

# **BASTROP COUNTY, TEXAS FLOOD DAMAGE PREVENTION ORDER**

## **ARTICLE 1**

### **STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE AND METHODS**

#### **SECTION A: STATUTORY AUTHORIZATION**

The Legislature of the State of Texas has, in the Flood Control Insurance Act, Texas Water Code, Section 16.315, delegated the responsibility of local governmental units to adopt regulations designed to minimize Flood losses. Therefore, the Bastrop County Commissioners Court of Bastrop County, Texas does ordain as follows:

#### **SECTION B: FINDINGS OF FACT**

1. The Flood hazard areas of Bastrop County 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, Flood-proofed, or otherwise protected from Flood damage.
3. The term Floodplain has a broader scope than the Special Flood Hazard Areas and refers to any land which is subject to periodic inundation. Floodplains are important to Bastrop County because they convey and store Flood waters; contribute to the better water quality and water supply; provide habitat for fish, game and wildlife; provide open space for leisure and recreational activities; and generate productive soils for agriculture and timber. It is the nature of Floodplains to change over time due both to natural processes and human Development.

#### **SECTION C: STATEMENT OF PURPOSE**

It is the purpose of this Order 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;
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;
7. Ensure that potential buyers are notified that property is in a Flood area; and
8. Ensure that those who occupy Areas of Special Flood Hazard assume responsibility for their actions.

**SECTION D:        METHODS OF REDUCING FLOOD LOSSES**

In order to accomplish its purposes, this Order uses of 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, drilling and other Development which may increase Flood damage.
5. Prevent or regulate the construction of Flood barriers which will unnaturally divert Floodwaters or which may increase Flood hazards to other lands.
6. Promote uses of Floodplains that are consistent with the natural and beneficial functions of the Floodplain.

## ARTICLE 2

### DEFINITIONS

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

**A ZONE(S)** – is a general term for Zones A, AE, AH, AO, A1-99 as it relates to the 100-year Flood. A 100-year Flood or 100-year Floodplain describes an event or an area subject to a 1% probability of a certain size Flood occurring in any given year.

**ACCESSORY BUILDING** – means a Structure which is on the same parcel of property as the principal Structure and the use of which is incidental and subordinate to the use of the principle Structure. This includes, but is not limited to, a detached garage, storage shed, gazebo, picnic pavilion, boathouse, barn or other similar building.

**ADDITION** – is an improvement that is structurally attached and increases the square footage of a Structure including lateral Additions added to the side or rear of a Structure, vertical Additions added on top of a Structure, and Enclosures added underneath a Structure. Related to Substantial Improvement.

**ALLUVIAL FAN FLOODING** – means Flooding occurring on the surface of an Alluvial Fan or similar landform, which originates at the Apex and is characterized by high-velocity flows; active processes of Erosion, sediment transport, and deposition; and unpredictable flow paths. Alluvial Fan Flooding is depicted on a Flood Insurance Rate Map (FIRM) as Zone AO, with a Flood depth and velocity.

**ALTER OR ALTERATION** – means any repair, reconstruction, rehabilitation, Addition, or modification in construction of an Existing Structure or other Development including waterways.

**APEX** – means a point on an Alluvial Fan or similar landform below which the flow path of the major stream that formed the fan becomes unpredictable and Alluvial Fan Flooding can occur.

**APPEALS BOARD** – means the Bastrop County Commissioners Court.

**AREA OF SHALLOW FLOODING** – means a designated AO, AH, AR/AO, AR/AH, or VO Zone on a Community's Flood Insurance Rate Map (FIRM) with a 1% or greater annual chance of Flooding to an average depth of 1 to 3 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 the county subject to a 1% or greater chance of Flooding in any given year. The area may be designated as Zone A on the Flood Hazard Boundary Map. After detailed rate making has been completed in

preparation for publication of the FIRM, Zone A usually is refined into Zones A, AO, AH, A1-30, AE, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, VO, V1-30, VE or V.

**BASE FLOOD** – means the Flood having a 1% chance of being equaled or exceeded in any given year.

**BASE FLOOD ELEVATION (BFE)** – the elevation shown on the Flood Insurance Rate Map (FIRM) and found in the accompanying Flood Insurance Study (FIS) for Zones A, AE, AH, A1 – A30, AR, V1 – V30, or VE that indicates the Water Surface Elevation resulting from the Flood that has a 1% chance of equaling or exceeding that level in any given year – also called the Base Flood.

**BASEMENT** – means any area of the building having its floor sub-grade (below ground level) on all sides. See FEMA Technical Bulletin 6-93

**BENCHMARK** – means a point of vertical ground elevation reference to be shown on the FIRM for comparison to the BFE. Reference marks shall be referenced to the National Geodetic Vertical Datum (NGVD) or the North American Vertical Datum (NAVD).

**COMMUNITY** – means a political entity that has the authority to adopt and enforce Floodplain ordinances for the area under its jurisdiction.

