

Staff Report

**APPROACHES TO DEVELOPMENT IN THE FLOOD PLAIN AND
ENVIRONMENTALLY SENSITIVE AREAS**

November 10, 2015

BACKGROUND:

In a response to recent development in the floodway and floodway fringe, on March 10, 2015 the City Council included as part of the work plan of the Planning and Housing Department a task to address potential issues with improvements in the floodway. Specifically, the work plan states:

- Flood Plain and Environmentally Sensitive Overlay Areas: *Add or clarify development standards within the Floodway or natural Riparian Areas for site disturbance and paving (Does not intend to alter the 3-foot fill requirement)*

The City Council had previously considered broad flood plain regulation issues in a work shop in February 2014. The workshop was a follow up from the Ames Flood Study that had looked at flood mitigation strategies for the City. **Staff generated this item for the work plan based on more recent comments and feedback related to intensification of developments that relied upon use of floodway or displacement of natural areas to support development of sites. Some of the issues that were raised from the public and Council were about parking within a floodway, potential for increased runoff from development, and disturbance of riparian areas.** This item was not meant to reconsider the issue of use of development in the floodway fringe or our principal development standard of requiring buildings to be protected to 3 feet above the 100-year base flood elevation.

FLOOD PLAIN ZONING REGULATIONS

The City has adopted flood plain regulations (Chapter 9 of the Ames Municipal Code) to fulfill the requirements of our participation in the National Flood Insurance Program. Chapter 9 describes the purposes of the ordinance as:

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

- (a) Reserve sufficient flood plain area for the conveyance of flood flows so that flood heights and velocities will not be increased by greater than one (1) foot.
- (b) Restrict or prohibit uses which are dangerous to health, safety or property in times of flood or which cause excessive increases in flood heights or velocities.
- (c) Require that uses vulnerable to floods, including public utilities which serve such uses, be protected against flood damage at the time of initial construction or substantial improvement.

- (d) Protect individuals from buying lands which are unsuited for intended purposes because of flood hazard.
- (e) Assure that eligibility to purchase flood insurance through the National Flood Insurance Program is maintained for property owners in the community.

To meet these purposes the City has adopted the standards required by the Iowa Department of Natural Resources as well as a few regulations unique to Ames, such as the standard that new development be protected to 3 feet above the water surface level of a 100-year flood event (aka, BFE+3). Chapter 9 also describes what uses are allowed within the floodway and the floodway fringe and the process for receiving flood plain development permits. (Attachments 3 through 6 illustrate the floodplains and floodways of the city)

Chapter 9 allows all types of development in the Floodway Fringe subject to compliance with the underlying zoning regulations and with the appropriate flood development standards. **In the Floodway, though, development is limited to open space uses, such as parking lots, golf courses, gardens, and sod farming.** It should also be noted that the City has a number of parking areas associated with parks that are in the floodway, such as some of the parking at Brookside Park. **There are also a limited number of conditional uses that are allowed in the floodway, such as utilities, car lots, accessory structures for open space uses, boat marinas, billboards.**

ENVIRONMENTALLY SENSITIVE AREA ZONING OVERLAY

The City also has adopted a Zoning Ordinance (Chapter 29) whose purpose is to promote health, safety, and general welfare in a broader sense than Chapter 9. The Zoning Ordinance includes specific base zones for allowed uses and development standards that govern all aspects of the use of a property that is not controlled by Chapter 9. In addition to base zones, the City also at times applies Overlay Zones to address issues that are broader than one zoning district or affect a subset of properties within a base zoning district. In regards to riparian and flood plain issues, the City has an “Environmentally Sensitive Area Overlay (Section 29.1103).” Its purpose is quoted below and the full text is found in Attachment 1.

The Environmentally Sensitive Overlay (O-E) Zone is intended to supplement the City's flood plain regulations and to protect designated natural resource areas by using the natural resources inventory to identify and preserve natural resources and by establishing parks and open space areas. Greenways are included in this district for stream corridors, linear parks, and open spaces adjacent to environmentally sensitive areas to create a continuous system throughout the City.

The O-E overlay zone has never been mapped to specific properties within the City. The ordinance allows such overlays to be mapped based on a scientific study that concludes the area is “especially sensitive to adverse public impact from development due to unique environmental concerns.” The ordinance suggests that flood plains, designated natural resource areas, parks and open spaces, greenways, and areas adjacent to aquifers are eligible based on existing scientific evidence (FEMA Flood Insurance Study, Norris Study of 1994, etc.). Other areas may be so designated by the City Council based on other scientific studies done by the City or by other parties.

