

PLANNING COMMISSION REPORT

Regular Agenda -- Public Hearing Item

PC Staff Report
07/22/15

ITEM NO. 8B TEXT AMENDMENT FOR FLOODPLAIN OVERLAY DISTRICT MAPS (AAM)

TA-15-00254: Consider a Text Amendment to the Zoning Regulations, Chapter 12, Article 28 of the Code of the County of Douglas, Kansas to reference 2015 effective dates for new Floodplain Overlay District Maps and related regulation changes. *Initiated by Planning Commission on 6/22/15.*

RECOMMENDATION: Staff recommends approval of the proposed text amendment [TA-15-00254] regarding changes to the Zoning Regulations, Chapter 12, Article 28 of the Code of the County of Douglas, Kansas and forwarding a recommendation for approval to the Board of County Commissioners.

Reason for Request: The Planning Commission initiated this amendment on June 22, 2015 as a result of the Risk Mapping, Assessment and Planning (Risk MAP) program undertaken by the Federal Emergency Management Administration (FEMA) by which new floodplain maps will be produced for Douglas County. The effective date for those maps needs to be reflected in the Zoning Regulations in order to comply with the State of Kansas model floodplain ordinance. In undertaking a review of the floodplain ordinance, staff has identified other minor changes that are necessary to comply with the National Flood Insurance Program (NFIP) requirements.

RELEVANT GOLDEN FACTOR:

- Conformance with the Comprehensive Land Use Plan is the relevant factor that applies to this request. Adoption of new regulatory tools, one of which is zoning regulations, is an implementation step in Chapter 17 of *Horizon 2020*, the City/County Comprehensive Land Use Plan.

PUBLIC COMMENT RECEIVED PRIOR TO PRINTING

- No written comments received to date.
- Staff has conferred with State Division of Water Resources floodplain program administrators regarding the proposed changes and is awaiting final approval on the ordinance changes from NFIP.

OVERVIEW OF PROPOSED AMENDMENT

The Federal Emergency Management Agency (FEMA) recently completed a re-evaluation of flood hazards for certain streams in Douglas County through the Risk Mapping, Assessment and Planning (Risk MAP) program. Staff has received the preliminary maps and has reviewed them. As part of the issuance of new Flood Insurance Rate Maps (FIRMs), staff has placed the

new maps on the website for the public to view (http://www.lawrenceks.org/city_maps), and will be conducting outreach activities within the community to raise awareness about the new flood hazard maps.

FEMA requires each community to amend their floodplain regulations to include the new effective date of the FIRM maps, which will be September 2, 2015. Sections 12-328-3 needs to be changed to reflect the new effective date.

Staff has also made some very minor modifications that have been recommended by DWR in order to further comply with NFIP regulations. These changes are not substantive in nature, but are mostly alternate wording choices or duplication of regulations that existed elsewhere in the floodplain regulations. In summary, language was added to further clarify that HVAC and mechanical equipment needs to be elevated; language was added to the purpose statement to clarify that development should be reasonably safe from flooding; language was added to the purpose statement to clarify that the carrying capacity should not be altered for watercourse modifications; and language was added to reference two Kansas Statutes as required by DWR and NFIP.

A full copy of Article 28, listing the proposed changes is attached to this staff report. Text to be deleted is shown with ~~strikeout~~ and proposed text is shown in underlined font.

The following is a summary listing of the proposed changes:

- 1) FIRM effective date change to September 2, 2015.
- 2) Minor modifications to comply with NFIP and DWR regulation.

Prior to adoption, this proposed language will need to be officially reviewed by the Kansas Department of Agriculture, Division of Water Resources (DWR) to ensure compliance with the County's participation in the National Flood Insurance Program (NFIP), including alignment with the current State Model Floodplain Ordinance. Staff has sent the proposed ordinance to DWR and it is currently under review.