**CRITICAL FACILITIES** – means those facilities essential to the preservation of life and property, including; schools, nursing homes, hospitals, police, fire and emergency response installations, facilities used for storage of critical records, and installations which produce, use or store hazardous materials or hazardous waste.

**CUMULATIVE DAMAGE** – is the damage threshold at which a Structure must be brought into compliance with this Order. This threshold has been met when the cost of restoring the Structure to before damaged condition would equal or exceed 50% of the appraised value of the Structure before the damage occurred. Each event is counted cumulatively for 10 years.

**DEVELOPMENT** – means any man-made change to improved or unimproved real estate, including but not limited to buildings or other Structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

**ELEVATED BUILDING** – means, for insurance purposes, a non-Basement building, which has its lowest elevated floor, raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

**ELEVATION CERTIFICATE** – means the effective FEMA Elevation Certificate Form used to show elevations of real property in relation to Base Flood Elevations.

**ENCLOSURES** – are fully-enclosed, walled-in areas below the Lowest Floor of an Elevated Building, including crawlspaces. See FEMA Technical Bulletin “Openings in Foundation Walls and Walls of Enclosures”

**ENCROACHMENTS** – are activities or construction within the Floodway including fill, New Construction, Substantial Improvements, and other Development. These activities are prohibited within the adopted Regulatory Floodway unless it has been demonstrated through hydrologic and hydraulic analyses that the proposed Encroachment would not result in any increase in Flood levels.

**EROSION** – means the process of the gradual wearing away of land mass.

**EXISTING STRUCTURES** – means for the purposes of determining Flood insurance 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.

**EXISTING MANUFACTURED HOME PARK OR SUBDIVISION** – means a Manufactured Home Park Or Subdivision for which the construction of facilities for servicing the lots on which the Manufactured Homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or pouring of concrete pads) is completed before the effective date of the Floodplain Management Regulations adopted by the County.

**EXPANSION TO AN EXISTING MANUFACTURED HOME PARK OR SUBDIVISION** – means the preparation of additional sites by the construction of facilities for servicing the lots on which the Manufactured Homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or pouring of concrete pads).

**FLOOD OR FLOODING** – means a general and temporary condition of partial or complete inundation of normally dry land areas from; the overflow of inland or tidal waters or 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 (FIS)** – is the official report provided by the Federal Emergency Management Agency that examines, evaluates, and determines the Flood hazards and if appropriate, corresponding Flood profiles and Water Surface Elevations. It can also be the examination, evaluation and determination of Flood hazards and, if appropriate, corresponding Water Surface Elevations, or an examination, evaluation and determination of mudslide (i.e. mudflow) and/or Flood-Related Erosion hazards.

**FLOODPLAIN OR FLOOD-PRONE AREA** – means any land area susceptible to being inundated by water from any source. See definition of Flooding.

**FLOODPLAIN MANAGEMENT** – means the operation of an overall program of corrective and preventive measures for reducing Flood damage and preserving and enhancing, where

possible, natural resources in the Floodplain, including, but not limited to, emergency preparedness plans, Flood control works and Floodplain Management Regulations.

**FLOODPLAIN MANAGEMENT REGULATIONS** – means zoning orders, Subdivision regulations, building codes, health regulations, special purpose orders (such as a Floodplain order, grading order and Erosion control order) and other applications of police power. The term describes such state or local regulations, in any combination thereof, which provide standards for the purpose of Flood damage prevention and reduction.

**FLOODPROOFING** – means any combination of structural and non-structural Additions, changes, or adjustments to Structures, which reduce or eliminate Flood damage to real estate or improved real property, water and sanitary facilities, Structures and their contents. See FEMA Technical Bulletins “Non-Residential Floodproofing – Requirements and Certification” and “Wet Floodproofing Requirements for Structures Located in Special Flood Hazard Areas”

**FLOOD-RESISTANT** – is any building material capable of withstanding direct and prolonged contact with Floodwaters for at least seventy-two (72) hours without sustaining any damage requiring more than low-cost cosmetic repair (such as painting).

**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 Base Flood without cumulatively increasing the Water Surface Elevation more than a designated height.

**FLOOD ZONE DESIGNATIONS** have the following meanings:

- ZONE A: Areas of the base (100-year) Flood where Base Flood Elevations have not been determined.
- ZONE AE: Areas of the base (100-year) Flood where Base Flood Elevations have been determined.
- ZONE AH: Areas of the base (100-year) Flood where depths are between 1.0 to 3.0 feet (usually areas of ponding); and Base Flood Elevations are shown.
- ZONE AO: Areas of the base (100-year) Flood where depths are between 1.0 to 3.0 feet (usually sheet flow on sloping terrain); average depths determined. For areas of Alluvial Fan Flooding, velocities also determined.
- ZONE X: SHADED – Areas of the 500-year Flood, areas of 0.2% Annual Chance Flood; areas of 1% Annual Chance Flood with average depths of less than one foot (1') or with drainage areas less than one (1) square mile; and areas protected by Levees from one-percent (1%) Annual Chance Flood.
- ZONE X: UNSHADED – Areas determined to be outside either the 100 – or 500 – year Floodplain or the 0.2% Annual Chance Floodplain.

