

COUNCIL ACTION FORM

SUBJECT: FLOOD PLAIN ZONING REGULATIONS TEXT AMENDMENT TO ADOPT THE NEW FLOOD INSURANCE REATE MAPS, UPDATE DEFINITIONS, AND AMEND TERMINOLOGY USED IN CHAPTER 9 OF THE AMES MUNICIPAL CODE.

BACKGROUND:

The City of Ames participates in the National Flood Insurance Program (NFIP). Because of this, property owners in the City are eligible to purchase flood insurance to protect their structures and contents. To participate in the NFIP, the City is obligated to regulate development so as to reduce the risks of loss of life, personal injury, and property damage. The City has adopted an ordinance, Chapter 9 Flood Plain Zoning, that regulates development in the flood plain and maps that identify the flood plain for waterways throughout the City. Some of the more significant standards of the City's ordinance are requirements to have new buildings protected/constructed three feet above the base flood elevation when located in the floodway fringe, restrict development within the floodway, and under certain circumstances requiring improvements to existing nonconforming buildings to current flood protection requirements.

Chapter 9 incorporates by reference the Flood Insurance Rate Maps (FIRMs) prepared by the Federal Emergency Management Agency (FEMA). Floodplains within the City include Skunk river, Squaw Creek, Clear Creek, College Creek and Worle Creek. (Map-Attachment B) Additionally, several Unnamed small streams including the Tea Garden outlet stream were included. The current Flood Insurance Study (FIS) and FIRMs were adopted in 2008 and a focused update study for College Creek and Worle Creek was adopted in 2014. **A new study that updates the topography of the area within Ames with new FIRMs have been prepared and are slated to become effective on January 15th 2021. Therefore, the City must adopt these maps in order to remain in compliance with the NFIP.** Note that meteorological event changes are not part of this update by DNR and FEMA.

The new Flood Insurance Study has resulted in more accurate Flood Insurance Rate Maps depicting Base Flood Elevations (BFE). The new topographic data is from LIDAR analysis from 2009. These more accurate maps will help the community plan for and better regulate development activities in the flood plain. It will also help affected homeowners and businesses to obtain the proper level of flood insurance coverage at the best price. The new study also updates the City's vertical datum it uses to determine base flood elevation (BFE) from the NGVD1929 standard to the NAVD1988 standard. This scale of measuring elevations was used in the existing FIRMs, but the new maps establish elevations for the study area in North American Vertical Datum 1988 (NAVD 88). The map update also brings with it some text amendments to the floodplain development

standards in Chapter 9 in order to maintain compliance with DNR and FEMA standards. **A more detailed explanation of the proposed text amendments and map change is discussed in the addendum below.**

The process of updating the maps was initiated by FEMA and DNR in 2018. Notice was provided in March 2019 to property owners within the flood plain about the impending changes and how to review and comments on the proposed changes to DNR. The City created a web map viewer for the public to easily identify changes as part of this process, which can be found on the [City's Planning Division website](#).

The FIRM update brings a total of 70 new parcels, including 39 buildings, into the 100-year floodplain. Nine parcels are being removed. The boundaries of the floodway did not change. Of the new buildings being added, the vast majority of those are non-residential. Staff mailed out follow up letters in October 2020 as a reminder to the 70 property owners that the FIRMS are changing and City Council would review the proposed changes to our local ordinances on October 27th.

PLANNING & ZONING RECOMMENDATION:

At the September 16th Planning & Zoning Commission meeting the Commission voted 5-1 to recommend approval of the new FIRM map and associated text amendments including eliminating the requirement of a Conditional Use Permit in General Floodplain Overlay areas.

The Planning & Zoning Commission discussed and asked questions about what eliminating the Conditional Use Permit Requirement would cause the City to lose. Staff replied that we believe there is no loss of oversight as City and DNR standards still apply. The extra step of having a Board review a project subject to precise performance standards is seen as duplicative of the Administrative review process already in place. General Flood Plain overlay is only found in two areas of the community, east of I-35 and north Ames near Ada Hayden.

One change has occurred since the Planning & Zoning Commission recommendation is upon further consultation with the DNR staff has discovered that 'development' was not required to replace 'use' in Section 9.8(1-3) (Non-conforming uses). As a result staff has chosen to leave 'use' in place in this particular section. DNR views this sections reference to the term 'use' as a zoning matter and not directly tied to floodplain development regulations.

ALTERNATIVES:

1. The City Council can amend Chapter 9 of the Ames *Municipal Code* as shown in the attachment, including the optional language removing the requirement for a Conditional Use Permit in General Floodplain Districts in Section 9.6 and approve on first reading an ordinance making these changes.

2. The City Council can amend Chapter 9 of the Ames *Municipal Code* with only the required amendments and approve on first reading an ordinance making these changes.
3. The City Council can choose not to approve the proposed amendments.

CITY MANAGER’S RECOMMENDED ACTION:

The new Flood Insurance Study has resulted in more accurate Flood Insurance Rate Maps depicting Base Flood Elevations (BFE). These more accurate maps will help the community plan for and better regulate development activities in the flood plain. It will also help affected homeowners and businesses to obtain the proper level of flood insurance coverage at the best price.

The new FIRMs, as finalized by FEMA and the Iowa DNR, are required to be adopted to be in compliance with the National Flood Insurance Program (NFIP). The new maps must be adopted, and the published Ordinance submitted to Iowa DNR no later than January 15th, 2021. The associated text amendments accompanying the map updates are minor in nature and do not have substantive effects on specific standards. The change to eliminate the ZBA Conditional Use Permit process does not affect the actual flood protection standards that would apply to the General Floodplain Overlay District.

Therefore, it is the recommendation of the City Manager that the City Council act in accordance with Alternative #1, which is to amend Chapter 9 of the Ames *Municipal Code* as shown in the attachment and adopt the new proposed FIRM.

Addendum

The floodplain is divided into two main areas called the Floodway which is the most restrictive to development and the Floodway Fringe which is the 100 year floodplain area which has a 1% chance of flooding each year. Development in this area must meet minimum flood protection standards. The new mapping updates the flood area for 100-year storm events, which is consistent with NFIP.

There are some areas that are designated as 500-year floodplain on the FIRM map panels. These areas have a 0.2% chance of flooding each year. The City does not regulate 500- year floodplain, although it is still recognized by FEMA and DNR for insurance purposes.

In November 2018 FEMA delivered preliminary FIRM's to the City for our review and comment. Once draft maps were prepared, City staff conducted an open house in January 2019, and published an invitation to the community. In March 2019 City staff mailed notices to all property owners with property currently within the flood plain or new properties coming within the new boundaries of the floodplain to make all property owners potentially affected by this update aware of what is happening. A public comment and review period began in January 2019. The City created a web map viewer for the public to easily identify changes as part of this process, which can be found on the [City's Planning Division website](#). The comment and review period for both the public and the City ended in December of 2019.

