

# ORDINANCE NO. 225-87

60.3(d)

Revised as of October 1, 1986

## FLOOD DAMAGE PREVENTION ORDINANCE

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FLOOD DAMAGE PREVENTION ORDINANCE

ARTICLE I

STATUTORY AUTHORIZATION, FINDINGS OF FACT,  
PURPOSE AND METHODS

SECTION A. STATUTORY AUTHORIZATION

The Legislature of the State of Texas has in \_\_\_\_\_ delegates  
(state) (statutes)  
the responsibility to local governmental units to adopt regulations designed to minimize  
flood losses. Therefore, the City Council of Willow Park, Texas, does  
(governing body) (local unit) (state)  
does ordain as follows:

SECTION B. FINDINGS OF FACT

(1) The flood hazard areas of Willow Park are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary public expenditures for flood protection and relief, all of which adversely affect the public health, safety and general welfare.

(2) These flood losses are created by the cumulative effect of obstructions in floodplains which cause an increase in flood heights and velocities, and by the occupancy of flood hazard areas by uses vulnerable to floods and hazardous to other lands because they are inadequately elevated, floodproofed or otherwise protected from flood damage.

SECTION C. STATEMENT OF PURPOSE,

It is the purpose of this ordinance to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- (1) Protect human life and health;
- (2) Minimize expenditure of public money for costly flood control projects;
- (3) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- (4) Minimize prolonged business interruptions;
- (5) Minimize damage to public facilities and utilities such as water and gas

mains, electric, telephone and sewer lines, streets and bridges located in floodplains;

(6) Help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize future flood blight areas; and

(7) Insure that potential buyers are notified that property is in a flood area.

#### SECTION D. METHODS OF REDUCING FLOOD LOSSES

In order to accomplish its purposes, this ordinance uses the following methods:

(1) Restrict or prohibit uses that are- dangerous to health, safety or property in times of flood, or cause excessive increases in flood heights or velocities;

(2) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

(3) Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of flood waters;

(4) Control filling, grading, dredging and other development which may increase flood damage;

(5) Prevent or regulate the constructioun of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

### ARTICLE 2

#### DEFINITIONS

Unless specifically defined below words. or phrases used in this ordinance shall be interpreted to give them the meaning they have in common usage and to give this ordinance its most reasonable application.

**APPEAL** - means a request for a review of the Flood Plain Administrator's interpretation of any provision of this ordinance or a request for a variance.

**AREA OF SHALLOW FLOODING** - means a designated AO, AH, or VD zone on a community's Flood Insurance Rate Map (FIRM) with a one percent chance or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

**AREA OF SPECIAL FLOOD HAZARD** - is the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. The area may be designated as Zone A on the Flood Hazard Boundary Map (FHBM).

After detailed ratemaking has been completed in preparation for publication of the FIRM, Zone A usually is refined into Zones A, AE, AH, AO, AI-99, VO, VI-30, VE or V.

**BASE FLOOD** - means the flood having a one percent chance of being equalled or exceeded in any given year.

**CRITICAL FEATURE** - means an integral and readily identifiable part of a flood protection system, without which the flood protection provided by the entire system would be compromised.

**DEVELOPMENT** - means any man-made change in improved and unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations.

**ELEVATED BUILDING** - means a nonbasement building (i) built, in the case of a building in Zones AI-30, AE, A, A99, AU, AH, B, C, X, and D, to have the top of the elevated floor, or in the case of a building in Zones VI-30, VE, or V, to have the bottom of the lowest horizontal structure member of the elevated floor elevated above the ground level by means of pilings, columns (posts and piers), or shear walls parallel to the floor of the water and (ii) adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood. In the case of Zones AI-30, AE, A, A99, AO, AH, B, C, X, D, "elevated building" also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of flood waters. In the case of Zones VI-30, VE, or V, "elevated building" also includes a building otherwise meeting the definition of "elevated building", even though the lower area is enclosed by means of breakaway walls if the breakaway walls meet the standards of Section 60.3(e)(5) of the National Flood Insurance Program regulations.