A 100-year Flood or 100-year Floodplain describes an event or an area subject to a 1% probability of a certain size Flood occurring in any given year.

**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 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.

**FUTURE-CONDITIONS HYDROLOGY** – means the Flood discharges associated with projected land-use conditions and without consideration of projected future construction of Flood detention Structures or projected future hydraulic modifications within a stream or other waterway, such as bridge and culvert construction, fill, and excavation.

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

**HISTORIC STRUCTURE** – means any Structure that is:

1. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
2. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
3. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or
4. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
  - a. By an approved state program as determined by the Secretary of the Interior, or
  - b. By the Secretary of the Interior directly in states without approved programs.

**HYDRODYNAMIC FORCES** – are imposed on an object, such as a building, by water flowing against and around it. Among the forces are positive frontal pressure against the Structure, drag effect along the sides, and negative pressure in the downstream side.

**HYDROSTATIC FORCES** – standing water or slowly moving water can induce horizontal Hydrostatic Forces against a Structure, especially when Floodwater levels on different sides of a wall are not equal. Also Flooding can cause vertical Hydrostatic Forces, or flotation.

**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.

**LIMITED STORAGE** – is the type of storage Permitted in an enclosed area below the Base Flood Elevation and is limited to that which is incidental and accessory to the principle use of the Structure. For example, if the Structure is a residence, storage should be limited to items such as lawn and garden equipment and other low damage items which will not suffer Flood damage or can be conveniently moved to the elevated part of the building.

**LOWEST FLOOR** – means the Lowest Floor of the lowest enclosed area (including Basement). An unfinished or Flood-Resistant enclosure, usable solely for parking of vehicles, building access or storage in a 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 required utilities. The term Manufactured Home does not include a Recreational Vehicle.

**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.

**MEAN SEA LEVEL** – means, for purposes of the National Flood Insurance Program, the North American Vertical Datum (NAVD 88) of 1988, or other datum, to which Base Flood Elevations shown on a Community's Flood Insurance Rate Map are referenced.

**MITIGATION** -- the taking of actions that reduce the harmful effects of a disaster. Mitigation accepts the occurrence of extreme natural phenomena, but attempts to limit both human and property loss. An example of Mitigation is a hydraulically equivalent volume of Floodplain storage sufficient to offset a reduction in Floodplain storage or conveyance capacity.

**NEW CONSTRUCTION** – means, for the purpose of determining insurance rates, Structures for which the Start of Construction commenced on or after the effective date of an initial FIRM or after December 31, 1974, whichever is later, and includes any subsequent improvements to such Structures. For Floodplain Management purposes, New Construction means Structures for which the Start of Construction commenced on or after the effective date of a Floodplain Management regulation adopted by a Community and includes any subsequent improvements to such Structures.

**NEW MANUFACTURED HOME PARK OR SUBDIVISION** – means a Manufactured Home Park Or Subdivision for which the construction of facilities for servicing the lots on which the Manufactured Homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of Floodplain Management Regulations adopted by the Community.



**NON-RESIDENTIAL STRUCTURES** – is a Structure that is primarily used for purposes other than RESIDENTIAL, including, but not limited to: business concerns, churches, schools, oil and gas wells, farm buildings (including grain bins and silos), pool houses, boat docks/houses, clubhouses, recreation buildings, mercantile Structures, agricultural and industrial Structures, warehouses, and hotels and motels with normal room rentals for less than six (6) months' duration.

**NO-RISE CERTIFICATE** - Any project in a Floodway must be reviewed to determine if the project will increase Flood heights. An engineering analysis must be conducted before a Permit can be issued. A record of the results of this analysis, which can be in the form of a No-Rise Certification, must be submitted to the County. This No-rise Certification must be supported by technical data and signed by a registered professional engineer. The supporting technical data should be based on the standard step-backwater computer model used to develop the 100-year Floodway shown on the Flood Insurance Rate Map (FIRM).

**1% ANNUAL CHANCE FLOOD (1% ANNUAL CHANCE EVENT)** - A 100-year Flood or 100-year Floodplain describes an event or an area subject to a 1% probability of a certain size Flood occurring in any given year.

**PERMIT** – means a Permit as required by this Order.

- **Class A Permit** – is issued for any Development of property that is wholly outside an identified Floodplain.
- **Conditional Class A Permit** – is issued for Development of property which contains the Floodplain but also has sufficient area to build outside of the Floodplain. Conditions of this Permit will be based on individual sites and plans.
- **Class B Permit** – is issued for any Development that is either partially or wholly within a mapped 1% Annual Chance Floodplain.