The FIRM update brings a total of 70 new parcels, including 39 buildings, into the 100-year floodplain. Nine parcels are being removed. The boundaries of the floodway did not change. Of the new buildings being added, the vast majority of those are non-residential.

Staff mailed out follow up letters in October 2020 as a reminder to the 70 property owners that the FIRMS are changing and City Council would review the proposed changes to our local ordinances on October 27th.

During the City's review staff looked at the proposed new FIRM to determine if past flood events coincided with the proposed new 100-year floodplain boundaries and if there were any areas staff felt should be included that weren't or if staff had any concerns about new areas being included. Staff determined the proposed boundaries reflected where water could be expected to rise to during an event of the particular magnitudes predicted for. However, one area staff did disagree with that was proposed to be placed within the 100-year floodplain is the land abutting Ada Hayden Lake. Staff appealed that section of the map and submitted engineering data that staff believes supports not placing the land immediately adjacent to the lake within the floodplain boundaries. FEMA reviewed the appeal and granted changes to the map which removed the 100 year flood plain on much of the land immediately abutting the lake and limited it to just the surface of the water and

a wetland area along the west side of the lake. The City has control of an outlet structure that empties water from the Skunk River into Ada Hayden Lake. As this can be controlled and with the engineering of the lake FEMA ultimately agreed with the City of Ames it is not a flood hazard.

One additional area that does not match existing conditions is in south Ames in the Tea Garden drainage area. Although a flood plain is still depicted for a waterway near Highway 69 and the Mucky Duck, the City as a separate process is pursuing a map amendment to remove the piped area from the flood plain.

Much of the expansion of floodplain is occurring along the Skunk River in the southeast portion of the City east of Duff and south of Lincoln Way. Minor areas of increase in floodplain are found along other areas near the Skunk River, Squaw Creek and Clear Creek. Most of College Creek and Worle Creek areas remain unchanged as those areas were remapped and updated in 2014. There are marginal decreases occurring as well. The majority of decreases occur in the Skunk River area and in some areas along Squaw Creek. These areas are isolated or found very near to the boundaries of the 100-year floodplain indicating a small alteration in boundary location. The map showing where changes to the 100-year flood plain boundary are located on the Planning Division website and can be accessed via the following links:

[Map of Changes](#)

[Additional Firm Update information](#)

Proposed Text Amendments

This FIRM update also includes text amendment updates to the Chapter 9 development standards. These are required updates that are primarily minor in nature and affect the terms 'Building' and replacing with 'Structures' and replacing 'Use/Uses' with the term 'Development'. Additional items being added include minor language dealing with subdivision review proposals and reformatting a small section of the section dealing with Substantially improved structures. The sections affected are sections 9.4, 9.5, 9.6, 9.7 and 9.8. The text amendment also makes changes to some existing definitions while adding some new definitions. The definitions are divided into current definitions being amended and new definitions. Regardless of whether a community uses the terminology in it's general standards the new definitions are required by FEMA to be inserted into the definitions section. Some of the new definitions are not used yet in our standards.

The new map number and associated FIRM panels and their adoption date must be added into the ordinance as a part of this process. The text amendments included in this update are required by the Iowa DNR and FEMA to be in compliance with federal and state floodplain regulations. The text amendments can be found below in Attachment A.

Optional Model Ordinance Items from DNR

The Iowa DNR has also given the City optional ordinance language we can adopt if the City believes it is necessary to enforcing our Floodplain Ordinance. The DNR is giving

cities the option of no longer requiring Conditional Use Permits in floodplain areas that have not been delineated between floodway and 100-year floodway fringe areas known as General Floodplain. Currently, General Floodplain Districts are treated all as floodway. The new language would eliminate Zoning Board of Adjustment review of the placement of structures, fill, factory built homes, excavation, storage of materials and obstructions within General Floodplain areas, but not the city's development standards and protection measures. Currently if a project involving one of the items listed above is proposed in a General Floodplain within the City, a Conditional Use Permit must be requested from the Zoning Board of Adjustment in addition to concurrent approval from the DNR. The process of having to obtain a Condition Use Permit could be viewed as burdensome to an applicant when the applied standards are the same and as such the DNR is providing the option of eliminating this process. Development in the general flood plain is very rare and in Ames as they are areas on the perimeter of the City. Currently there are only 2 areas in the City where General Floodplain exists. (See Attachment A)

Based on how subdivisions and site developments are currently permitted in the City no site development or subdivision would be able to occur without City review and approval by multiple departments. This includes review of floodplain development. Given the review requirements already in place the process of developing in a General Floodplain would always be subject to review by the City and DNR. Eliminating the Zoning Board of Adjustment review is not viewed as change or elimination of flood protection standards themselves.

Attachment A- Proposed Text Amendment
Highlights are text changes

ORDINANCE NO.

AN ORDINANCE TO AMEND THE MUNICIPAL CODE OF THE CITY OF AMES, IOWA, BY AMENDING CHAPTER 9 SECTION 9.1(3)(b)(c), 9.2(2)(4), 9.3(3), 9.4(2)(b)(e)(g), (3)(a)(b)(c)(e), 9.5(2)(b)(c)(h)(i)(k)(l)(c), 9.6 (1)(g)(2), 9.7(1)(b)(iii)(2)(v)(vi),(e), (3)(e)(ii)(a)(7)(8)(9), 9.7(3)(e)(ii)(b)(5)(h), 9.8 (1)(a)(e)(2)(d(3)(a)(e), 9.11 (2)(12)(14)(16)(27)(29) AND ENACTING A NEW SECTION 9.6 (4)(a)(b)(c)(1)(2), (5)(a)(b), 9.11(34)(35)(36)(37)(38) THEREOF, FOR THE PURPOSE OF ADOPTING NEW FLOOD MAPS, UPDATE DEFINITIONS AND AMEND TERMINOLOGY; REPEALING ANY AND ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT TO THE EXTENT OF SUCH CONFLICT; PROVIDING A PENALTY; AND ESTABLISHING AN EFFECTIVE DATE.

BE IT ENACTED, by the City Council for the City of Ames, Iowa, that:

Section One. The Municipal Code of the City of Ames, Iowa shall be and the same is hereby amended by enacting Chapter 9 as follows:

“Sec. 9.1. STATUTORY AUTHORIZATION, FINDINGS OF FACT, AND PURPOSE.

...