Staff has also identified a few possible changes for future consideration:

1. **Critical Facilities:** Critical facilities are facilities that store or use hazardous materials; housing units likely to have occupants that cannot readily evacuate; public safety facilities that are needed in the event of a flood disaster; and utility and public works operations. Examples include, but are not limited to police stations, fire stations, hospitals and public works operation sites. In recent years, a federal executive order was issued that does not allow the use of federal money to repair or develop critical facilities in the 100-year or 500-year floodplain.
2. **Elevation Requirement:** Currently, the county zoning regulations require residential structures to be elevated 1' above the Base Flood Elevation (BFE) unless they are located in the Urban Growth Area (UGA) where they have to be elevated 2' above BFE. The City of Lawrence regulations require residential structures to be elevated 2' above the BFE inside city limits. Staff has identified that a higher regulatory standard that would require all residential structures in the county to be elevated 2' above the BFE is in the best interest of the community. Not only will flood risks be reduced, insurance premiums will be lowered for property owners.
3. **Cumulative Improvement:** Staff has also identified a possible change related to the threshold for when a project is required to comply with the floodplain regulations.

Currently, the code requires compliance with the floodplain regulations when a project involves new construction or is a substantial improvement. Substantial Improvement is defined as “means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure before start of construction of the improvement.” Staff has identified that this section of the code could be amended to also include Cumulative Improvement, defined as “any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which exceeds fifty-percent (50%) of the of the market value of the structure over the course of the last five calendar years.” The idea behind substantial and cumulative improvement is if a property owner is improving a property, then a threshold should be established for when a portion of the financial commitment for those improvements should go towards decreasing the flood risk to the property, which will in turn reduce flood insurance costs and the potential payout should there be flood damage. Staff has identified that a loophole exists in the current code, whereby a property owner can apply for multiple permits over time, in order to improve a property without triggering substantial improvement, which currently only applies to each building permit. Cumulative improvement would track those improvements for five years. In addition to closing the loophole, the addition of cumulative improvement is considered a higher regulatory standard. Adoption of this standard improves the overall rating in the county’s participation in the Community Rating System (CRS) program, which allows property owners to receive a discount on their flood insurance premiums.

The above changes are considered higher regulatory standards. Adoption of these standards improves the overall rating in the county’s participation in the Community Rating System (CRS) program, which allows property owners to receive a discount on their flood insurance premiums. These possible code changes will require research and are not being included in this text amendment. If appropriate, the County Commission may initiate text amendments for future changes to the regulations.

12-310 FLOODPLAIN MANAGEMENT REGULATIONS

12-328-1. STATEMENT OF PURPOSE AND INTENT

12-328-1.01. Statement of Purpose.

The management regulations set forth in this Section are the floodplain management regulations for the unincorporated portions of Douglas County. The purpose of these regulations is to protect individuals and property from flood hazards or flooding by providing for the orderly and safe development of the floodplain for the most advantageous uses which are consistent with the health, safety, and welfare of the general public and which are also consistent with sound practices for utilizing those areas required for the conveyance of specified stream flows in the regulatory floodway. This article is also used to establish or maintain the Community's eligibility for participation in the National Flood Insurance Program (NFIP) as defined in 44 Code of Federal Regulations (CFR) 512.22 (a) (3); and to meet the requirements of 44 CFR 60.3(d), K.S.A. 12-741, K.S.A. 12-766 and K.A.R. 5-44-4 by applying the provisions of this Article

12-328-1.02. Intent.

a. The intent of these regulations is to avoid additional costs for home owners upon annexation and to minimize losses due to floods or flood waters by provisions designed to:

- 1) Prohibit the placement of fill, materials, and structures which would obstruct flood flows and decrease the carrying storage—capacity of the regulatory floodway unless it can be 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.
- 2) Require structures in the floodplain and public utilities vulnerable to floods be provided with flood protection at the initial construction stage.
- 3) Protect individuals from the purchase of lands rendered unsuitable for intended uses by their proximity to floodplain.
- 4) Minimize public expenditures for flood control projects and damage to public improvements within the floodplain.
- 5) Maintain property values adjacent to the floodplain and minimize flood blight areas.
- 6) Assure eligibility for property owners in the Federal Flood Insurance Program.
- (7) Ensure that development is reasonably safe from flooding.

b. These regulations are designed and intended to be administered in a manner which will:

- 1) Restrict or prohibit uses dangerous because of water and erosion hazards or which will result in undue increases in erosion, flood heights, or velocities.
- 2) Control grading (fill or excavation), dredging, and development which may unduly increase the potential for flood damage.
- 3) Require that uses protect private and public investments by requiring floodproofing.
- 4) Control alteration of floodplains, stream channels and natural barriers which accommodate or channel floodwaters.
- 5) Prevent or regulate construction of barriers that unnaturally divert flood waters or cause increased flood hazards. Construction in floodplains should be directed

to the outer limits of the Floodway Fringe before it is allowed to encroach further into the regulatory floodplain.