**RECREATIONAL VEHICLE** – means a vehicle which is built on a single chassis; four-hundred (400) square feet or less when measured at the largest horizontal projections; designed to be self-propelled or permanently towable by a light duty truck; and designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

**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.

**REPETITIVE LOSS** – means Flood-related damage sustained by a Structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such Flood event, on the average, equals or exceeds 25% of the market value of the Structure before the damage occurred.

**RESIDENTIAL STRUCTURE** – is a Structure that is considered to be a domicile or is used for residential purposes for six (6) months or more. Residential Structures include a single family home or a manufactured or modular home.

**RIVERINE** – means relating to, formed by, or resembling a river (including tributaries), streams, brook, etc.

**SEVERE REPETITIVE LOSS PROPERTY** – a Structure that is covered under an NFIP Flood insurance policy and:

1. That has at least four NFIP claim payments (including building and contents) over \$5,000 each, and the cumulative amount of such claims payments exceeds \$20,000; or
2. For which at least two separate claims payments (building payments only) have been made with the cumulative amount of the building portion of such claims exceeding the market value of the building.

For both (1.) and (2.) above, at least two of the referenced claims must have occurred within any ten-year period, and must be greater than 10 days apart.

**SPECIAL FLOOD HAZARD AREA** – see Area of Special Flood Hazard

**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, rehabilitation, Addition placement, or other improvement was within one-hundred and eighty (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. For a Substantial Improvement, the actual Start of Construction means the first Alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that Alteration affects the external dimensions of the building.

**STRUCTURE** – means, for Floodplain Management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a Manufactured Home. **Structure** for insurance coverage purposes, means a walled and roofed building, other than a gas or liquid storage tank that is principally above ground and affixed to a permanent site, as well as a Manufactured Home on a permanent foundation. For the latter purpose, the term includes a building while in the course of construction, Alteration or repair, but does not include building materials or supplies intended for use in such construction, Alteration or repair, unless such materials or supplies are within an enclosed building on the premises.

**SUBDIVISION** – for the purpose of this Order, means the division of any lot, tract, or parcel of land into two or more lots or sites greater than five (5) acres for the purpose of public sale or building Development. It also includes Existing or Proposed Manufactured Home Park or Subdivision. Base Flood Elevation data must be included within any such proposal.

**SUBSTANTIAL DAMAGE** – means damage of any origin sustained by a Structure whereby the cost of restoring the Structure to its condition before damages occurred would equal or exceed 50% of the market value of the Structure before the damage occurred. Substantial Damage also means Flood related damage sustained by a Structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each Flood event, on the average, equals or exceeds 25% of the market value of the Structure before the damage occurred.

**SUBSTANTIAL IMPROVEMENT** – means any reconstruction, rehabilitation, Addition, or other improvement of a Structure, the cost of which equals or exceeds 50% of the market value of the Structure before Start of Construction of the improvement. This term includes Structures, which have incurred Repetitive Loss or Substantial Damage, regardless of the actual repair work performed. The term does not, however, include:

1. Any project for improvement of a Structure to correct existing Violations of state or local health, sanitary, or safety code specifications which have been identified by local authorities/officials and which are the minimum necessary to assure safe living conditions, or
2. Any Alteration of a Historic Structure provided that the Alteration will not preclude the Structure's continued designation as a Historic Structure.

**VARIANCE** – means a grant of relief by the Community from the terms of a Floodplain Management regulation. (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 Floodplain 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)(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 North American Vertical Datum (NAVD) of 1988, (or other datum, where specified), of Floods of various magnitudes and frequencies in the Floodplains of coastal or Riverine areas.

**WET FLOODPROOFING** – includes permanent or contingent measures applied to a Structure or its contents that prevent or provide resistance to damage from Flooding while allowing Floodwaters to enter the Structure or area. FEMA Technical Bulletins "Non-Residential Floodproofing – Requirements and Certification" and "Wet Floodproofing Requirements"

## ARTICLE 3

### GENERAL PROVISIONS

#### SECTION A: LANDS TO WHICH THIS ORDER APPLIES

This Order shall apply to all Areas of Special Flood Hazard within the jurisdiction of Bastrop County.

#### 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 the current scientific and engineering report entitled, "The Flood Insurance Study (FIS) for Bastrop County, Texas and Incorporated Areas," dated January 6, 2016, with accompanying Flood Insurance Rate Maps (FIRM) dated January 6, 2016 and any revisions thereto are hereby adopted by reference and declared to be a part of this Order.

#### SECTION C: ESTABLISHMENT OF DEVELOPMENT PERMIT AND APPLICATION FEE

A Development Permit shall be required to ensure conformance with the provisions of this Order for the unincorporated area of Bastrop County. A permitting fee structure shall be established by the Commissioners Court of Bastrop County.