(3) Purpose. It is the purpose of this ordinance to promote the public health, safety, and general welfare by minimizing those flood losses described in Section 9.1(2) with provisions designed to:

(b) Restrict or prohibit **development** which **is** dangerous to health, safety or property in times of flood or which cause excessive increases in flood heights or velocities.

(c) Require that development vulnerable to floods, including public utilities which serve such **development**, be protected against flood damage at the time of initial construction or substantial improvement.

Sec. 9.2. GENERAL PROVISIONS.

...

(2) **Establishment of Official Flood Plain Zoning Map.** The Story County, Iowa and Incorporated Areas Flood Insurance Rate Map (FIRM), City of Ames, Panels **19169C0135F, 0137G, 0139G, 0141G, 0142G, 0143G, 0144G, 0155F, 0161F, 0162F, 0163G, 0164F, 0168F, 0170F, 0256G, 0257G, 0276F, 0277F**, dated January 15 2021, which were prepared as part of the Flood Insurance Study for Story County and digital FIRM equivalent are hereby adopted by reference and declared to be the **Official Floodplain Zoning Map.**

...

(4) Compliance. No structure or land shall hereafter be used and no structure shall be located, extended, converted or structurally altered without full compliance with the terms of this chapter and other applicable regulations.

Sec. 9.3. ESTABLISHMENT OF ZONING OVERLAY DISTRICTS.

...

(3) General Flood Plain Overlay District – The General Flood Plain Overlay District includes the areas shown as “Zone A” on the Official Flood Plain Zoning Map Within these districts, all **development** not allowed as permitted **development** are prohibited unless a variance to the terms of this ordinance is granted after due consideration by the Zoning Board of Adjustment.

Sec. 9.4. FLOODWAY OVERLAY DISTRICT.

(1) Permitted Uses. The following uses shall be permitted within the Floodway Overlay District to the extent they are not prohibited by any other ordinance or underlying zoning district regulation, and

provided they do not include placement of habitable structures, factory-built homes, fill or other obstruction the storage of materials or equipment, excavation, or alteration of a watercourse (except as needed for public infrastructure):

- (a) Agricultural uses such as general farming, pasture, grazing, outdoor plant nurseries, horticulture, viticulture, truck farming, forestry, sod farming, and wild crop harvesting.
- (b) Signs, billboards, utility transmission lines and pipelines.
- (c) Private and public recreational uses such as golf courses, tennis courts, driving ranges, archery ranges, picnic grounds, boat launching ramps, swimming areas, parks, wildlife and nature preserves, game farms, fish hatcheries, shooting preserves, target ranges, trap and skeet ranges, hunting and fishing areas, hiking and horseback riding trails, and non-habitable structures accessory to them that meet the applicable Floodway Overlay District Performance Standards.
- (d) Residential accessory uses such as lawns, gardens and play areas.
- (e) Grading provided there is no change of surface topography of more than one foot and no fill is introduced into the Floodway.
- (f) Such other open-space uses similar in nature to the above uses.
- (g) Public infrastructure such as bridges; roads; trails; culverts; fill, excavation or grading; channel changes, relocations or placement of riprap or similar material; provided that any required permits from the Iowa Department of Natural Resources or Army Corps of Engineers have been approved. Such uses must also meet the applicable provisions of the Floodway Overlay District Performance Standards. This also includes any activity defined as maintenance under the nationwide permit issued by the Army Corps of Engineers.

(2) Development Uses. The following uses developments which involve structures (temporary or permanent), fill, or storage of materials or equipment may be permitted only upon issuance of a Major Site Development Plan as provided for in Section 29.1103. Such developments must also meet the applicable provisions of the Floodway Overlay District Performance Standards.

- (a) Transient commercial uses such as circuses, carnivals, flea markets, and similar transient enterprises.
- (b) Permanent commercial development such as drive-in theaters, new and used car lots, and roadside stands.
- (c) Borrow pits, storm water detention and retention areas, and extraction of sand, gravel, and other materials.
- (d) Marinas, boat rentals, docks, piers, wharves.
- (e) Accessory development such as loading areas, driveways and parking areas.
- (f) Grading, in which the surface topography may be increased greater than one foot.
- (g) Other development similar in nature to development described as permitted development or listed development, which are consistent with the performance standards of Subsection (3) below and the general spirit and purpose of this ordinance.

(3) Performance Standards. All Floodway Overlay District development allowed as a Permitted Development shall meet the following standards:

- (a) No development shall be permitted in the Floodway Overlay District that would result in any increase in the base flood elevation level. Consideration of the effects of any development on flood levels shall be based upon the assumption that an equal degree of development would be allowed for similarly situated lands. Evidence required will be a hydraulic study performed by a licensed professional engineer for the area of drainage involved.
- (b) All development within the Floodway Overlay District shall:
 - (i) Be consistent with the need to minimize flood damage.
 - (ii) Use construction methods and practices that will minimize and resist flood damage.
 - (iii) Use construction materials and utility equipment that are resistant to flood damage.
- (c) No development shall affect the capacity or conveyance of the channel or floodway or any tributary to the main stream, drainage ditch, or any other drainage facility or system.
- (d) Structures, buildings and sanitary and utility systems, if permitted, shall meet

the applicable performance standards of the Floodway Fringe Overlay District and shall be constructed or aligned to present the minimum possible resistance to flood flows.

(e) Structures, if permitted, shall have a low flood damage potential and shall not be for human habitation.

...

Sec. 9.5. FLOODWAY FRINGE OVERLAY DISTRICT.

(1) Permitted Uses. All uses within the Floodway Fringe Overlay District shall be permitted to the extent that they are not prohibited by any other ordinance or underlying zoning district and provided they meet applicable performance standards of the Floodway Fringe Overlay District.

(2) Performance Standards. All development must be consistent with the need to minimize flood damage and shall meet the following applicable performance standards. Until a regulatory floodway is designated, no development may increase the Base Flood Elevation more than one (1) foot. The applicant will be responsible for providing the Department of Natural Resources with sufficient technical information to make such a determination.

(a) All structures shall

- (i) be adequately anchored to prevent flotation, collapse or lateral movement of the structure,
- (ii) be constructed with materials and utility equipment resistant to flood damage, and
- (iii) be constructed by methods and practices that minimize flood damage.

(b) Residential Structure. All new or substantially improved residential structures shall have the lowest floor, including basements, elevated a minimum of three (3) feet above the base flood elevation level. Construction shall be upon compacted fill which shall, at all points, be no lower than three (3) feet above the base flood elevation level and extend at such elevation at least 18 feet beyond the limits of any structure erected thereon. Alternate methods of elevating (such as piers) may be allowed, subject to favorable consideration by the Zoning Board of Adjustment and issuance of a Conditional Use Permit, where existing topography, street grades, or other factors preclude elevating by fill. In such cases, the methods used must be adequate to support the structure as well as withstand the various forces and hazards associated with flooding. All new residential buildings shall be provided with a means of access which will be passable by wheeled vehicles during the base flood elevation.

