

**COUNCIL ACTION FORM**

**SUBJECT: FLOOD PLAIN ZONING REGULATIONS TEXT AMENDMENT TO ALLOW PUBLIC INFRASTRUCTURE AS A PERMITTED USE IN THE FLOODWAY OVERLAY DISTRICT AND TO AMEND REFERENCES TO PROFESSIONAL ENGINEERS**

**BACKGROUND:**

The City of Ames participates in the National Flood Insurance Program (NFIP). As such, 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 personal injury, loss of life, and property damage. The City has adopted a set of ordinances that regulate development in the flood plain and maps that identify the flood plain.

The Flood Plain Zoning Regulations are found in Chapter 9 of the *Ames Municipal Code* and are structured in much the same way as the Zoning Code of Chapter 29. There are three flood plain overlay districts—Floodway, Floodway Fringe, and General Flood Plain. Each overlay district allows permitted uses and conditional uses. Performance standards are enumerated for each overlay district.

Within the Floodway Overlay District, permitted uses are limited to open space uses such as farming and gardening, parking lots, airfields, golf courses, nature preserves, and the like. Anything that involves grading, placement of fill, excavation, and placement of structures requires a conditional use permit issued by the Zoning Board of Adjustment (the Board). All activities in the Floodway Overlay District, either permitted or conditional, must meet performance standards. Only when it is determined that the uses are allowed and the performance standards have been met can a local flood plain development permit be issued.

The City has been presented with very few applications for development within the floodway. The few that have been submitted and approved have been public infrastructure projects such as bridges, culverts, and roadways. All such activities must have the approval of the Iowa Department of Natural Resources (IDNR) and the Army Corp of Engineers (ACE). The IDNR and ACE must be satisfied that the proposed improvements will maintain the carrying capacity of the floodway and result in no increase in the base flood elevation. These activities also need the approval of the Board before the flood plain administrator can issue a local flood plain development permit.

Staff of the Planning Division and Engineering Division met to consider ways to improve the review process and to remove uncertainties from the approval process. One method

that was considered was to allow the flood plain administrator to issue the local flood plain development permit for public infrastructure projects upon evidence that the performance standards have been met, and that the necessary approvals from the IDNR and ACE have been obtained.

This approach would remove the Board from considering these types of projects and issuing a conditional use permit. When a project is presented to the Board for consideration, the ordinance requires the Board to consider the factors noted here:

1. The danger to life and property due to increased flood heights or velocities caused by encroachments.
2. The danger that materials may be swept onto other lands or downstream to the injury of others.
3. The proposed water supply and sanitation systems and the ability of these systems to prevent disease, contamination and unsanitary conditions.
4. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner.
5. The importance of the services provided by the proposed facility to the community.
6. The requirements of the facility for a flood plain location.
7. The availability of alternative locations not subject to flooding for the proposed use.
8. The compatibility of the proposed use with existing development and development anticipated in the foreseeable future.
9. The relationship of the proposed use to the comprehensive plan and flood plain management program for the area.
10. The safety of access to the property in times of flood for ordinary and emergency vehicles.
11. The expected heights, velocity, duration, rate of rise and sediment transport of the flood water expected at the site.
12. Such other factors which are relevant to the purpose of this ordinance.

Many of these factors are those that the City staff has already considered in determining whether to recommend the inclusion of these infrastructure projects in the Land Use Policy Plan, Long-Range Transportation Plan, and the Capital Improvements Plan. Ultimately, the inclusion of the projects in any short- or long-term plan for the City rests with the City Council. Other factors are addressed during the engineering phase of the project. Most factors are beyond the technical scope of the Board to consider.

The City's flood plain zoning regulations have been approved by the Iowa Department of Natural Resources which ensures that the regulations are consistent with the NFIP. Any proposed amendment must also have approval of IDNR. Staff has presented this option to IDNR, which has determined that such an approach is acceptable.

In addition, the Flood Plain Zoning Ordinance makes references to “**registered** professional engineers.” Chapter 542B.1 of the *Code of Iowa* states that “A person shall

not engage in the practice of engineering or land surveying in the state unless the person is a **licensed** professional engineer or a licensed land surveyor.” Staff is proposing amending these references to “licensed professional engineer.” This change would be more reflective of State Code language.

**Recommendation of the Planning & Zoning Commission.** At its meeting of August 3, 2011, with a vote of 4-0, the Planning and Zoning Commission recommended approval of the amendment to correct the references to “registered professional engineer.” This item was seen as a housekeeping amendment.

**With a vote of 3-1, the Commission recommended denial of the amendment to allow public infrastructure in the floodway as a permitted use. Some members of the Commission found value in having the Zoning Board of Adjustment retain the approval process for public infrastructure. Members that voted to deny the proposed amendments voiced concern about narrowing public review of these projects. Others noted that the delay due to Board review would add only three to four weeks to the process. One commissioner noted, though, that these public infrastructure projects have been studied by staff, the IDNR, and the City Council prior to awarding a contract.**

#### **ALTERNATIVES:**

1. The City Council can amend the *Ames Municipal Code* as shown in the attachments to allow public infrastructure in the floodway as a permitted use and to correct the reference to “registered professional engineer.” These two changes are contained in two separate proposed ordinances so the City Council can act on them independently.
2. The City Council can deny either, or both, of the proposed amendments.
3. The City Council can refer the proposed amendments the zoning ordinance back to staff for specific further information or for further options.