12-328-2. FLOODPLAIN OVERLAY DISTRICTS

The floodplain overlay districts shall include only those areas designated as floodplain by the Federal Insurance Study or by an approved Hydrologic and Hydraulic Study.

The floodplain overlay districts consist of: the "F-W" floodway overlay district; and, the "F-F" floodway fringe overlay districts.

12-328-3. FLOODPLAIN OVERLAY DISTRICTS MAP

The official floodplain overlay districts map shall be used in conjunction with the official zoning districts map. The official floodplain overlay districts map shall show the boundaries of the "F-W" floodway and the "F-F" floodway fringe overlay districts. These boundaries shall be consistent with the Floodway and Floodway Fringe as identified by the Federal Emergency Management Agency (FEMA) through a scientific and engineering report entitled, "The Flood Insurance Study for the County of Douglas, Kansas, and Incorporated Areas ~~August 10, 2010 November 7, 2001~~ September 2, 2015", with the accompanying Flood Insurance Rate Maps and revisions thereto.

12-328-4. FLOOD INSURANCE

No part of this Section or any regulation therein shall be construed as affecting the eligibility for flood insurance of any structure existing at the time of publication of the Flood Insurance Rate Maps.

12-328-5. FLOODPLAIN DEVELOPMENT WITHIN THE CITY OF LAWRENCE URBAN GROWTH AREA (UGA)

12-328-5.01. Development of Property in the Floodplain Overlay District. Development of land or subdivision of property (including lot splits) within the City of Lawrence Urban Growth Area (UGA) and a floodplain overlay district shall be permitted only where an approved hydrologic and hydraulic study demonstrates that there will be no rise in the base flood elevation and no increase in flood velocities at any point resulting from the proposed development.

- a. Property platted prior to June 1, 2005, may develop and/or re-plat or subdivide (including lot splits) for non-residential uses without conducting a hydrologic and hydraulic study. Such development is still subject to the remaining sections of this Article.
- b. Development of undeveloped property that was platted prior to June 1, 2005 may occur without conducting a hydrologic and hydraulic study until January 1, 2007. Such development is still subject to the remaining sections of this Article. After January 1, 2007 development of the property is subject to all sections contained within this Section.

12-328-5.02. Floodway Restrictions. Any encroachment, including fill, new construction, substantial improvements, or other development is prohibited within the F-W Overlay District, except for the following structures:

- a. Flood control and stormwater management structures;
- b. Road improvements and repair;
- c. Utility easements/Rights-of Way; and,
- d. Public improvements or public structures for bridging the Floodway.

12-328-5.03. Hydrologic and Hydraulic Study

- a. Hydrologic and hydraulic studies shall comply with the following standards:
- 1) The study shall be signed and sealed by a professional engineer, licensed in the State of Kansas;
 - 2) The study shall be submitted for approval by the Douglas County Director of Public Works concurrent with the initial submittal of a floodplain development permit application, preliminary plat, development plan or site plan;
 - 3) Hydrologic and hydraulic methods of analysis shall be consistent with those used in the current Flood Insurance Study for Douglas County;
 - 4) The study shall extend an adequate distance upstream and downstream of the proposed development to encompass the hydraulic effects of the proposed development;
 - 5) The study shall determine the water surface elevations of the base flood for the existing stream and for any proposed development. Based on the assumption of full watershed development and other factors, the findings of the hydrologic and hydraulic study may differ from the Flood Insurance Study. At a given location, the higher water surface elevation shall be the base flood elevation for compliance with the provisions of this section;
 - 6) The study shall identify the velocities of the base flood for the existing stream and for any proposed development;
 - 7) The study shall determine the areas of inundation of the base flood for the existing stream and for any proposed development. The area of inundation shall be dimensioned to the property corners for use in revising the floodplain overlay districts on all property within the extent of the study; and,
 - 8) In areas outside Zone AE, the study shall also identify the Floodway for the proposed development.
- b. For a hydrologic and hydraulic study that proposes an alteration of FEMA's designated floodplain or Floodway, a letter of map revision (LOMR) must be obtained before a building permit will be used for any lot containing a Zone A, AE, AH or AO of the current FIRM.