#### SECTION D: COMPLIANCE

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

#### SECTION E: ABROGATION AND GREATER RESTRICTIONS

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

#### SECTION F: INTERPRETATION

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

**SECTION G:           SEVERABILITY**

This Order and the various parts thereof are hereby declared to be severable. Should any section of this Order be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the Order as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid.

**SECTION H:           PENALTIES FOR NON-COMPLIANCE**

No Structure or land shall hereafter be developed, constructed, located, extended, converted or Altered without full compliance with the terms of this Commissioners Court Order and other applicable regulations.

Violation of the provisions of this Order by failure to comply with any of its requirements (including Violations of conditions and safeguards established in connection with any provision) shall constitute a misdemeanor. Each day of non-compliance constitutes a separate offense/violation.

Any person who violates this Commissioners Court Order or fails to comply with any of its requirements shall upon conviction thereof be fined not more than **five-hundred dollars (\$500)** for each Violation, and in addition shall pay all costs and expenses involved in pursuit and enforcement of the case.

Nothing herein contained shall prevent Bastrop County from taking such other lawful action as is necessary to prevent or remedy any Violation.

**SECTION I:           WARNING AND DISCLAIMER OF LIABILITY**

The degree of Flood protection required by this Order 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 Order 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 Order shall not create liability on the part of the County or any official or employee thereof for any Flood damages that result from reliance on this Order or any administrative decision lawfully made hereunder.

## ARTICLE 4

### ADMINISTRATION

#### SECTION A: DESIGNATION OF THE COUNTY FLOODPLAIN ADMINISTRATOR

The Floodplain Administrator is hereby appointed the County Floodplain Administrator to administer and implement the provisions of this Order and other appropriate sections of 44 CFR (Emergency Management and Assistance – National Flood Insurance Program Regulations) pertaining to Floodplain Management.

#### SECTION B: DUTIES & RESPONSIBILITIES OF THE COUNTY FLOODPLAIN ADMINISTRATOR

Duties and responsibilities of the County 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 Order.
2. Review Permit applications to determine whether proposed building sites, including the placement of Manufactured Homes, will be reasonably safe from Flooding.
3. Review and approve or deny all applications for Development Permits required by adoption of this Order.
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 is 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, the U. S. Army Corp of Engineers, and the State Coordinating Agency, which is the Texas Water Development Board and also the Texas Commission on Environmental Quality (TCEQ), 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 County 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 A1-30 and AE on the County'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.
10. Under the provisions of 44 CFR, Chapter 1, Section 65.12, of the National Flood Insurance Program regulations, a Community may approve certain Development in Zones A1-30, AE, and AH on the Community's FIRM, which increases the Water Surface Elevation of the Base Flood by more than one-foot (1'), provided that the County first completes all of the provisions required by Section 65.12.

**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 drawn to scale showing the location, dimensions, and elevation of proposed landscape alterations, existing and proposed Structures, including the placement of Manufactured Homes, and the location of the foregoing 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. Documentation shall be a FEMA Elevation Certificate.
  - b. Elevation relation to Mean Sea Level to which any Non-Residential Structure shall be Floodproofed. Documentation shall be a FEMA Elevation Certificate.
  - 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 Order 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 cost 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 floodwaters 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. Compliance with other State or local regulations.

**SECTION D: VARIANCE PROCEDURES**

1. The Appeals Board, which is the Bastrop County Commissioners Court, shall hear and render judgment on requests for Variances from the requirements of this Order.
2. The Appeals Board shall hear and render judgment on appeals and requests for Variances from the requirements of this Order 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 Order.
3. Any person or persons aggrieved by the decision of the Appeals Board may appeal such decision to 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 Order.
6. Variances may be issued for New Construction and Substantial Improvements to be erected on a lot of ½ acre or less in size contiguous to and surrounded by lots with Existing Structure 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 ½ acre, the technical justification required for issuing the Variance increases.
7. Upon consideration of the factors noted above and the intent of this Order, the Appeals Board may attach such conditions to the granting of Variances as it deems necessary to further the purpose and objectives of this Order (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. Variances may be issued for the repair or rehabilitation of Historic Structures upon a determination that the proposed repair or rehabilitation will not preclude the Structure's continued designation as a Historic Structure and the Variance is the minimum necessary to preserve the historic character and design of the Structure.
10. 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 orders.
  - c. Any application to which 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 reduce Lowest Floor elevation.
11. 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 Forces and Hydrostatic Forces, 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. All 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.
7. All on-site wastewater 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 (3), the following provisions are required:

1. **Residential Construction** – New Construction and Substantial Improvement of any Residential Structure shall have the Lowest Floor, elevated at least two feet (2') above the Base Flood Elevation. A registered professional engineer, architect, or land surveyor shall submit certifications to the Floodplain Administrator that the standards of this Order are satisfied.