The O-E does not contain specific regulatory requirements, such as use limitations. It requires the applicant to prepare an Environmental Assessment Report on how the development will “address, obviate, or mitigate” the environmental issues which led to the designation. **The major**

regulatory tool within the O-E is the requirement for a City Council approval of a major site development plan for any development within the overlay district.

POST CONSTRUCTION STORMWATER MANAGEMENT

The City also has a natural area (riparian area) assessment requirement as part of its stormwater management requirements in Chapter 5B. The intent of assessing resources prior to development is an attempt to potentially preserve desirable natural areas and plan for incorporating their existing benefits into the development of the site and preserve water quality. The most significant protection standard is a general requirement for a 100-foot riparian area setback. Chapter 5B applies to development with 10,000 square feet of new impervious surfaces and ground disturbance activities exceeding 1 acre. Approval of a plan or a waiver from the standards is the purview of the Municipal Engineer.

OPTIONS

Some developments rely upon use of the Floodway to maximize the buildable area within the Floodway Fringe. Locating parking lots or stormwater detention ponds in the floodway are the two most common development activities that staff sees proposed in the floodway. Issues of this type could be addressed with text amendments to Flood Plain Regulations (Chapter 9) or Zoning standards (Chapter 29).

Option 1. Prohibit Development Activities In The Floodway Under Chapter 9

Chapter 9 allows parking lots and impervious surfaces as accessory uses within the Floodway. If impervious surfaces are prohibited from the Floodway, the Floodway could be used to meet landscaping or open space requirements of a base zoning district. If this option is selected, areas in the Floodway that have been used for parking would remain, but new parking lots would be prohibited. **Council would select this option if it believed that no disturbance of a Floodway is warranted to support development in the Floodway Fringe.**

Option 2. Conditionally Permit Development Activities In the Floodway Under Chapter 9

The City Council can direct staff to propose amendments to the flood plain regulations of Chapter 9 that would allow parking lots and impervious surfaces only as a conditional use rather than as a permitted use in the Floodway. The Zoning Board of Adjustment is the approval authority for Conditional Uses within the Floodway. The Board would review an application for a conditional use permit and consider a number of factors relating to impacts on life and property, susceptibility to flood damage, alternative design and location, safety, and impacts on flood velocities and heights. The factors upon which approval of a conditional use permit would be based are found in Attachment 2.

Under this option, the Board could place any conditions needed to mitigate the impact of such development. **The intent of requiring a conditional use permit process would be Council's belief that a case-by-case evaluation is necessary to assure such improvements are consistent with the expectations of the ordinance or individual circumstances would make allowing the improvements permissible when they would not typically be acceptable.**

Option 3. Zone Properties Within The Floodway As Environmentally Sensitive Area Overlay (Chapter 29)

The City Council can direct staff to rezone all properties that include the Floodway with the Environmentally Sensitive Overlay. The underlying base zoning district would not be

changed with this option, but the additional requirements of the overlay would apply. Such an overlay zoning designation would require developers to describe how they will “address, obviate, or mitigate” flood hazards through a major site development plan. The approval process would be a Major Site Development plan that requires a recommendation from the Planning and Zoning Commission and a final decision by the City Council.

This approach would require a developer to identify measures to reduce the expected increase in runoff from an impervious surface in the Floodway. Like the conditional use permit described above, this approach would not entirely prohibit parking lots in the Floodway but instead would require the project to demonstrate how its impacts will be mitigated. The City Council could impose conditions on any approval to mitigate any possible negative effects. Denial of such a request for a parking lot improvement would need to be based upon a determination that the design of the parking lot does not meet the criteria of a site development plan. Criteria 1 relates to stormwater runoff and criteria 5 relates to incorporating natural features into a project design. (Site Plan Criteria are Attachment 7) **Council would select this option if they want to allow for a case-by-case review of projects as a Major Site Development Plan and also require applicants to submit environmental assessments as part of the review process.**

STAFF COMMENTS:

The options above would tend to limit, if not outright prohibit, creation of additional impervious surfaces in the Floodway. The applicability of any of these changes would impact only those developments in which a portion of the property lies within the designated Floodway. While a number of commercial properties along S. Duff Avenue or SE 16th Street are in the Floodway Fringe and have the Floodway cross their properties, there are other areas of the City that also contain developable areas within a portion of the Floodway. For example, the City recently approved an apartment complex on S 4th Street in which a parking lot for 322 cars is located within the Floodway. Maps in Attachment 3 through 6 show various areas of the City that contain developable land within the Floodway.