12-328-5.04. Land Disturbance. Land disturbance or removal of vegetation within the floodplain overlay districts shall be minimized to the extent possible. When excavation, grading, removal of vegetation or other modifications to the cross-sectional geometry of the floodplain are proposed in order to meet the requirements set forth in section 12-328-5.01, those modifications shall comply with the following:

- a. Construction plans shall be prepared for the proposed modifications and shall be submitted for review and approval by the Douglas County Director of Public Works.
- b. As approved by the Douglas County Director of Public Works:
- 1) Channel lining materials shall be limited to native vegetation, stabilized as necessary to prevent erosion. The use of concrete lining, pipe or other structural materials shall be minimized;
 - 2) Within the area of inundation, all disturbed areas above the channel lining shall be restored with native vegetation, including trees, to promote wildlife habitat; and,
 - 3) Channel designs shall preserve existing low-flow channels to the extent possible.

12-328-6 DEVELOPMENT STANDARDS AND CRITERIA

12-328-6.01. General Standards. Development in areas that are included in the floodplain overlay districts shall be required to meet the following general standards:

- a. No structure, fill, or other uses within the floodway overlay district shall be permitted which will increase the base flood elevation.
- b. Public improvements shall be waterproofed to the base flood elevation. Any space below the base flood elevation shall be watertight with walls substantially impermeable to the passage of water with structural components having the capabilities of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. The interior and content of the structures shall remain substantially dry.
- c. Water lines shall be designed to eliminate infiltration of flood waters into systems.
- d. Sewer lines shall be designed to eliminate infiltration of flood waters into systems and discharge from the systems into the floodwaters.
- e. Residential Construction: New construction or substantial improvements of a residential structure shall be elevated, anchored to prevent flotation, collapse, or lateral movement of the structure and shall be constructed to resist and minimize flood damage. Construction shall be with materials resistant to flood damages, utilizing methods and practices that minimize flood damages, and 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.
- f. Non-Residential Construction: All new construction and substantial improvements that fully enclose areas below the lowest floor which 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 exist 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 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. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
- g. Storage of materials or equipment may be allowed if not subject to major damage by floods and firmly anchored to prevent floatation or if readily removable from the area within the time available after the flood warning. Storage of materials that are buoyant, flammable, explosive or potentially injurious to human life at times of flooding shall not be permitted.
- h. On site waste disposal systems shall be designed to avoid impairment due to flooding.
- i. All new construction and substantial improvements that fully enclose 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 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. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
- j. Until a Floodway is designated, no new construction, substantial improvements, or other development, including fill, shall be permitted within any unnumbered or numbered A zones, or AE zones on the 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.

12-328-6.02. Specific Standards. In addition to these general standards, development shall be required to meet the following specific standards:

