

CITY OF PORT LAVACA  
PART II – CODE OF ORDINANCES

**EXHIBIT A**

**Chapter 12 - BUILDINGS AND BUILDING REGULATIONS**

**ARTICLE III. FLOOD DAMAGE PREVENTION**

**DIVISION 2. - DEFINITIONS**

**Sec. 12-65. - [Definitions generally.]**

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

*LiMWA, LIMIT of MODERATE WAVE ACTION* – means Coastal A Zone areas adjacent to Zone V and VE where wave height is less than 3' and greater than 1.5', also known as LiMWA - Limit of Moderate Wave Action.

**DIVISION 3. GENERAL PROVISIONS**

**Sec. 12-72. - 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 Calhoun County and incorporated areas, Texas," dated ~~October 16, 2014~~ **August 2, 2018** October 16, 2014, with accompanying flood insurance rate maps (FIRM) dated October 16, 2014 and any revisions thereto are hereby adopted by reference and declared to be a part of this article.

**DIVISION 5. - PROVISIONS FOR FLOOD HAZARD REDUCTION**

**Sec. 12-95. - General standards.**

In all areas of special flood hazards **within the City of Port Lavaca** 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;

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- (5) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system;
- (6) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the system and discharge from the systems into floodwaters; and,
- (7) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

**Sec. 12-96. - Specific standards.**

In all areas of special flood hazards **within the City of Port Lavaca** where base flood elevation data has been provided as set forth in (i) section 12-72, (ii) subsection 12-86(8), or (iii) subsection 12-97(c), 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~~ **a minimum of two (2) feet 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 subsection 12-86(a)(1), is satisfied.
- (2) *Non-residential 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~~ **minimum of two (2) feet 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 usable solely for parking of vehicles, building access or 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 separate 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 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.

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(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 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. 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 ~~to or above the base flood elevation~~ **a minimum of two (2) feet above natural grade; above the crown of the nearest street; or a minimum of two (2) feet above the base flood elevation, whichever is higher** 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 with zones A1-30, AH and AE on the community's FIRM that are not subject to the provisions of subsection (4) of this section be elevated so that either:
  1. The ~~bottom of the I-beam of the manufactured home is at or above the base flood elevation~~ **lowest floor of the manufactured home be elevated a minimum of two (2) feet above natural grade; above the crown of the nearest street; or a minimum of two (2) feet above the base flood elevation, whichever is higher**, or
  2. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

- (5) *Recreational vehicles.* Require that recreational vehicles placed on sites within zones A1-30, AH, and AE on the community's FIRM either (i) be on the site for fewer than 180 consecutive days, or (ii) be fully licensed and ready for highway use, or (iii) meet the permit requirements of subsection [12-87\(a\)](#), and the elevation and anchoring requirements for "manufactured homes" in subsection (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.

**Sec. 12-98. Standards for areas of shallow flooding (AO/AH zones).**

Located within the areas of special flood hazard established in section 12-72, are areas designated as shallow flooding. These areas have special flood hazards associated with flood

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depths 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; therefore, the following provisions apply:

- (1) All new construction and substantial improvements of residential structures have the lowest floor (including basement) elevated ~~to or above the base flood elevation or 36 inches above the highest adjacent~~ a minimum of two (2) feet above the base flood elevation or the highest adjacent grade at least two (2) feet above as the depth number specified in feet on the community's FIRM (at least three feet 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 ~~to or above the base flood elevation or the highest adjacent grade at least as high~~ a minimum of two (2) feet above the base flood elevation or the highest adjacent grade at least two (2) feet above as the depth number specified in feet on the community's FIRM (at least three feet 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 in an AO zone, or below the base flood elevation 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 a certification to the floodplain administrator that the standards of this section, as proposed in section 12-87 are satisfied.
- (4) Require within zones AH or AO adequate drainage paths around structures on slopes, to guide floodwaters around and away from proposed structures.

**Sec. 12-99. Coastal high hazard areas.**

Located within the areas of special flood hazard established in section 12-72, are areas designated as coastal high hazard areas (zones V1-30, VE, and/or V). These areas have special flood hazards associated with high velocity waters from tidal surges and hurricane wave wash; therefore, in addition to meeting all provisions outlined in this article, the following provisions must also apply:

- (1) Obtain the elevation (in relation to mean sea level) of the bottom of the lowest structural member of the lowest floor (excluding pilings and columns) of all new and substantially improved structures, and whether or not such structures contain a basement. The floodplain administrator shall maintain a record of all such information.
- (2) All new construction shall be located landward of the reach of mean high tide.
- (3) All new construction and substantial improvements shall be elevated on pilings and columns so that:

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- a. The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated ~~to or above~~ a minimum of two (2) feet above the base flood level;
  - b. The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by applicable state or local building standards. A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction, and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of [subsections] (3)a. and (3)b. of this section.
- (4) Provide that all new construction and substantial improvements have the space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls, open wood lattice-work, or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system.