(c) Non-residential Structure. All new and substantially improved non-residential structures shall have the lowest floor (including basement) elevated a minimum of three (3) feet above the base flood elevation level, or together with attendant utility and sanitary systems, be floodproofed to such a level. When floodproofing is utilized, a professional engineer licensed in the State of Iowa shall certify that the floodproofing methods used are adequate to withstand the flood depths, pressures, velocities, impact and uplift forces and other factors associated with the base flood elevation level, and that the structure, below the base flood elevation level, is watertight with walls substantially impermeable to the passage of water. A record of the certification indicating the specific elevation to which any structures are floodproofed shall be maintained by the Flood Plain Administrator.

...

(h) No development shall affect the capacity or conveyance of the channel or floodway of any tributary to the main stream, drainage ditch, or other drainage facility or system. In addition, the Department of Natural Resources must approve any alteration or relocation of any stream.

(i) Subdivisions (including factory-built home parks and subdivisions) shall be consistent with the need to minimize flood damages and shall have adequate drainage provided to reduce exposure to flood damage. Development associated with subdivision proposals (including the installation of public utilities) shall meet the applicable performance standards of this Ordinance. Subdivision proposals intended for residential development shall provide all lots with a means of vehicular access that will remain dry during occurrence of the base flood. Proposed subdivision plats greater than five (5) acres or fifty (50) lots (whichever is fewer) shall include base flood elevation data for those areas located within the Floodway, Floodway Fringe, or General Floodway Overlay Districts on the preliminary plat and final plat.

...

(k) For all new and substantially improved structures:

(i) Fully enclosed areas below the "lowest floor" (not including basements) 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 licensed professional engineer or meet or exceed the following minimum criteria:

a. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.

b. The bottom of all openings shall be no higher than one foot above grade.

c. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided, that they permit the automatic entry and exit of floodwaters. Such areas shall be used solely for parking of vehicles, building access, and low damage potential storage.

...

Sec. 9.6. GENERAL FLOOD PLAIN OVERLAY DISTRICT (FP).

(1) ...

(g) Public infrastructure such as bridges; roads; trails; culverts; fill, excavation or grading; channel changes, relocations or placement of riprap or similar material; provided that any required permits from the Iowa Department of Natural Resources or Army Corps of Engineers have been approved. Such development must also meet the applicable provisions of the Floodway Overlay District Performance Standards. This also includes any activity defined as maintenance under the nationwide permit issued by the Army Corps of Engineers.

...

(2) Performance Standards.

(a) All conditional uses, or portions thereof, to be located in the floodway as determined by the Department of Natural Resources shall meet the applicable provisions and standards of the Floodway Overlay District.

(b) All conditional uses, or portions thereof, to be located in the floodway fringe as determined by the Department of Natural Resources shall meet the applicable standards of the Floodway Fringe Overlay District.

(3) Permitted Uses

a. All development within the General Floodplain District shall be permitted to the extent that they are not prohibited by any other ordinance (or underlying zoning district) and provided they meet the applicable performance standards of the General Floodplain District.

b. Any development which involves placement of structures, factory-built homes, fill or other obstructions, storage of materials or equipment, excavation or alteration of a watercourse shall be reviewed by the Department of Natural Resources to determine (i) whether the land involved is either wholly or partly within the floodway or floodway fringe and (ii) the base flood elevation. The applicant shall be responsible for providing the Department of Natural Resources with sufficient technical information to make the determination.

c. Review by the Iowa Department of Natural Resources is not required for the proposed construction of new or replacement bridges or culverts where:

1) The bridge or culvert is located on a stream that drains less than two (2) square miles, and

2) The bridge or culvert is not associated with a channel modification that constitutes a channel change as specified in 567-71.2(2), Iowa Administrative Code.

(4) Performance Standards

d. All development, or portions thereof, to be located in the floodway as determined by the Department of Natural Resources shall meet the applicable provisions and standards of the Floodway (Overlay) District.

e. All development, or portions thereof, to be located in the floodway fringe as determined by the Department of Natural Resources shall meet the applicable provisions and standards of the Floodway Fringe (Overlay) District.

Sec. 9.7. ADMINISTRATION

(1) Appointment, Duties and Responsibilities of Flood Plain Administrator

(a) The Flood Plain Administrator (the Administrator) shall be the Director of the Department of Planning and Housing or his/her designee and shall administer and enforce this chapter and will herein be referred to as the Administrator.

(b) Duties and responsibilities of the Administrator shall include, but not necessarily be limited to, the following:

...

(iii) Record and maintain a record of:

a. the elevation (in relation to the appropriate vertical datum) of the lowest habitable floor of all new or substantially improved structure or
b. the elevation to which new or substantially improved structures have been floodproofed.

...

(2) Flood Plain Development Permit.

(a) Permit Required. A Flood Plain Development Permit issued by the Administrator shall be secured prior to initiation of any flood plain development. Development is defined in Section 9.11

(b) Application for Permit. Application for a Flood Plain Development Permit shall be made on forms supplied by the Administrator and shall include the following information:

...

(v) Elevation of the lowest floor (including basement) of a structure or of the level to which a building is to be floodproofed.

(vi) For a structure being improved or rebuilt, the estimated cost of improvements and market value of the building prior to the improvements.

...

(e) The applicant shall be required to submit certification by a professional engineer or land surveyor, as appropriate, licensed in the State of Iowa, that the finished fill, structure floor elevations, floodproofing, or other flood protection measures were accomplished in compliance with the provisions of this Ordinance, prior to the use or occupancy of any structure.

(3) Conditional Uses, Appeals, and Variances.

...

(e) Hearings and Decisions of the Zoning Board of Adjustment.

(ii) Decisions. The Board shall arrive at a decision on a Conditional Use, Appeal, or variance within a reasonable time. In passing upon an Appeal, the Board may, so long as such action is in conformity with the provisions of this ordinance, reverse or affirm, wholly or in part, or modify the order, requirement, decision, or determination appealed from, and it shall make its decision, in writing, setting forth the findings of fact and the reasons for its decision. In granting a Conditional Use or Variance the Board shall consider such factors as contained in this section and all other relevant sections of this ordinance and may prescribe such conditions as described below.

a. Factors Upon Which the Decision of the Board Shall be Based. In passing upon requests for Conditional Uses or Variances, the Zoning Board shall consider all relevant factors specified in other sections of this ordinance and:

...