- a. Residential Construction. New construction and substantial improvement of residential structures shall have the lowest floor, including basement and all HVAC and mechanical equipment, elevated: a) a minimum of two feet above the base flood elevation when located within the Urban Growth Area (UGA) of Lawrence, or, b) a minimum of one foot above the base flood elevation when located outside the Urban Growth Area of Lawrence but within the unincorporated area of Douglas County.
- b. Non-Residential Construction. All new construction and substantial improvements of non-residential structures, including all HVAC and mechanical equipment, shall have a) the lowest floor (including basement) elevated a minimum of one foot above the base flood elevation; or, b) 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 loads and the effects of buoyancy; and c) a registered professional engineer or architect shall develop and/or review the 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 for meeting applicable provisions of the Federal Emergency Management Regulations [44FR311177, the Section 60.3 (c)(3)(ii) & Section 60.3 (c)(8)(ii), and amendments thereto.]
- c. Existing Manufactured (Mobile) Home Park – All manufactured homes to be placed in an existing park located in a floodplain overlay district are required to be firmly secured to an adequately anchored foundation system to resist floatation, collapse, or lateral movement, which may include, but is not limited to, the use of over-the-top or fume ties to ground anchors. (This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces.)
- d. Manufactured (mobile) homes to be placed or substantially improved in an expansion to an existing manufactured (mobile) home park where the repair, reconstruction, or improvement of the streets, utilities and pads equals or exceeds 50 percent of the value of the streets, utilities and pads before the repair, reconstruction or improvement has commenced are required to have the manufactured home chassis elevated by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six inches in height above grade and be securely attached to an adequately anchored foundation such that the lowest floor of the manufactured home is elevated at least two feet above the base flood elevation.
- e. A licensed land surveyor or professional engineer shall certify that the elevation of a proposed structure is above the specified base flood elevation.
- f. In areas where a base flood elevation has not been provided by the FIS, the county shall obtain, review and reasonably utilize any base flood elevation and Floodway data available from federal, state or other sources until such other data has been provided by FEMA for use and enforcement of this chapter.
- g. Require that recreational vehicles placed on sites within the identified floodplain on the community's FIRM either 1) be on the site for fewer than 180 consecutive days, 2) be fully licensed and ready for highway use, or 3) meet the permit requirements and the elevation and anchoring requirements for manufactured homes in this ordinance. A recreation 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.

- h. All proposals for development must include base flood elevation data.
- i. In Zone AO and AH, adequate drainage paths shall be required around structures on slopes, in order to guide floodwaters around and away from proposed structures.

12-328-6.03. Letter of Map Revision (LOMR). Structures placed on property that has been removed from the floodplain by a LOMR shall have the lowest floor, including basement, elevated above the base flood elevation in compliance with section 12-328-6-02.

12-328-7. ADMINISTRATION AND RECORDS

12-328-7.01. Administration. The Director of Zoning and Codes shall be vested with the administration of these regulations. It shall be his responsibility to review all requests for floodplain development permits and to enforce the regulations in this Section. Each permit shall be reviewed in consideration with the following:

- a. Satisfying all the requirements of this Section.
- b. Obtaining all the necessary permits from federal, state, or local government agencies prior to approval of the development permit.
- c. The location of the proposed development in relation to the Floodway and the assurance that any encroachment meet the standards in this Section, and K.S.A. 12-766.

12-328-7.02. Records. The Director of Zoning and Codes, as administrator of these regulations, shall record and maintain a record of all development permits issued.

Documentation of these permits shall include:

- a. The proposed use, residential or non-residential;
- b. The elevation of the regulatory floodway for the area developed; and,
- c. Certification that the elevation of the lowest floor is above the base flood elevation by the required; one foot in the unincorporated area of the County outside the Lawrence Urban Growth Area or, two feet within the Urban Growth Area of Lawrence.

The Director of Zoning and Codes shall submit a biennial report on the appropriate federal annual report form to the Administrator concerning the community's participation in the Federal Insurance Program.

12-328-8. DEVELOPMENT PERMIT

12-328-8.01. No development shall be made in, on, or over any land designated by this Section and shown on the official floodplain overlay district map as being within the floodway overlay districts without obtaining approval from the Director of Zoning and Codes.

12-328-8.02. Application for a development permit shall be made by the property owner or his certified agent to the Director of Zoning and Codes upon appropriate forms. Such application shall be made at least ten days prior to the approval of a development permit. The application shall be accompanied by a fee of Fifty Dollars; no part shall be returnable to the applicant after review of the permit request has begun. The application fee shall be made payable to the Director of Zoning and Codes.