If the Council believes further limiting improvements within the Floodway to reduce disturbances in the Floodway is needed, choosing Option 1 would accomplish this goal. Option 1 would amend Chapter 9 to restrict improvements, such as parking lots, within the Floodway. Option 1 does not affect use of a property within the Floodway Fringe. Staff would return with a text amendment and no specific outreach would be expected by staff for this approach.

If Council was concerned about the general use or site specific features of a site, it may wish to add a discretionary review process to improvements proposed in the Floodway. Council could decide to address Floodway concerns with Option 2 that consists of a case-by-case review of a conditional use permit by the ZBA under the factors described in Chapter 9 or it could pursue Option 3 that would establish City Council as the approval authority for projects with impacts to the Floodway. Option 2 would require a text amendment establishing the conditional use permit process for the ZBA. The conditional use permit would not necessarily restrict use of the floodway, but a determination of consistency with Chapter 9 purposes and standards would be required before work could be done.

Option 3 would be involve rezoning of property to add the O-E Overlay. The Overlay would not necessarily restrict use of the entire property, especially in the Floodway Fringe, but require a public hearing based approval process. The strength of this approach is that the burden is on the applicant to demonstrate to the City Council that they have designed the project to address

any negative impacts associated with the development. If Council chose this option for mapping the O-E, staff would notify all properties with the floodway of a pending zoning change and the public hearings for adopting the new Zoning Map Overlay for the O-E. There are approximately 460 properties within the City, including government owned lands (City, Iowa State University, State of Iowa), that intersect with the floodway.

If the City Council supports a change in our current regulations to either limit or prohibit additional impervious surfaces in the Floodway, direction is needed as to which option should be pursued by the staff.

ATTACHMENT 1: FULL TEXT OF SECTION 29.1103

Sec. 29.1103. "O-E" ENVIRONMENTALLY SENSITIVE AREA OVERLAY.

(1) **Purpose.** The Environmentally Sensitive Overlay (O-E) Zone is intended to supplement the City's flood plain regulations and to protect designated natural resource areas by using the natural resources inventory to identify and preserve natural resources and by establishing parks and open space areas. Greenways are included in this district for stream corridors, linear parks and open spaces adjacent to environmentally sensitive areas to create a continuous system throughout the City.

(2) **Designation of Environmentally Sensitive Areas.** Any area may be designated an O-E Zone by ordinance of City Council, after the advice and recommendation of the Planning and Zoning Commission, if the results of a scientific study of the area support the conclusion that the area so designated is especially sensitive to adverse public impact from development due to unique environmental circumstances. Examples of such areas that may be designated as an O-E zone are:

- (a) Flood Plain Areas. Those areas defined in Chapter 9 of the Municipal Code;
- (b) Designated Natural Resource Areas. Those areas defined in "A Natural Areas Inventory of Ames" (July 18, 1994);
- (c) Park and Open Space Areas. Those areas defined in the City's Parks and Recreation Master Plan of the Municipal Code;
- (d) Green-ways. Those areas as may be defined as Green-ways by the City Council; and
- (e) Aquifer Protection Areas. Those areas as may be defined as Aquifer Protection Areas as defined by the City Council.

(3) **Studies.** The Department of Planning and Housing and the Planning and Zoning Commission are authorized to conduct studies in order to evaluate areas for environmental sensitivity as part of the continuing process of maintaining a current comprehensive land use plan for the City. Additionally, studies done by or for other governmental or private parties may be adopted for the purposes of this section.

(4) **Procedures.** No Building/Zoning Permit shall be issued and no grading, excavation, construction or change in use shall occur in an area designated as an O-E Zone except in accordance with the procedures set forth in Section 29.1503(4), "Major Site Development Plan Review". In addition, the applicant shall prepare and submit an Environmental Assessment Report which shall detail how the problems identified in the study on which the O-E Zone designation was based will be addressed, obviated or mitigated. City Council shall not approve the Major Site Development Plan unless it has reviewed and approved the Environmental Assessment Report.