7. The availability of alternative locations not subject to

flooding for the proposed development.

8. The compatibility of the proposed development with existing development and development anticipated in the foreseeable future.

9. The relationship of the proposed development to the comprehensive plan and flood plain management program for the area.

...

b. Conditions attached to Conditional Uses or Variances. Upon consideration of the factors listed above, the Board may attach such conditions to the granting of Conditional Uses or Variances as it deems necessary to further the purpose of this ordinance. Such conditions may include, but are not limited to:

...

5. Floodproofing measures shall be designed consistent with the flood protection elevation for the particular area, flood velocities, durations, rate of rise, hydrostatic and hydrodynamic forces, and other factors associated with the regulatory flood. The Zoning Board of Adjustment shall require that the applicant submit a plan or document certified by a licensed professional engineer that the floodproofing measures are consistent with the regulatory flood protection elevation and associated flood factors for the particular area. Such floodproofing measures may include, but are not necessarily limited to the following:

...

(h) Pumping facilities or comparable practices for subsurface drainage systems for a structure to relieve external foundation wall and basement flood pressures.

Sec. 9.8. NONCONFORMING USES.

(1) In the Floodway Overlay District. When located in the Floodway Overlay District, a structure, or the use of a structure, or the use of land, which was lawful before July 16, 2004, but is not in conformity with the provisions of this ordinance, may be continued subject to the following conditions:

(a) No use shall be expanded or enlarged to cover more lot area, or changed to another use, unless that use is a permitted use.

...

(e) If a nonconforming use is discontinued for twelve (12) consecutive months, any future use of the structure or premises shall conform to this ordinance.

(2) In the Floodway Fringe Overlay District. When located in the Floodway Fringe Overlay District, a structure, use of a structure or the use of land which was lawful before July 16, 2004, but is not in conformity with the provisions of this ordinance, may be continued subject to the following conditions:

...

(d) If a nonconforming use is discontinued for twelve (12) consecutive months, any future use of the structure or premises shall conform to this ordinance.

(3) In the General Flood Plain Overlay District. When located in the General Flood Plain Fringe Overlay District, a structure, use of a structure or the use of land which was lawful before July 16, 2004, but is not in conformity with the provisions of this ordinance, may be continued subject to the following conditions:

(a) No use shall be expanded or enlarged to cover more lot area, or changed to another use, unless that use is a permitted use.

punishable as set out by law.

Section Three. All ordinances, or parts of ordinances, in conflict herewith are hereby repealed to the extent of such conflict, if any.

Section Four. This ordinance shall be in full force and effect from and after its passage and publication as required by law.

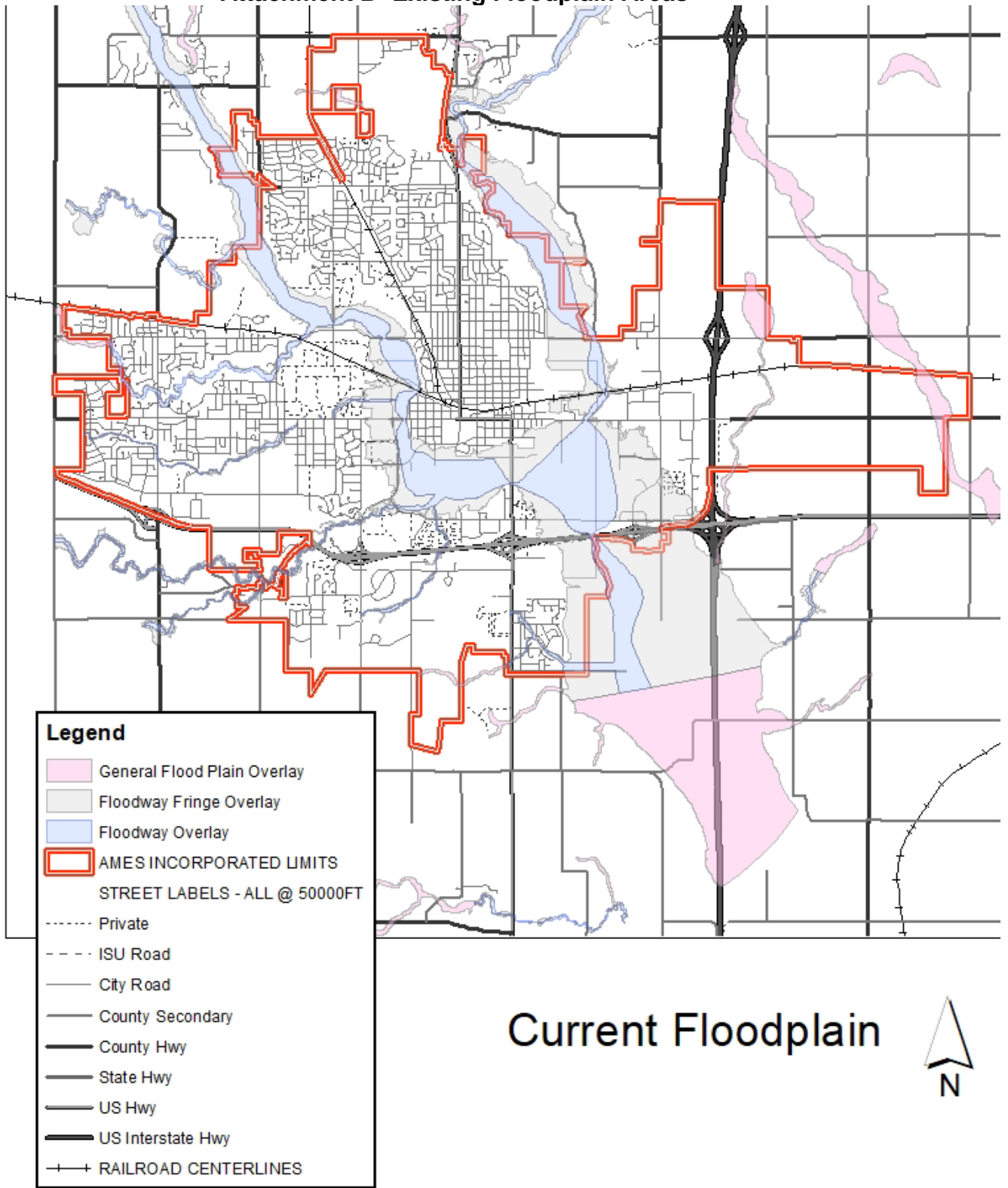
Passed this _____ day of _____, _____.

Diane R. Voss, City Clerk

John A. Haila, Mayor

DRAFT

Attachment B- Existing Floodplain Areas



ORDINANCE NO.