12-328-8.03. Information required. An application for a development permit shall be accompanied by the following information:

- a. Identification and description of proposed use or development;
- b. Legal description of the property;
- c. Plan of the proposed development or use at a scale of one inch equals fifty feet or larger

- showing the Floodway and Floodway Fringe as designated by the Federal Insurance Administrator;
- d. Use and type of structures proposed;
 - e. The elevation (in relation to mean sea level) of the lowest floor, including basements, of all structures or proposed fill;
 - f. A statement of the elevation flood proofed by a licensed land surveyor;
 - g. Proposed developments which include alteration of watercourses must:
 - 1) In river or tributary situations, the Director of Zoning and Codes will notify any adjacent community, state coordinating agency for the National Flood Insurance Program, and the Federal Insurance Administration prior to any alteration or relocation of a watercourse.
 - 2) Evidence submitted by the applicant's engineer or architect showing that no adverse impacts will result from the alteration and the flood carrying capacity within the altered or relocated portion of the watercourse is not diminished.
 - h. Any additional data which the Director of Zoning and Codes or County Engineer requests which is pertinent to the issuance of a development permit.

12-328-9. CERTIFICATION OF ELEVATION

Within sixty days after a building permit has been issued, a certification of elevation must be received, approved and recorded at the Director of Zoning & Codes' Office.

The development permit must include certification from a land surveyor (licensed to do business in the State of Kansas) that the lowest floor, including basement, is a minimum of one foot above the base floodplain elevation. The building permit is null and void after said sixty day period if such certification is not provided. Occupancy of the structure shall be illegal prior to the approval of a development permit.

12-328-10. NON-CONFORMING USES AND STRUCTURES IN THE FLOODPLAIN

All non-conforming uses and structures within a floodway or regulatory floodway fringe overlay districts shall be subject to the following requirements in addition to other provisions of the County's Zoning Resolution.

12-328-10.01. No non-conforming use or structure shall be altered, repaired or modified unless a permit is issued under this Section.

12-328-10.02. No permit for the alteration, repair or modification of a non-conforming use in the Floodway Fringe shall be issued unless such alteration, repair or modification includes flood proofing by elevation to or above the base flood elevation. No permits shall be issued for alteration, repair or modification in the Floodway that will obstruct flow or increase the height of the base flood.

12-328-10.03. Uses or adjuncts thereof, which are or become nuisances shall not be entitled to continue as non-conforming uses.

12-328-10.04. The Director of Zoning and Codes, before issuing a development permit for the alteration, repair or modification of a non-conforming use or structure, shall request a decision from the Board of Zoning Appeals in determining the adequacy of the proposed flood proofing measures for the proposed alteration, repair or modification of the non-conforming use or structure. The Board of Zoning Appeals shall make this determination in accordance with the following specific criteria:

- a. The susceptibility of the structure or use to flood damage.

- b. The availability and expense of alternate floodproofing techniques.
- c. The safety of the flood proofing measures.

12-328-11. AREAS OF SHALLOW FLOODING (ZONE AO AND ZONE AH)

The following provisions apply to areas designated as Zone AO and Zone AH:

12-328-11.01. Zone AO.

- a. All development and substantial-improvements of residential structures, including mobile homes or manufactured homes, shall 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);
- b. All development and substantial-improvements of any commercial, industrial, or other non-residential structures shall 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 FIRM (at least two feet if no depth number is specified) or together with attendant utilities and sanitary facilities be completely floodproofed to that so that 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; and
- c. Drainage paths must be provided adequately to guide floodwaters around structures.

12-328-11.02. Zone AH.

- a. The development standards for all areas of special flood hazard where base flood elevation has been provided shall be required as set forth in section 12-328-6 et al; and,
- b. Drainage paths must be provided adequately to guide floodwaters around structures.

12-328-12. AMENDMENTS

The regulations, restrictions, and boundaries set forth in this section may from time to time be amended, supplemented, changed, or repealed to reflect any and all changes in the National Flood Disaster Protection Act of 1973, provided, that prior to the adoption thereof, the Board of County Commissioners shall submit to the chief engineer of the Division of Water Resources of the State Board of Agriculture any ordinance, resolution, regulation or plan that proposes to create or to effect any change in a floodplain zone or district, or that proposes to regulate or restrict the location and use of structures, encroachments, and uses of land within such an area.