#### **RECOMMENDED ACTION:**

The proposed amendment to allow public infrastructure projects as permitted uses in the floodway is a process improvement that continues to ensure that strict scrutiny is applied to these projects to ensure compliance with the demands of the Flood Plain Zoning Regulations. The amendment also streamlines the process by removing redundancy in the review and approval of public infrastructure projects. The City Council will still retain the authority as to whether a particular project is appropriate in a particular location while the review of IDNR and Army Corps of Engineers will ensure that the performance standards are met. Construction in the Floodway is rare and has almost always been due to a City-sponsored project.

While there may be a perception that the public is being denied the opportunity to review and comment on a particular project, the Council should remember that all public infrastructure projects already go through broad public review and comment periods. In the planning phase, the Long range Transportation Plan and the Land Use Policy Plan provide wide opportunities for public review and comment. As items are placed in the City's Capital Improvements Plan, Transportation Improvement Plan, and Program Budget public meetings and hearings are held. And when a construction contract is finally awarded, the City Council holds a public hearing on the plans and specifications. The City retains ample opportunity for public comment.

Therefore, it is the recommendation of the City Manager that the City Council act in accordance with Alternative #1, which is to amend the Ames *Municipal Code* as shown in the attachment to allow public infrastructure in the floodway as a permitted use and to correct the reference to "registered professional engineer."

## ATTACHMENT 1

### 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 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) Industrial-commercial uses such as loading areas, parking areas, airport landing strips. Sup #2009-4 9-3 Rev. 10-1-09

(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.

(d) Residential uses such as lawns, gardens, parking areas and play areas.

(e) Such other open-space uses similar in nature to the above uses.

**(f) 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) Conditional Uses. The following uses which involve structures (temporary or permanent), fill, or storage of materials or equipment may be permitted only upon issuance of a Conditional Use Permit by the Zoning Board of Adjustment as provided for in Sec. 9.7. Such uses must also meet the applicable provisions of the Floodway Overlay District Performance Standards.

(a) Uses or structures accessory to open-space uses.

(b) Circuses, carnivals, and similar transient amusement enterprises.

(c) Drive-in theaters, new and used car lots, roadside stands, signs, and billboards.

(d) Extraction of sand, gravel, and other materials.

(e) Marinas, boat rentals, docks, piers, wharves.

(f) Utility transmission lines, underground pipelines.

(g) Other uses similar in nature to uses described as permitted uses or listed conditional uses, which are consistent with the performance standards of Subsection (3) below and the general spirit and purpose of this ordinance.

In addition, amend the following sections to replace “registered professional engineer” with “licensed professional engineer.”

- Section 9.4(3)(a)
- Section 9.5(2)(c)
- Section 9.5(2)(k)(i)
- Section 9.7(2)(e)
- Section 9.7(3)(e)(i)
- Section 9.7(3)(e)(ii)(b)(5)

**ORDINANCE NO.**

**AN ORDINANCE TO AMEND THE MUNICIPAL CODE OF THE CITY OF AMES, IOWA, BY REPEALING SECTION 9.4(1) AND ENACTING A NEW SECTION 9.4(1)(a)(b)(c)(d)(e)(f) FOR THE PURPOSE OF ALLOWING PUBLIC INFRASTRUCTURE AS A PERMITTED USE IN THE FLOODWAY OVERLAY DISTRICT; 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 repealing Section 9.4(1) and enacting a new Section 9.4(1)(a)(b)(c)(d)(e)(f) as follows:

**“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 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) Industrial-commercial uses such as loading areas, parking areas, airport landing strips.
- (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.
- (d) Residential uses such as lawns, gardens, parking areas and play areas.
- (e) Such other open-space uses similar in nature to the above uses.
- (f) 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. ”

...

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

\_\_\_\_\_  
Ann H. Campbell, Mayor

**ORDINANCE NO.**

**AN ORDINANCE TO AMEND THE MUNICIPAL CODE OF THE CITY OF AMES, IOWA, BY AMENDING SECTION 9.4(3)(a), SECTION 9.5(2)(c)(k)(i), SECTION 9.7(2)(e) AND SECTION 9.7(3)(e)(i)(b)(5) THEREOF, FOR THE PURPOSE OF REPLACING THE REFERENCE OF “REGISTERED PROFESSIONAL ENGINEER” WITH “LICENSED PROFESSIONAL ENGINEER”; 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 amending Section 9.4(3)(a), Section 9.5(2)(c)(k)(i), Section 9.7(2)(e) and Section 9.7(3)(e)(i)(b)(5) as follows:

**“Sec. 9.4. FLOODWAY OVERLAY DISTRICT.**

...

(3) Performance Standards. All Floodway Overlay District uses allowed as a Permitted or Conditional Use shall meet the following standards:

(a) No use 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.

**Sec. 9.5. FLOODWAY FRINGE OVERLAY DISTRICT.**

...

(2) Performance Standards. All uses must be consistent with the need to minimize flood damage and shall meet the following applicable performance standards.

...

(c) Non-residential buildings. All new and substantially improved non-residential buildings 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 (in relation to National Geodetic Vertical Datum NGVD29) to which any structures are floodproofed shall be maintained by the Flood Plain Administrator.

...

(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:



## **Sec. 9.7. ADMINISTRATION.**

...

### **(2) Flood Plain Development Permit.**

...

(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, building 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.**

...

(i) Hearings. Upon the filing with the Zoning Board of Adjustment of a request for a Conditional Use, an Appeal, or a request for a Variance, the Board shall hold a public hearing. The Board shall fix a reasonable time and publish notice of the hearing. At the hearing, any party may appear in person or by agent or attorney and present written or oral evidence. The Board may require the appellant or applicant to provide such information as is reasonably deemed necessary and may request the technical assistance and/or evaluation of a licensed professional engineer or other expert person or agency, including the Department of Natural Resources.

...

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. 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:"

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

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Ann H. Campbell, Mayor