and effect, save and except as amended by this ordinance.

SECTION 7. That any act done or right vested or accrued, or any proceeding, suit, or prosecution had or commenced in any action before the amendment or repeal of any ordinance, or part thereof, shall not be affected or impaired by amendment or repeal of any ordinance, or part thereof, and shall be treated as still remaining in full force and effect for all intents and purposes as if the amended or repealed ordinance, or part thereof, had remained in force.

SECTION 8. That the terms and provisions of this ordinance are severable and are governed by Section 1-4 of Chapter 1 of the Dallas City Code, as amended.

SECTION 9. That this ordinance shall take effect immediately from and after its passage and publication in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so ordained.

APPROVED AS TO FORM:

CHRISTOPHER J. CASO, City Attorney

By _____
Assistant City Attorney

Passed _____