The chief engineer may require, pursuant to rules and regulations, each submission hereunder to be accompanied by complete maps, plans, profiles, specifications and textual matter. The chief engineer shall approve or disapprove any such ordinance, resolution, regulation or plan or changes thereof within 90 days of the date of receipt of all such data required by the chief engineer as specified in rules and regulations adopted thereby.

If the chief engineer fails to approve or disapprove within the 90 day period required by this section, such ordinance, resolution, regulation or plan or change thereof shall be deemed approved. The chief engineer shall provide, in writing, specific reasons for any disapproval.

12-328-13. DEFINITIONS

The following definitions are applicable to only the terms found in this section.

12-328-13.01. Agency. The Federal Emergency Management Agency (FEMA).

12-328-13.02. Areas of Special Flood Hazard. The land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year.

12-328-13.03. Base Flood. The flood having a one percent chance of being equaled or exceeded in any given year.

12-328-13.04. Base Flood Elevation. The water surface elevation of the base flood as determined by the Flood Insurance Study or by an approved Hydrologic and Hydraulic Study, whichever is higher.

12-328-13.05. Community. Any State or area or political subdivision thereof, which has authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction.

12-328-13.06. Development. Any man-made change to improved or unimproved real estate, including but not limited to, building or other structure, mining, fill, dredging, grading, paving, excavation or drilling operations (excluding wells for potable water), or storage of equipment or materials.

12-328-13.07. "Eligible Community". A community for which the Administrator has authorized the sale of flood insurance under the National Flood Insurance Program (NFIP).

12-328-13.08. Existing Construction. 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".

12-328-13.09. Existing Manufactured Home, Park or Subdivision. A manufactured home, park or subdivision for which the construction of facilities for servicing the lot(s) on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, either final site grading or the pouring of concrete pads, and the construction of streets) are completed before March 2, 1981, the effective date of the adoption of the first County floodplain management regulations.

12-328-13.10. Existing Structures. (See "Existing Construction")

12-328-13.11. Expansion to an Existing Manufactured Home Park or Subdivision. 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, either final site grading or pouring of concrete pads, or the construction of streets.)

12-328-13.12. Flood. A general and temporary condition of partial or complete inundation of normally dry land areas from: 1) the overflow of inland waters; 2) the unusual and rapid accumulation or runoff of surface waters from any source; and 3) the collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood, or by some similarly unusual and unforeseeable event which results in flooding as defined above in item 1).

12-328-13.13. Flooding. [See "Flood"].

12-328-13.14. Flood Insurance Rate Map (FIRM). The official map of a community on which both the special flood hazard areas and the risk premium zones have been delineated.

12-328-13.15. Flood Insurance Study (FIS). An examination, evaluation, and determination of flood hazards and, if appropriate, corresponding water surface elevations.

12-328-13.16. Floodplain. The land area inundated by a flood of a given magnitude as determined by the Flood Insurance Study or by an approved Hydrologic and Hydraulic Study.

12-328-13.17. Floodplain Management. The operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness flood control works, and floodplain management regulations.

12-328-13.18. Floodplain Management Regulations. Zoning ordinances, subdivision regulations, building codes, health regulations, special purposes (such as floodplain and grading ordinances) and other applications of police power. The term describes such state or local regulations, in any combination thereof that provide standards for the purpose of flood damage prevention and reduction.

12-328-13.19. Floodproofing. Any combination of structural and nonstructural additions, changes, or adjustments to structures that reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, or structures and their contents.

12-328-13.20. Floodway. 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 one foot.

12-328-13.21. Floodway Encroachment Lines. The lines marking the limits of Floodways on Federal, State and local floodplain maps.

12-328-13.22. Floodway Fringe. The area outside the Floodway encroachment lines, but still subject to inundation by the regulatory flood.

12-328-13.23. Freeboard. A factor of safety usually expressed in feet above a flood level for purposes of floodplain management. "Freeboard" tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and Floodway conditions, such as bridge openings and the hydrological effect of urbanization of the watershed.

12-328-13.24. Habitable Floor. Any floor usable for living purposes, which include working, sleeping, eating, cooking or recreation, or a combination thereof.