For the purpose of this section, a breakaway wall shall have a design safe loading resistance of not less than ten and no more than 20 pounds per square foot. Use of breakaway walls which exceed a design safe loading resistance of 20 pounds per square foot (either by design or when so required by local or state codes) may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet the following conditions:

- a. Breakaway wall collapse shall result from a water load less than that which would occur during the base flood; and
  - b. The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (structural and nonstructural). Water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by applicable state or local building standards. Such enclosed space shall be useable solely for parking of vehicles, building access, or storage. Such space shall not be used for human habitation.
- (5) Prohibit the use of fill for structural support of buildings.
- (6) Prohibit manmade alteration of sand dunes and mangrove stands that increase potential flood damage.
- (7) Manufactured homes. Require that manufactured homes placed or substantially improved within zone V1-30, V, and VE 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 the result of a flood, meet the standards of subsections (1) through (6) of this section and that manufactured homes placed or

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substantially improved on other sites in an existing manufactured home park or subdivision within zones V1-30, V, and VE on the community's FIRM meet the requirements of subsection 12-96(4) of this article.

- (8) Recreational vehicles. Require that recreational vehicles placed on sites within zones V1-30, V, and VE on the community's FIRM either (i) be on the site for fewer than 180 consecutive days, or (ii) be fully licensed and ready for highway use, or (iii) meet the requirements in section 12-73 of this article and subsections (1) through (6) 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.

**(9) Limit of Moderate Wave Action (LiMWA) Areas**

Areas designated as Limit of Moderate Wave Action (LiMWA) have special flood hazards associated with high velocity waters from tidal surges and hurricane wave wash; therefore, in addition to meeting all provisions outlined in this ordinance, the following provisions must also apply:

- i. All new construction and substantial improvements shall be elevated on pilings and columns so that:
- ii. the bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated a minimum of two (2) feet above the base flood elevation;
- iii. Prohibit the use of fill for structural support of buildings

**Sec. 12-100. Zone X (shaded) Areas**

Areas designated as Zone X (shaded) are areas within the 0.2% annual chance floodplain; areas of (base) flood with average depths of 1 foot; or with drainage areas less than 1 square mile; areas protected by levees from the 1% annual chance flood; and areas upstream of the “limit of detail study” on the community FIRM.

In areas mapped as Zone X (shaded) on the community Flood Insurance Rate Map (FIRM), new construction and substantial improvement of any residential structure, including manufactured homes, shall have the lowest floor, including basement, elevated above the 0.2 percent or 500-year flood elevation; or a minimum of two feet above the highest adjacent natural grade; or elevated above the crown of the nearest street, whichever is higher.

**Sec. 12-101. Zone X (unshaded) Areas**

Areas designated as Zone X (unshaded) are areas outside the 0.2% annual chance floodplain; include all areas within a community that has received a Flood Hazard Boundary Map (FHBM); and all areas within a community that has not received a Flood Hazard Boundary Map (FHBM) or Flood Insurance Rate Map (FIRM).

In areas mapped as Zone X (unshaded) on the community Flood Insurance Rate Map (FIRM), new construction and substantial improvement of any residential structure, including manufactured homes, shall have the lowest floor, including basement, elevated a minimum of two feet above the

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highest adjacent natural grade or elevated above the crown of the nearest street, whichever is higher.

**Sec. 12-102. Unmapped Areas**

In all areas of the community that has not received a Flood Hazard Boundary Map (FHBM) or a Flood Insurance Rate Map (FIRM), new construction and substantial improvement of any residential structure, including manufactured homes, shall have the lowest floor, including basement, elevated a minimum of two feet above the highest adjacent natural grade or above the crown of the nearest street, whichever is higher.

**Sec. 12-103. Severability**

If any section, clause, sentence, or phrase of this Ordinance is held to be invalid or unconstitutional by any court of competent jurisdiction, then said holding shall in no way affect the validity of the remaining portions of this Ordinance.

**Sec. 12-104. Penalties for Non-Compliance**

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this court order and other applicable regulations. Violation of the provisions of this court order by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Any person who violates this court order or fails to comply with any of its requirements shall upon conviction thereof be fined no more than \$500 for each violation, and in addition shall pay all costs and expenses involved in the case. Nothing herein contained shall prevent the City of Port Lavaca, Texas from taking such other lawful action as is necessary to prevent or remedy any violation.

**Secs. 12-105—12-286. Reserved.**