AN ORDINANCE TO AMEND THE MUNICIPAL CODE OF THE CITY OF AMES, IOWA, BY AMENDING CHAPTER 9 SECTION 9.1(3)(b)(c), 9.2(2)(4), 9.3(3), 9.4(2)(b)(e)(g), (3)(a)(b)(c)(e), 9.5(2)(b)(c)(h)(i)(k)(i)(c), 9.6 (1)(g)(2), 9.7(1)(b)(iii)(2)(v)(vi),(e), (3)(e)(ii)(a)(7)(8)(9), 9.7(3)(e)(ii)(b)(5)(h), 9.8 (1)(a)(e)(2)(d(3)(a)(e), 9.11 (2)(12)(14)(16)(27)(29) AND ENACTING A NEW SECTION 9.6 (4)(a)(b)(c)(1)(2), (5)(a)(b), 9.11(34)(35)(36)(37)(38) THEREOF, FOR THE PURPOSE OF ADOPTING NEW FLOOD MAPS, UPDATE DEFINITIONS AND AMEND TERMINOLOGY; REPEALING ANY AND ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT TO THE EXTENT OF SUCH CONFLICT; PROVIDING A PENALTY; AND ESTABLISHING AN EFFECTIVE DATE.

BE IT ENACTED, by the City Council for the City of Ames, Iowa, that:

Section One. The Municipal Code of the City of Ames, Iowa shall be and the same is hereby amended by enacting Chapter 9 as follows:

“Sec. 9.1. STATUTORY AUTHORIZATION, FINDINGS OF FACT, AND PURPOSE.

...

(3) Purpose. It is the purpose of this ordinance to promote the public health, safety, and general welfare by minimizing those flood losses described in Section 9.1(2) with provisions designed to:

(b) Restrict or prohibit development which is dangerous to health, safety or property in times of flood or which cause excessive increases in flood heights or velocities.

(c) Require that development vulnerable to floods, including public utilities which serve such development, be protected against flood damage at the time of initial construction or substantial improvement.

Sec. 9.2. GENERAL PROVISIONS.

...

(2) **Establishment of Official Flood Plain Zoning Map.** The Story County, Iowa and Incorporated Areas Flood Insurance Rate Map (FIRM), City of Ames, Panels 19169C0135F, 0137G, 0139G, 0141G, 0142G, 0143G, 0144G, 0155F, 0161F, 0162F, 0163G, 0164F, 0168F, 0170F, 0256G, 0257G, 0276F, 0277F, dated January 15 2021, which were prepared as part of the Flood Insurance Study for Story County and digital FIRM equivalent are hereby adopted by reference and declared to be the Official Floodplain Zoning Map.

...

(4) Compliance. No structure or land shall hereafter be used and no structure shall be located, extended, converted or structurally altered without full compliance with the terms of this chapter and other applicable regulations.

Sec. 9.3. ESTABLISHMENT OF ZONING OVERLAY DISTRICTS.

...

(3) General Flood Plain Overlay District – The General Flood Plain Overlay District includes the areas shown as “Zone A” on the Official Flood Plain Zoning Map Within these districts, all development not allowed as permitted development are prohibited unless a variance to the terms of this ordinance is granted after due consideration by the Zoning Board of Adjustment.

Sec. 9.4. FLOODWAY OVERLAY DISTRICT.

(1) Permitted Uses. The following uses shall be permitted within the Floodway Overlay District to the extent they are not prohibited by any other ordinance or underlying zoning district regulation, and

provided they do not include placement of habitable structures, factory-built homes, fill or other obstruction the storage of materials or equipment, excavation, or alteration of a watercourse (except as needed for public infrastructure):

- (a) Agricultural uses such as general farming, pasture, grazing, outdoor plant nurseries, horticulture, viticulture, truck farming, forestry, sod farming, and wild crop harvesting.
- (b) Signs, billboards, utility transmission lines and pipelines.
- (c) Private and public recreational uses such as golf courses, tennis courts, driving ranges, archery ranges, picnic grounds, boat launching ramps, swimming areas, parks, wildlife and nature preserves, game farms, fish hatcheries, shooting preserves, target ranges, trap and skeet ranges, hunting and fishing areas, hiking and horseback riding trails, and non-habitable structures accessory to them that meet the applicable Floodway Overlay District Performance Standards.
- (d) Residential accessory uses such as lawns, gardens and play areas.
- (e) Grading provided there is no change of surface topography of more than one foot and no fill is introduced into the Floodway.
- (f) Such other open-space uses similar in nature to the above uses.
- (g) Public infrastructure such as bridges; roads; trails; culverts; fill, excavation or grading; channel changes, relocations or placement of riprap or similar material; provided that any required permits from the Iowa Department of Natural Resources or Army Corps of Engineers have been approved. Such uses must also meet the applicable provisions of the Floodway Overlay District Performance Standards. This also includes any activity defined as maintenance under the nationwide permit issued by the Army Corps of Engineers.

(2) Development Uses. The following uses developments which involve structures (temporary or permanent), fill, or storage of materials or equipment may be permitted only upon issuance of a Major Site Development Plan as provided for in Section 29.1103. Such developments must also meet the applicable provisions of the Floodway Overlay District Performance Standards.

- (a) Transient commercial uses such as circuses, carnivals, flea markets, and similar transient enterprises.
- (b) Permanent commercial development such as drive-in theaters, new and used car lots, and roadside stands.
- (c) Borrow pits, storm water detention and retention areas, and extraction of sand, gravel, and other materials.
- (d) Marinas, boat rentals, docks, piers, wharves.
- (e) Accessory development such as loading areas, driveways and parking areas.
- (f) Grading, in which the surface topography may be increased greater than one foot.
- (g) Other development similar in nature to development described as permitted development or listed development, which are consistent with the performance standards of Subsection (3) below and the general spirit and purpose of this ordinance.

(3) Performance Standards. All Floodway Overlay District development allowed as a Permitted Development shall meet the following standards:

- (a) No development shall be permitted in the Floodway Overlay District that would result in any Increase in the base flood elevation level. Consideration of the effects of any development on flood levels shall be based upon the assumption that an equal degree of development would be allowed for similarly situated lands. Evidence required will be a hydraulic study performed by a licensed professional engineer for the area of drainage involved.
- (b) All development within the Floodway Overlay District shall:
 - (i) Be consistent with the need to minimize flood damage.
 - (ii) Use construction methods and practices that will minimize and resist flood damage.
 - (iii) Use construction materials and utility equipment that are resistant to flood damage.
- (c) No development shall affect the capacity or conveyance of the channel or floodway or any tributary to the main stream, drainage ditch, or any other drainage facility or system.
- (d) Structures, buildings and sanitary and utility systems, if permitted, shall meet

the applicable performance standards of the Floodway Fringe Overlay District and shall be constructed or aligned to present the minimum possible resistance to flood flows.