12-328-13.25. Highest Adjacent. The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

12-328-13.26. Historic Structure. Any structure that is: a) Listed individually in the National Register of Historic places (a listing maintained by the Department of Interior) or preliminary determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register; b) certified or preliminary determined by the Secretary of the Interior as contributing to the historical significance of a registered historic

district or a district preliminary determined by the Secretary to qualify as a registered historic district; c) individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or d) individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either: 1) by an approved state program as determined by the Secretary of the Interior or 2) directly by the Secretary of the Interior in states without approved programs.

12-328-13.27. Hydrologic and Hydraulic Study. An engineering study that is done in accordance with section 12-328-5.03 et al.

12-328-13.28. Lowest Floor. 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 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 to structure in violation of the applicable non-elevation design requirements of this ordinance.

12-328-13.29. Manufactured Homes [See "Mobile Home"]

12-328-13.30. Market Value. An estimate of what is fair, economic, just and equitable value under normal local market conditions. If market value cannot be determined, the construction estimate can be used.

12-328-13.31. Mean Sea Level. For purposes of the National Flood Insurance Program (NFIP), 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 (FIRM) are reference.

12-328-13.32. Mobile or Manufactured Home. A structure, transportable in one or more sections, that is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The terms "mobile home" or "manufactured home" does not include a "recreational vehicle".

12-328-13.33. New Construction. For the purposes 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 the floodplain management regulations adopted by a community and includes any subsequent improvements to such structure.

12-328-13.34. Overlay District. A special zoning district that has been "overlaid" on a base zoning classification to add to or alter some or all of the base district zoning regulations.

12-328-13.35. Participating Community. [See "Eligible Community"]

12-328-13.36. Person. Includes any individual or group of individuals, corporation, partnership, association, or any other entity, including Federal, State, and local governments and agencies.

12-328-13.37. Principally Above Ground. When at least 51 percent of the actual cash value of the structure, less land value, is above ground.

12-328-13.38. Recreational Vehicle. A vehicle which is a) built on a single chassis; b) 400 square feet or less when measured at the largest horizontal projections; c) designed to be self-propelled or permanently able to be towed by a light-duty truck; and d) designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use. 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.

12-328-13.39. Special Flood Hazard Area (SFHA). See ["Area of Special Flood Hazard"].

12-328-13.40. Start of Construction. This includes substantial improvements, 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 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 state of excavation or 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 a basement, footing, 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.

12-328-13.41. State Coordinating Agency. The Division of Water Resources, Kansas Department of Agriculture, or other office designated by the governor of the state or by state statute at the request of the Administrator to assist in the implementation of the National Flood Insurance Program (NFIP) in that state.

12-328-13.42. Structure. For the purpose of this section the definition of structure shall mean, 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 purposes, means a walled and roofed building, other than a gas or liquid storage tank that is principal 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.

12-328-13.43. Substantial Damage. Damage of any origin sustained by a structure whereby the cost of restoring the structure to it's before damage condition would equal or exceed 50% of the market value of the structure before the damage occurred.

12-328-13.44. Substantial Improvement. Any repair, reconstruction, or improvement of a structure, the cost of which equals or exceed 50 percent 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 purposes 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.

12-328-13.45. Urban Growth Area. The area that is defined in the City and County Comprehensive Land Use Plan as the Urban Growth Area (UGA) surrounding the City of Lawrence.

12-328-13.46. Variance. A grant of relief by the community from the terms of floodplain management regulation. Flood insurance requirements remain in place for any varied use or structure and cannot be varied the community.

12-328-13.47. Violation. 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 by this ordinance is presumed to be in violation until such time as that documentation is provided.

12-328-13.48. Water Surface Elevation. 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 floodplain.

12-328-13.49. Zone A. The special flood hazard area inundated by 100-year flood where no base flood elevations have been determined.

12-328-13.50. Zone AE. The special flood hazard area inundated by 100-year flood where the base flood elevations have been determined.

12-328-13.51. Zone AH. The special flood hazard area inundated by 100-year flood depths of 1 to 3 feet (usually areas of ponding); where base flood elevations have been determined.

12-328-13.52. Zone AO. The special flood hazard area inundated by 100-year flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); where average depths have been determined. For areas of alluvial fan flooding velocities have also been determined.