**EXISTING CONSTRUCTION** - means for the purposes of determining rates, structures for which the "start of construction" commenced before the effective date of the FIRM or before January 1, 1975, for FIRMs effective before that date. "Existing construction" may also be referred to as "existing structures."

**FLOOD OR FLOODING** - means a general and temporary condition of partial or complete inundation of normally dry land areas from-

- (1) the overflow of inland or tidal waters.
- (2) the unusual and rapid accumulation or runoff of surface waters from any source.

**FLOOD INSURANCE RATE MAP (FIRM)** - 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.

**FLOOD INSURANCE STUDY** - is the official report provided by the Federal

Emergency Management Agency. The report contains flood profiles, water surface elevation of the base flood, as well as the Flood Boundary-Floodway Map.

**FLOODPLAIN OR FLOOD-PRONE AREA** - means any land area susceptible to being inundated by water from any source (see definition of flooding).

**FLOOD PROTECTION SYSTEM** - means those physical structural works for which funds have been authorized, appropriated, and expended and which have been constructed specifically to modify flooding in order to reduce the extent of the areas within a community subject to a "special flood hazard" and the extent of the depths of associated flooding. Such a system typically includes hurricane tidal barriers, dams, reservoirs, levees or dikes. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

**FLOODWAY (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 base flood without cumulatively increasing the water surface elevation more than a designated height.

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

**HABITABLE FLOOR** - means any floor usable for the following purposes; which includes working, sleeping, eating, cooking or recreation, or a combination thereof. A floor used for storage purposes only is not a "habitable floor."

**HIGHEST ADJACENT GRADE** - means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

**LEVEE** - means a man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding.

**LEVEE SYSTEM** - means a flood protection system which consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

**LOWEST FLOOR** - means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking or vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor; provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirement of Section 60.3 of the National Flood Insurance Program regulations.

**MANUFACTURED HOME** - means a structure transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For flood plain management purposes the term "manufactured home" also includes park trailers, travel trailers, and other similar vehicles placed on a site for greater than 180 consecutive days. For insurance purposes the term "manufactured home" does not include park trailers, travel trailers, and other similar vehicles.

**MEAN SEA LEVEL** - means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map are referenced.

**NEW CONSTRUCTION** - means, for flood plain management purposes, structures for which the "start of construction" commenced on or after the effective date of a flood plain management regulation adopted by a community.

**START OF CONSTRUCTION** - (for other than new construction or substantial improvements under the Coastal Barrier Resources Act (Pub. L. 97-348)), includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure.

**STRUCTURE** - means a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home.

**SUBSTANTIAL IMPROVEMENT** - means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50% of the market value of the structure either, (1) before the improvement or repair is started, or (2) if the structure has been damaged and is being restored, before the damage occurred. For the purpose of this definition "substantial improvement" is considered to occur 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 either (1) any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions, or (2) any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

VARIANCE - is a grant of relief to a person from the requirements of this ordinance when specific enforcement would result in unnecessary hardship. A variance, therefore, permits construction or development in a manner otherwise prohibited by this ordinance. (For full requirements see Section 60.6 of the National Flood Insurance Program regulations.)

VIOLATION - means the failure of a structure or other development to be fully compliant with the community's flood plain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in Section 60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4), or (e)(5) is presumed to be in violation until such time as that documentation is provided.

WATER SURFACE ELEVATION - means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929 (or other datum, where specified), of floods of various magnitudes and frequencies in the flood plains of coastal or riverine areas.

### ARTICLE 3

#### GENERAL PROVISIONS

##### SECTION A. LANDS TO WHICH THIS ORDINANCE APPLIES

The ordinance shall apply to all areas of special flood hazard with the jurisdiction of Willow Park.  
(local unit)

##### SECTION B. BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD

The areas of special flood hazard identified by the Federal Emergency Management Agency in a scientific and engineering report entitled, "Thp Flood Insurance Study for Willow Park," dated \_\_\_\_\_, with accompanying Flood Insurance Rate Maps and Flood Boundary-Floodway Maps (FIRM and FBFM) and any revisions thereto are hereby adopted by reference and declared to be a part of this ordinance.