2. **Non-Residential Construction** – New Construction and Substantial Improvements of any commercial, industrial or other Non-Residential Structure (including utilities and sanitary facilities) shall either have the Lowest Floor elevated at least two-feet (2') above the Base Flood level; or be designed so that the Structure is Floodproofed at least two feet above the Base Flood Elevation. A registered professional engineer or architect shall develop 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. See FEMA Technical Bulletins "Flood Damage-Resistant Materials Requirement" and "Non-Residential Floodproofing – Requirements and Certification"
3. **Enclosures** – including New Construction and Substantial Improvements, with fully enclosed areas below the Lowest Floor that are usable solely for parking of vehicles, building access or limited storage in an area other than a Basement and which 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 on opposite walls 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 (1') above grade.
  - c. The openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of Floodwaters. See FEMA Technical Bulletin "Openings in Foundation Walls and Walls of Enclosures"
4. **Manufactured Homes** -
  - a. Require that all Manufactured Homes to be placed within Zone A on a Community's FHBM or FIRM shall be installed using methods and practices which minimize Flood damage. For the purposes of this requirement, Manufactured Homes must be elevated at least two-feet (2') above the Base Flood Elevation 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 requirements for resisting wind forces.
  - b. Require that Manufactured Homes that are placed or substantially improved within Zones A1-30, AH, and AE on the Community's FIRM on sites (i) outside of a Manufactured Home Park Or Subdivision, (ii) in a New Manufactured Home Park Or Subdivision, (iii) in an Expansion To An Existing Manufactured Home Park Or Subdivision, or (iv) in an Existing Manufactured Home Park Or Subdivision on which a Manufactured Home has incurred Substantial Damage as a result of a Flood, be elevated on a permanent foundation such that the Lowest Floor of the Manufactured Home is elevated at least two-feet (2') above the Base Flood Elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

- c. Require that Manufactured Homes be placed or substantially improved on sites in an Existing Manufactured Home Park Or Subdivision within Zone A1-30, AH, and AE on the Community's FIRM that are not subject to the provisions of paragraph (4) of this section be elevated so that either:
    - i. The Lowest Floor of the Manufactured Home is at least two-feet (2') above the Base Flood Elevation, or
    - ii. The Manufactured Home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six inches (36") in height above grade and be securely anchored to an adequately anchored foundation system to resist floatation, collapse, and lateral movement.
5. **Recreation Vehicles** – require that Recreational Vehicles placed on sites within Zones A1-30, AH, and AE on the Community's FIRM either:
- a. Be on site for fewer than 180 consecutive days, or
  - b. Be fully licensed and ready for highway use, or
  - c. Meet the requirements of Article 4, Section C (1), paragraph (4) of this section.

A Recreational Vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached Additions.

6. **Compensatory Storage** – for non-single family residential Development greater than 5,000 square feet within a Special Flood Hazard Area; New Construction is required to demonstrate through an engineering study that it will cause no increase in the Water Surface Elevation. Compensatory storage must be hydraulically equivalent and at a ratio of 1.0 to 1.0 for volume of Flood storage lost to fill or Structures in a Special Flood Hazard Area. If fill material is to be used to elevate any Structure, the following will apply:
- a. Fill materials must be compacted to at least 95% of Standard Laboratory Maximum Density (Standard Proctor) according to ASTM Standard D-698;
  - b. Fill soils must be fine grained soils of low permeability, such as those classified as CH, CL, SC, or ML according to ASTM Standard D-2487, "Classification of Soils for Engineering Purposes". See Table 1804.2 in the "2000 International Building Code (IBC)" for descriptions of these soil types.
  - c. The fill material must be homogeneous and isotropic; that is, the soil must be all of one material, and the engineering properties must be the same in all directions. See FEMA Technical Bulletin "Ensuring that Structures Built on Fill In or Near Special Flood Hazard Areas are Reasonably Safe From Flooding"
7. **Cumulative Damage/Substantial Improvement Thresholds:** shall occur when any combination of repairs, reconstruction, rehabilitation, Addition, or other improvement of a Structure taking place within a 10 year period, the cumulative cost of which equals or exceeds 50% of the market value of the Structure before the Start of Construction of the improvement. This term includes Structures which have incurred Repetitive Loss, Severe

Repetitive Loss or Substantial Damage, regardless of the actual repair work performed. Any Additions to Existing Structures which have not met the cumulative threshold shall be elevated at least 2' above the Base Flood Elevation.