(e) Structures, if permitted, shall have a low flood damage potential and shall not be for human habitation.

...

Sec. 9.5. FLOODWAY FRINGE OVERLAY DISTRICT.

(1) Permitted Uses. All uses within the Floodway Fringe Overlay District shall be permitted to the extent that they are not prohibited by any other ordinance or underlying zoning district and provided they meet applicable performance standards of the Floodway Fringe Overlay District.

(2) Performance Standards. All development must be consistent with the need to minimize flood damage and shall meet the following applicable performance standards. Until a regulatory floodway is designated, no development may increase the Base Flood Elevation more than one (1) foot. The applicant will be responsible for providing the Department of Natural Resources with sufficient technical information to make such a determination.

(a) All structures shall

(i) be adequately anchored to prevent flotation, collapse or lateral movement of the structure,

(ii) be constructed with materials and utility equipment resistant to flood damage, and

(iii) be constructed by methods and practices that minimize flood damage.

(b) Residential Structure. All new or substantially improved residential structures shall have the lowest floor, including basements, elevated a minimum of three (3) feet above the base flood elevation level. Construction shall be upon compacted fill which shall, at all points, be no lower than three (3) feet above the base flood elevation level and extend at such elevation at least 18 feet beyond the limits of any structure erected thereon. Alternate methods of elevating (such as piers) may be allowed, subject to favorable consideration by the Zoning Board of Adjustment and issuance of a Conditional Use Permit, where existing topography, street grades, or other factors preclude elevating by fill. In such cases, the methods used must be adequate to support the structure as well as withstand the various forces and hazards associated with flooding. All new residential buildings shall be provided with a means of access which will be passable by wheeled vehicles during the base flood elevation.

(c) Non-residential Structure. All new and substantially improved non-residential structures shall have the lowest floor (including basement) elevated a minimum of three (3) feet above the base flood elevation level, or together with attendant utility and sanitary systems, be floodproofed to such a level. When floodproofing is utilized, a professional engineer licensed in the State of Iowa shall certify that the floodproofing methods used are adequate to withstand the flood depths, pressures, velocities, impact and uplift forces and other factors associated with the base flood elevation level, and that the structure, below the base flood elevation level, is watertight with walls substantially impermeable to the passage of water. A record of the certification indicating the specific elevation to which any structures are floodproofed shall be maintained by the Flood Plain Administrator.

...

(h) No development shall affect the capacity or conveyance of the channel or floodway of any tributary to the main stream, drainage ditch, or other drainage facility or system. In addition, the Department of Natural Resources must approve any alteration or relocation of any stream.

(i) Subdivisions (including factory-built home parks and subdivisions) shall be consistent with the need to minimize flood damages and shall have adequate drainage provided to reduce exposure to flood damage. Development associated with subdivision proposals (including the installation of public utilities) shall meet the applicable performance standards of this Ordinance. Subdivision proposals intended for residential development shall provide all lots with a means of vehicular access that will remain dry during occurrence of the base flood. Proposed subdivision plats greater than five (5) acres or fifty (50) lots (whichever is fewer) shall include base flood elevation data for those areas located within the Floodway, Floodway Fringe, or General Floodway Overlay Districts on the preliminary plat and final plat.

...

(k) For all new and substantially improved structures:

(i) Fully enclosed areas below the “lowest floor” (not including basements) 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 licensed professional engineer or meet or exceed the following minimum criteria:

a. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.

b. The bottom of all openings shall be no higher than one foot above grade.

c. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided, that they permit the automatic entry and exit of floodwaters. Such areas shall be used solely for parking of vehicles, building access, and low damage potential storage.

...

Sec. 9.6. GENERAL FLOOD PLAIN OVERLAY DISTRICT (FP).

(1) ...

(g) Public infrastructure such as bridges; roads; trails; culverts; fill, excavation or grading; channel changes, relocations or placement of riprap or similar material; provided that any required permits from the Iowa Department of Natural Resources or Army Corps of Engineers have been approved. Such development must also meet the applicable provisions of the Floodway Overlay District Performance Standards. This also includes any activity defined as maintenance under the nationwide permit issued by the Army Corps of Engineers.

...

(2) Performance Standards.

(a) All conditional uses, or portions thereof, to be located in the floodway as determined by the Department of Natural Resources shall meet the applicable provisions and standards of the Floodway Overlay District.

(b) All conditional uses, or portions thereof, to be located in the floodway fringe as determined by the Department of Natural Resources shall meet the applicable standards of the Floodway Fringe Overlay District.

(3) Permitted Uses

a. All development within the General Floodplain District shall be permitted to the extent that they are not prohibited by any other ordinance (or underlying zoning district) and provided they meet the applicable performance standards of the General Floodplain District.

b. Any development which involves placement of structures, factory-built homes, fill or other obstructions, storage of materials or equipment, excavation or alteration of a watercourse shall be reviewed by the Department of Natural Resources to determine (i) whether the land involved is either wholly or partly within the floodway or floodway fringe and (ii) the base flood elevation. The applicant shall be responsible for providing the Department of Natural Resources with sufficient technical information to make the determination.

c. Review by the Iowa Department of Natural Resources is not required for the proposed construction of new or replacement bridges or culverts where:

1) The bridge or culvert is located on a stream that drains less than two (2) square miles, and

2) The bridge or culvert is not associated with a channel modification that constitutes a channel change as specified in 567-71.2(2), Iowa Administrative Code.

(4) Performance Standards

d. All development, or portions thereof, to be located in the floodway as determined by the

Department of Natural Resources shall meet the applicable provisions and standards of the Floodway (Overlay) District.

e. All development, or portions thereof, to be located in the floodway fringe as determined by the Department of Natural Resources shall meet the applicable provisions and standards of the Floodway Fringe (Overlay) District.

Sec. 9.7. ADMINISTRATION

(1) Appointment, Duties and Responsibilities of Flood Plain Administrator

(a) The Flood Plain Administrator (the Administrator) shall be the Director of the Department of Planning and Housing or his/her designee and shall administer and enforce this chapter and will herein be referred to as the Administrator.

(b) Duties and responsibilities of the Administrator shall include, but not necessarily be limited to, the following:

...

(iii) Record and maintain a record of:

a. the elevation (in relation to the appropriate vertical datum) of the lowest habitable floor of all new or substantially improved structure or
b. the elevation to which new or substantially improved structures have been floodproofed.