##### SECTION C. ESTABLISHMENT OF DEVELOPMENT PERMIT

A Development Permit shall be required to ensure conformance with the provisions of this ordinance.

##### SECTION D. COMPLIANCE

No structure or land shall hereafter be located, altered, or have its use changed without full compliance with the terms of this ordinance and other applicable regulations.

##### SECTION E. ABROGATION AND GREATER RESTRICTIONS

This ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

#### SECTION F. INTERPRETATION

In the interpretation and application of this ordinance, all provisions shall be; (1) considered as minimum requirements; (2) liberally construed in favor of the governing body; and (3) deemed neither to limit nor repeal any other powers granted under State statutes.

#### SECTION G. WARNING AND DISCLAIMER OR LIABILITY

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. On rare occasions greater floods can and will occur and flood heights may be increased by man-made or natural causes. This ordinance does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of the community or any official or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made thereunder.

### ARTICLE 4

#### ADMINISTRATION

##### SECTION A. DESIGNATION OF THE FLOODPLAIN ADMINISTRATOR

The Mayor of Willow Park is hereby appointed the Floodplain Administrator to administer and implement the provisions of this ordinance and other appropriate sections of 44 CFR (National Flood Insurance Program Regulations) pertaining to flood plain management.

##### SECTION B. DUTIES & RESPONSIBILITIES OF THE FLOODPLAIN ADMINISTRATOR

Duties and responsibilities of the Floodplain Administrator shall include, but not be limited to, the following:

- (1) Maintain and hold open for public inspection all records pertaining to the provisions of this ordinance.
- (2) Review permit application to determine whether proposed building site will be reasonable safe from flooding.
- (3) Review, approve or deny all applications for development permits required by adoption of this ordinance.
- (4) Review permits for proposed development to assure that all necessary

permits have been obtained from those Federal, State or local governmental agencies (including Section 404 of the Federal Water Pollution Control Act Amendments of 1972. 33 U.S.C. 1334) from which prior approval is required.

(5) Where interpretation is needed as to the exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) the Floodplain Administrator shall make the necessary interpretation.

(6) Notify, in riverine situations, adjacent communities and the State Coordinating Agency which is \_\_\_\_\_, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency.

(7) Assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained.

(8) When base flood elevation data has not been provided in accordance with Article 3, Section B, the Floodplain Administrator shall obtain, review and reasonably utilize any base flood elevation data and floodway data available from a Federal, State or other source, in order to administer the provisions of Article 5.

(9) When a regulatory floodway has not been designated, the Floodplain Administrator must require that no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones AI-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

#### SECTION C. PERMIT PROCEDURES

(1) Application for a Development Permit shall be presented to the Floodplain Administrator on forms furnished by him/her and may include, but not be limited to, plans in duplicate drawn to scale showing the location, dimensions, and elevation of proposed landscape alterations, existing and proposed structures, and the location of the foregoing in relation to areas of special flood hazard. Additionally, the following information is required:

a. Elevation (in relation to mean sea level), of the lowest floor (including basement) of all new and substantially improved structures;

b. Elevation in relation to mean sea level to which any nonresidential structure shall be floodproofed;

c. A certificate from a registered professional engineer or architect that the nonresidential floodproofed structure shall meet the floodproofing criteria of Article 5,

Section B(2);

d. Description of the extent to which any watercourse or natural drainage will be altered or relocated as a result of proposed development.

e. Maintain a record of all such information in accordance with Article 4.  
Section (B)(1).