8. **Critical Facilities** – construction of Critical Facilities are prohibited within an identified 500 – and 100 – year Floodplain and Floodway. Critical Facilities are those facilities essential to the preservation of life and property, including; schools, nursing homes, hospitals, police, fire and emergency response installations, facilities used for storage of critical records, and installations which produce, use or store hazardous materials or hazardous waste.
9. **Elevation Certificate Requirements** – all elevation requirements noted in this Order shall be documented using the FEMA Elevation Certificate or its latest version, and shall be certified by a registered professional engineer, surveyor, or architect, and shall be submitted to the Floodplain Administrator. Final Elevation Certificates must include at least two (2) photographs of the building (views from opposite sides of the Structure).
10. **No Adverse Impact** – the action of one property owner must not adversely affect the Flood risks, regardless of the Flooding source, for other properties as measured by increased Flood stages, increase Flood velocity, increased flows, or the increased potential for Erosion and sedimentation, unless the impact is mitigated.
11. **Non-Single Family Residential Development (Commercial/Industrial/Multi-Family Development)** – drainage issues shall be addressed in accordance with Bastrop County Subdivision Regulations.
12. **Basements** - are not Permitted for Residential Structures within a Floodplain. They shall be Permitted for only Non-Residential Structures, and only on land which is not in a Floodway, and must, together with attendant utility and sanitary facilities, be designed so that below the Base Flood Elevation 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 Forces and effects of buoyancy. A licensed architect or registered professional engineer shall certify that the Floodproofing methods used in the construction of the Basement are adequate to withstand the Flood depths, pressures, velocities, impact and uplift forces and other factors associated with the Base Flood. See FEMA Technical Bulletins “Flood Damage-Resistant Materials Requirements”, “Non-Residential Floodproofing – Requirements and Certification” and “Wet Floodproofing Requirements”
13. **Machinery/Equipment**
  - a. For residential Development; water heaters, furnaces, air conditioning systems, electrical distribution panels and any other mechanical or electrical equipment and service facilities shall be elevated at least two-feet (2') above the Base Flood Elevation for all new and substantially improved residential Development.
  - b. For non-residential Development; water heaters, furnaces, air conditioning systems, electrical distribution panels and any other mechanical or electrical equipment and

services facilities shall be either elevated at least two-feet (2') above the Base Flood Elevation or designed and/or located (Floodproofed) so as to prevent water from entering or accumulating within the components during conditions of Flooding for all new and substantially improved non-residential Development. See FEMA Technical Bulletins 2 "Flood Damage-Resistant Materials Requirements" and 3-93 "Non-Residential Floodproofing – Requirements and Certification"

- c. Other outside equipment such as loose pipes and storage tanks (i.e. propane) that are not elevated at least two-feet (2') above the Base Flood Elevation shall be firmly anchored to prevent flotation.

## **SECTION C:            STANDARDS FOR SUBDIVISION PROPOSALS**

1. All Subdivision proposals including the placement of Manufactured Home Parks and Subdivisions shall be consistent with Article 1, Sections B, C, and D of this Order.
2. All proposals for the Development of Subdivisions including the placement of Manufactured Home Parks and Subdivisions shall meet Development Permit requirements of Article 3, Section C; Article 4, Section C, and the provisions of Article 5 of this Order.
3. Base Flood Elevation data shall be generated based on fully developed conditions for Subdivision proposals and other proposed Development including the placement of Manufactured Home Parks and Subdivisions which are greater than fifty (50) lots or five (5) acres, whichever is lesser, if not otherwise provided pursuant to Article 3, Section B or Article 4, Section B (8) of this Order.
4. All Subdivision proposals including the placement of Manufactured Home Parks and Subdivisions shall have adequate drainage provided to reduce exposure to Flood hazards. Flood waters originating within these areas shall not be allowed to drain from the area described in higher quantities or flow rates than existed under pre-Development conditions.

All Subdivisions, with the exception of short-form final plats and amended plats, shall include a comprehensive drainage study. When a preliminary plan is required, the drainage study must be prepared within that stage of the Development process. This shall be accomplished by the proper design and construction of detention, retention, and/or drainage systems.

5. All Subdivision proposals including the placement of Manufactured Home Parks or Subdivisions shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize or eliminate Flood damage.
6. Subdivision or Manufactured Home lots adjacent to or containing Floodplain shall indicate the Finished Floor Elevation within the lot lines. A note shall also be added to further define the Finished Floor Elevation as being the Base Flood Elevation and two-foot (2') freeboard.

7. Subdivision or Manufactured Home lots adjacent to or containing Floodplain shall have a minimum of one-half (1/2) acre that is outside the Floodplain and drainage easement and is suitable for building sites. The area outside the Floodplain must be contiguous.
8. Subdivision or Manufactured Home lots within Zone X (SHADED) shall designate a minimum finished floor elevation at least six-inches (6") above the Highest Adjacent Grade.
9. Subdivisions or Manufactured Home Parks shall be designed where the mapped Floodway area shall be reserved from having Structures or any other obstruction or Development placed within it. Other uses include, but are not limited to open space, retention, wildlife habitat, recreation, or wetlands.
10. Subdivisions or Manufactured Home Parks shall include surveyed Benchmarks/monumentations in the Areas of Special Flood Hazard.
11. Subdivisions or Manufactured Home Parks shall include a technical analysis to determine whether the proposed Development may result in physical damage to adjacent property or any future affect (i.e. impervious cover) that may Alter any Floodway, channel, or Floodwaters.
12. Subdivisions or Manufactured Home Parks shall include an agreement from the Property Owner's Association, Homeowner's Association, or other entity to build, maintain and preserve a system or systems necessary for the containment of Areas of Special Flood Hazard and drainage within the Subdivision.
13. Subdivisions or Manufactured Home Parks shall include Erosion controls, both temporary and/or permanent to be installed and maintained continuously by the Property Owner's Association, Homeowner's Association, Contractor, Developer, and/or other entity.
14. Due to the high growth rate, additional information and/or criteria may be required.