...

(2) Flood Plain Development Permit.

(a) Permit Required. A Flood Plain Development Permit issued by the Administrator shall be secured prior to initiation of any flood plain development. Development is defined in Section 9.11

(b) Application for Permit. Application for a Flood Plain Development Permit shall be made on forms supplied by the Administrator and shall include the following information:

...

(v) Elevation of the lowest floor (including basement) of a structure or of the level to which a building is to be floodproofed.

(vi) For a structure being improved or rebuilt, the estimated cost of improvements and market value of the building prior to the improvements.

...

(e) The applicant shall be required to submit certification by a professional engineer or land surveyor, as appropriate, licensed in the State of Iowa, that the finished fill, structure floor elevations, floodproofing, or other flood protection measures were accomplished in compliance with the provisions of this Ordinance, prior to the use or occupancy of any structure.

(3) Conditional Uses, Appeals, and Variances.

...

(e) Hearings and Decisions of the Zoning Board of Adjustment.

(ii) Decisions. The Board shall arrive at a decision on a Conditional Use, Appeal, or variance within a reasonable time. In passing upon an Appeal, the Board may, so long as such action is in conformity with the provisions of this ordinance, reverse or affirm, wholly or in part, or modify the order, requirement, decision, or determination appealed from, and it shall make its decision, in writing, setting forth the findings of fact and the reasons for its decision. In granting a Conditional Use or Variance the Board shall consider such factors as contained in this section and all other relevant sections of this ordinance and may prescribe such conditions as described below.

a. Factors Upon Which the Decision of the Board Shall be Based. In passing upon requests for Conditional Uses or Variances, the Zoning Board shall consider all relevant factors specified in other sections of this ordinance and:

...

7. The availability of alternative locations not subject to flooding for the proposed development.

8. The compatibility of the proposed development with existing development and development anticipated in the foreseeable future.

9. The relationship of the proposed development to the comprehensive plan and flood plain management program for the area.

...

b. Conditions attached to Conditional Uses or Variances. Upon consideration of the factors listed above, the Board may attach such conditions to the granting of Conditional Uses or Variances as it deems necessary to further the purpose of this ordinance. Such conditions may include, but are not limited to:

...

5. Floodproofing measures shall be designed consistent with the flood protection elevation for the particular area, flood velocities, durations, rate of rise, hydrostatic and hydrodynamic forces, and other factors associated with the regulatory flood. The Zoning Board of Adjustment shall require that the applicant submit a plan or document certified by a licensed professional engineer that the floodproofing measures are consistent with the regulatory flood protection elevation and associated flood factors for the particular area. Such floodproofing measures may include, but are not necessarily limited to the following:

...

(h) Pumping facilities or comparable practices for subsurface drainage systems for a structure to relieve external foundation wall and basement flood pressures.

Sec. 9.8. NONCONFORMING USES.

(1) In the Floodway Overlay District. When located in the Floodway Overlay District, a structure, or the use of a structure, or the use of land, which was lawful before July 16, 2004, but is not in conformity with the provisions of this ordinance, may be continued subject to the following conditions:

(a) No use shall be expanded or enlarged to cover more lot area, or changed to another use, unless that use is a permitted use.

...

(e) If a nonconforming use is discontinued for twelve (12) consecutive months, any future use of the structure or premises shall conform to this ordinance.

(2) In the Floodway Fringe Overlay District. When located in the Floodway Fringe Overlay District, a structure, use of a structure or the use of land which was lawful before July 16, 2004, but is not in conformity with the provisions of this ordinance, may be continued subject to the following conditions:

...

(d) If a nonconforming use is discontinued for twelve (12) consecutive months, any future use of the structure or premises shall conform to this ordinance.

(3) In the General Flood Plain Overlay District. When located in the General Flood Plain Fringe Overlay District, a structure, use of a structure or the use of land which was lawful before July 16, 2004, but is not in conformity with the provisions of this ordinance, may be continued subject to the following conditions:

(a) No use shall be expanded or enlarged to cover more lot area, or changed to another use, unless that use is a permitted use.

...

(e) If a nonconforming use is discontinued for twelve (12) consecutive months, any future use of the structure or premises shall conform to this ordinance.

...

Sec. 9.11. DEFINITIONS.

BASE FLOOD ELEVATION (BFE) - The elevation floodwaters would reach at a particular site during the occurrence of a base flood event.

FLOOD INSURANCE STUDY (FIS) - A report published by FEMA for a community issued along with the community's Flood Insurance Rate Map(s). The study contains such background data as the base flood discharge and water surface elevations that were used to prepare the FIRM

FLOODPROOFING - Any combination of structural and nonstructural additions, changes, or adjustments to structures, including utility and sanitary facilities, which will reduce or eliminate flood damage to such structures.

FLOODWAY FRINGE - Those portions of the Special Flood Hazard Area outside the floodway.

SPECIAL FLOOD HAZARD AREA (SFHA) - The land within a community subject to the "base flood". This land is identified on the community's Flood Insurance Rate Map as Zone A, A1-30, AE, AH, AO, AR, and/or A99. These Zones apply to areas subject to one percent or greater chance of flooding in any given year

STRUCTURE - Anything constructed or erected on the ground or attached to the ground, including, but not limited to, buildings, factories, sheds, cabins, factory-built homes, storage tanks, grain storage facilities and/or other similar uses.

New Definitions

APPURTENANT STRUCTURE - A structure which is on the same parcel of the property as the principal structure to be insured and the use of which is incidental to the use of the principal structure.

FIVE HUNDRED (500) YEAR FLOOD - A flood, the magnitude of which has a two-tenths (0.2) percent chance of being equaled or exceeded in any given year or which, on average, will be equaled or exceeded at least once every five hundred (500) years.

FLOODPLAIN MANAGEMENT - An overall program of corrective and preventive measures for reducing flood damages and promoting the wise use of floodplains, including but not limited to emergency preparedness plans, flood control works, floodproofing and floodplain management regulations.

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

NEW FACTORY-BUILT HOME PARK OR SUBDIVISION - A factory-built home park or subdivision for which the construction of facilities for servicing the lots on which the factory-built 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 the effective date of the first floodplain management regulations adopted by the community."

Section Two. Violation of the provisions of this ordinance shall constitute a municipal infraction punishable as set out by law.

Section Three. All ordinances, or parts of ordinances, in conflict herewith are hereby repealed to the extent of such conflict, if any.

Section Four. This ordinance shall be in full force and effect from and after its passage and publication as required by law.

Passed this _____ day of _____, _____.

Diane R. Voss, City Clerk

John A. Haila, Mayor