(2) Approval or denial of a Development Permit by the Floodplain Administrator shall be based on all of the provisions of this ordinance and the following relevant factors:

- a. The danger to life and property due to flooding or erosion damage;
- b. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
- c. The danger that materials may be swept onto other lands to the injury of others;
- d. The compatibility of the proposed use with existing and anticipated development;
- e. The safety of access to the property in times of flood for ordinary and emergency vehicles;
- f. The costs of providing governmental services during and after flood conditions including maintenance and repair of streets and bridges, and public utilities and facilities such as sewer, gas, electrical and water systems;
- g. The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site;
- h. The necessity to the facility of a waterfront location where applicable;
- i. The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
- j. The relationship of the proposed use to the comprehensive plan for that area.

#### SECTION D. VARIANCE PROCEDURES

(1) The Appeal Board as established by the community shall hear and render judgement on requests for variances from the requirements of this ordinance.

(2) The Appeal Board shall hear and render judgement on an appeal only when it is alleged there is an error in any requirement, decision, or determination made by the

Floodplain Administrator in the enforcement or administration of this ordinance.

(3) Any person or persons aggrieved by the decision of the Appeal Board may appeal such decision in the courts of competent jurisdiction.

(4) The Floodplain Administrator shall maintain a record of all actions involving an appeal and shall report variances to the Federal Emergency Management Agency upon request.

(5) Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in the remainder of this ordinance.

(6) Variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing the relevant factors in Section C(2) of this Article have been fully considered. As the lot size increases beyond the one-half acre, the technical justification required for issuing the variance increases.

(7) Upon consideration of the factors noted above and the intent of this ordinance, the Appeal Board may attach such conditions to the granting of variances as it deems necessary to further the purpose and objectives of this ordinance (Article 1. Section C).

(8) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

(9) Prerequisites for granting variances:

a. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

b. Variances shall only be issued upon, (i) showing a good and sufficient cause; (ii) a determination that failure to grant the variance would result in exceptional hardship to the applicant, and (iii) a determination that the granting of a variance 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 existing local laws or ordinances.

c. Any application to whom a variance is granted shall be given written notice that the structure will be permitted to be built with the lowest floor elevation below the base flood elevation, and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

(10) Variances may be issued by a community for new construction and substantial

improvements and for other development necessary for the conduct of a functionally dependent use provided that (i) the criteria outlined in Article 4, Section D(1)-(9) are met, and (ii) the structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

## ARTICLE 5

### PROVISIONS FOR FLOOD HAZARD REDUCTION

#### SECTION A. GENERAL STANDARDS

In all areas of special flood hazards the following provisions are required for all new construction and substantial improvements;

(1) All new construction or substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;

(2) All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage;

(3) All new construction or substantial improvements shall be constructed with materials resistant to flood damage;

(4) All new construction or substantial improvements shall be constructed with electrical heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

(5) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;

(6) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from the systems into flood waters; and,

(7) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

#### SECTION B. SPECIFIC STANDARDS

In all areas of special flood hazards where base flood elevation data has been provided as set forth in (i) Article 3, Section B. (ii) Article 4, Section B(8), or (iii) Article 5, Section C(4), the following provisions are required:

(1) Residential Construction - new construction and substantial improvement

of any residential structure shall have the lowest floor (including basement), elevated to or above the base flood elevation. A registered professional engineer, architect, or land surveyor shall submit a certification to the Floodplain Administrator that the standard of this subsection as proposed in Article 4, Section C(1)a., is satisfied.

(2) Nonresidential Construction - new construction and substantial improvements of any commercial, industrial or other nonresidential structure shall either have the lowest floor (including basement) elevated to or above the base flood level or, together with attendant utility and sanitary facilities, be designed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall develop and/or review structural design, specifications, and plans for the construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice as outlined in this subsection. A record of such certification which includes the specific elevation (in relation to mean sea level) to which such structures are floodproofed shall be maintained by the Floodplain Administrator.