**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 Flood depths of 1 to 3 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; therefore, the following provisions apply:

1. All New Construction and Substantial Improvements of Residential Structures have the Lowest Floor including Basement elevated at least two-feet (2') above the Base Flood Elevation or the Highest Adjacent Grade at least as high as the depth number specified in feet on the County's FIRM (at least two-feet (2') if no depth number is specified).
2. All New Construction and Substantial Improvements of Non-Residential Structures;

- a. Have the Lowest Floor (including Basement) elevated at least two-feet (2') above the Base Flood Elevation or the Highest Adjacent Grade at least as high as the depth number specified in feet on the County's FIRM (at least two-feet (2') if no depth number is specified), or
  - b. Together with attendant utility and sanitary facilities be designed so that below the base specified Flood depth plus an additional two-feet (2') in an AO Zone, or below the Base Flood Elevation plus an additional two-feet (2') in an AH Zone, 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 certification to the County Floodplain Administrator that the standards of this Section are in compliance.
  4. Require within Zones AH or AO adequate drainage paths around Structures on slopes, to guide Flood waters around and away from proposed Structures.

**SECTION E: ALTERATION OF A WATERCOURSE**

1. In a case where Alterations are made to the channels of rivers, stream, or drainage ways, the Flood carrying capacity must be the same or greater as the original watercourse. Once the Alteration is made, the capacity of the Altered or relocated watercourse must be maintained over time through a Property Owner or Home Owner's Maintenance Agreement.
2. If a Development Permit application proposes a stream Alteration, the Floodplain Administrator must notify the adjacent communities, the Texas Water Development Board, and the Texas Commission on Environmental Quality.

**SECTION F: 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 within the adopted Regulatory Floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed Encroachment would not result in any increase in Flood levels within the Community during the occurrence of the Base Flood discharge. A No-Rise Certificate shall be submitted with study analysis.
2. If Article 5, Section F (1) above is satisfied, all New Construction and Substantial Improvements shall comply with all applicable Flood hazard reduction provisions of Article 5.



3. Under the provisions of 44 CRF Chapter 1, Section 65.12, of the National Flood Insurance Program Regulations, a Community may Permit Encroachments within the adopted Regulatory Floodway that would result in an increase in Base Flood Elevations, provided that the Community first completes all the provisions required by Section 65.12.

## **ADDITIONAL RESOURCE MATERIALS**

### **National Flood Insurance Program (NFIP) Technical Bulletins**

**GUIDE-1** – User's Guide to Technical Bulletins. Provides a list of available technical bulletins, a key word/subject reference index for all the bulletins, and information about how to obtain copies of the bulletins.

**TECHNICAL BULLETIN 1-93** – Openings in Foundation Walls for Buildings Located in Special Flood Hazard Areas

**TECHNICAL BULLETIN 2-93** – Flood-Resistant Materials Requirements for Buildings Located in Special Flood Hazard Areas

**TECHNICAL BULLETIN 3-93** – Non-Residential Floodproofing – Requirements and Certification for Buildings Located in Special Flood Hazard Areas

**TECHNICAL BULLETIN 4-93** – Elevator Installation for Buildings Located in Special Flood Hazard Areas

**TECHNICAL BULLETIN 6-93** – Below-Grade Parking Requirements for Buildings Located in Special Flood Hazard Areas

**TECHNICAL BULLETIN 7-93** – Wet Floodproofing Requirements for Structures Located in Special Flood Hazard Areas

**TECHNICAL BULLETIN 10-01** – Ensuring That Structures Built on Fill In or Near Special Flood Hazard Areas are Reasonably Safe from Flooding

**TECHNICAL BULLETIN 11-01** – Crawlspace Construction for Buildings Located in Special Flood Hazard Areas

The above materials may be obtained from FEMA website, [www.fema.gov](http://www.fema.gov) or from the County Floodplain Administrator.

CERTIFICATION OF ADOPTION

APPROVED: \_\_\_\_\_

Paul Pape  
Paul Pape, County Judge

PASSED: \_\_\_\_\_

December 14, 2015  
Adoption Date

ORDER BECOMES EFFECTIVE: \_\_\_\_\_

January 6, 2016  
Effective Date

I, the undersigned, Rose Pietsch, do hereby certify that the  
above is a true and correct copy of an Order duly adopted by the Bastrop County Commissioners  
Court, at a regular meeting duly convened on December 14, 2015.

Rose Pietsch

Rose Pietsch, County Clerk