(3) Enclosures - new construction and substantial improvements, with fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:

- a. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
- b. The bottom of all openings shall be no higher than one foot above grade.
- c. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(4) Manufactured Homes –

a. Require that all manufactured homes to be placed within Zone A. shall be installed using, methods and practices which minimize flood damage. For the purpose of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces.

b. All manufactured homes shall be in compliance with Article 5, Section B (1).

c. Require that all manufactured homes to be placed or substantially improved within Zones A1-30, AH and AE on the community's FIRM be elevated on a permanent

foundation such that the lowest floor of the manufactured home is at or above the base flood elevation; and be securely anchored to an adequately anchored foundation system in accordance with the provision of Section B(4) of this Article.

#### SECTION C. STANDARDS FOR SUBDIVISION PROPOSALS

(1) All subdivision proposals including manufactured home parks and subdivisions shall be consistent with Article 1, Sections B, C, and D of this ordinance.

(2) All proposals for the development of subdivisions including manufactured home parks and subdivisions shall meet Development Permit requirements of Article 3, Section C; Article 4, Section C; and, the provisions or Article 5 of this ordinance.

(3) Base flood elevation data shall be generated for subdivision proposals and other proposed development including manufactured home parks and subdivisions which is greater than 50 lots or 5 acres, whichever is lesser, if not otherwise provided pursuant to Article 3, Section B or Article 4, Section B (8) of this ordinance.

(4) All subdivision proposals including manufactured home parks and subdivisions shall have adequate drainage provided to reduce exposure to flood hazards.

(5) All subdivision proposals including manufactured home parks and subdivisions shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize or eliminate flood damage.

#### SECTION D. STANDARDS FOR AREAS OF SHALLOW FLOODING (AO/AH ZONES)

Located within the areas of special flood hazard established in Article 3, Section B, are areas designated as shallow flooding. These areas have special flood hazards associated with base flood depths of 1 to 3 feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and where 'velocity flow may be evident. Such flooding is characterized by ponding or sheet flow; therefore, the following provisions apply;

(1) All new construction and substantial improvements of residential structures have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified).

(2) All new construction and substantial improvements of nonresidential structures;

i. have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified), or;

ii. together with attendant utility and sanitary facilities be designed so

that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads of effects of buoyancy.

(3) A registered professional engineer or architect shall submit a certification to the Floodplain Administrator that the standards of this Section, as proposed in Article 4. Section C (1)a., are satisfied.

(4) Require within Zones AH or A0 adequate drainage paths around structures on slopes, to guide flood waters around and away from proposed structures.

#### SECTION E. FLOODWAYS

Floodways - located within areas of special flood hazard established in Article 3, Section B, are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles and erosion potential, the following provisions shall apply;

(1) Encroachments are prohibited, including fill, new construction, substantial improvements and other development unless certification by a professional registered engineer or architect is provided demonstrating that encroachments shall not result in any increase in flood levels within the community during the occurrence of the base flood discharge.

(2) If Article 5, Section E (1) above is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Article 5.

CERTIFICATION

It is hereby found and declared by City of Willow Park that severe flooding has  
(local unit)  
occurred in the past within its jurisdiction and will certainly occur within the future; that  
flooding is likely to result in infliction of serious personal injury or death, and its likely to  
result in substantial injury or destruction of property within its jurisdiction; in order to  
effectively comply with minimum standards for coverage under the National Flood  
Insurance Program; and in order to effectively remedy the situation described herein, it is  
necessary that this ordinance become effective immediately.

Therefore, an emergency is hereby declared to exist, and this ordinance, being necessary  
for the immediate preservation of the public peace, health and safety, shall be in full force  
and effect from and after its passage and approval.

APPROVED: Richard Baack, Mayor  
(local official)

PASSED: 2 - 10 - 87  
(date)

CERTIFICATE

I, the undersigned, Aref Hassan, do hereby certify that the above is a true and correct  
copy of an ordinance duly adopted by the City of Willow Park, at a regular meeting  
duly Convened on 2 - 10 - 87.

Aref Hassan

(Secretary or responsible person)  
(SEAL)