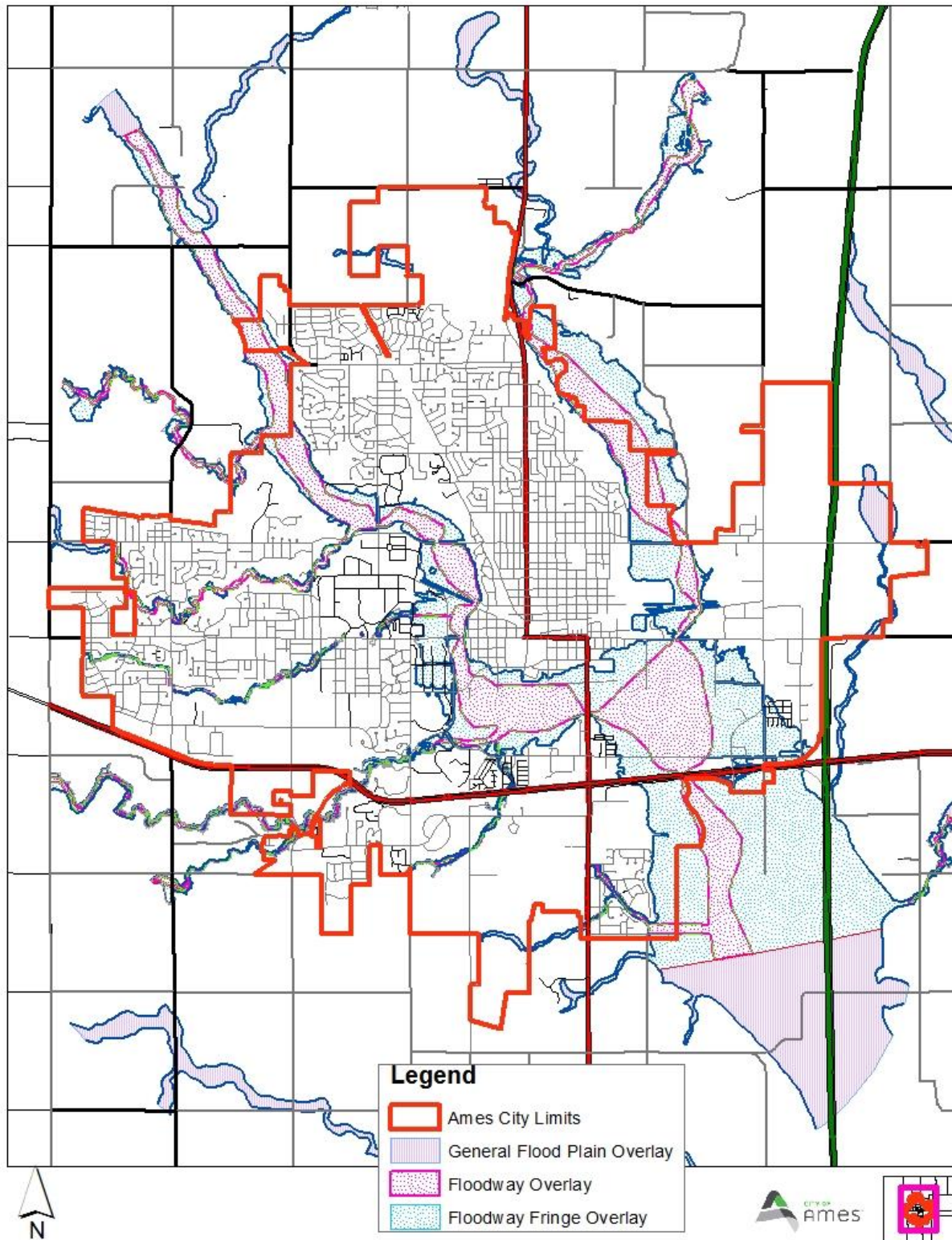
(5) **Enforcement.** Development or other activities in conflict with the Major Site Development Plan, or a failure to implement the Plan, including the measures set out in the Environmental Assessment Report shall constitute the violation of this section for which any and all enforcement means and remedies established by law or zoning regulations may be invoked and instituted.

ATTACHMENT 2: FULL TEXT OF SECTION 9.7 (3) (E) (II) (A)

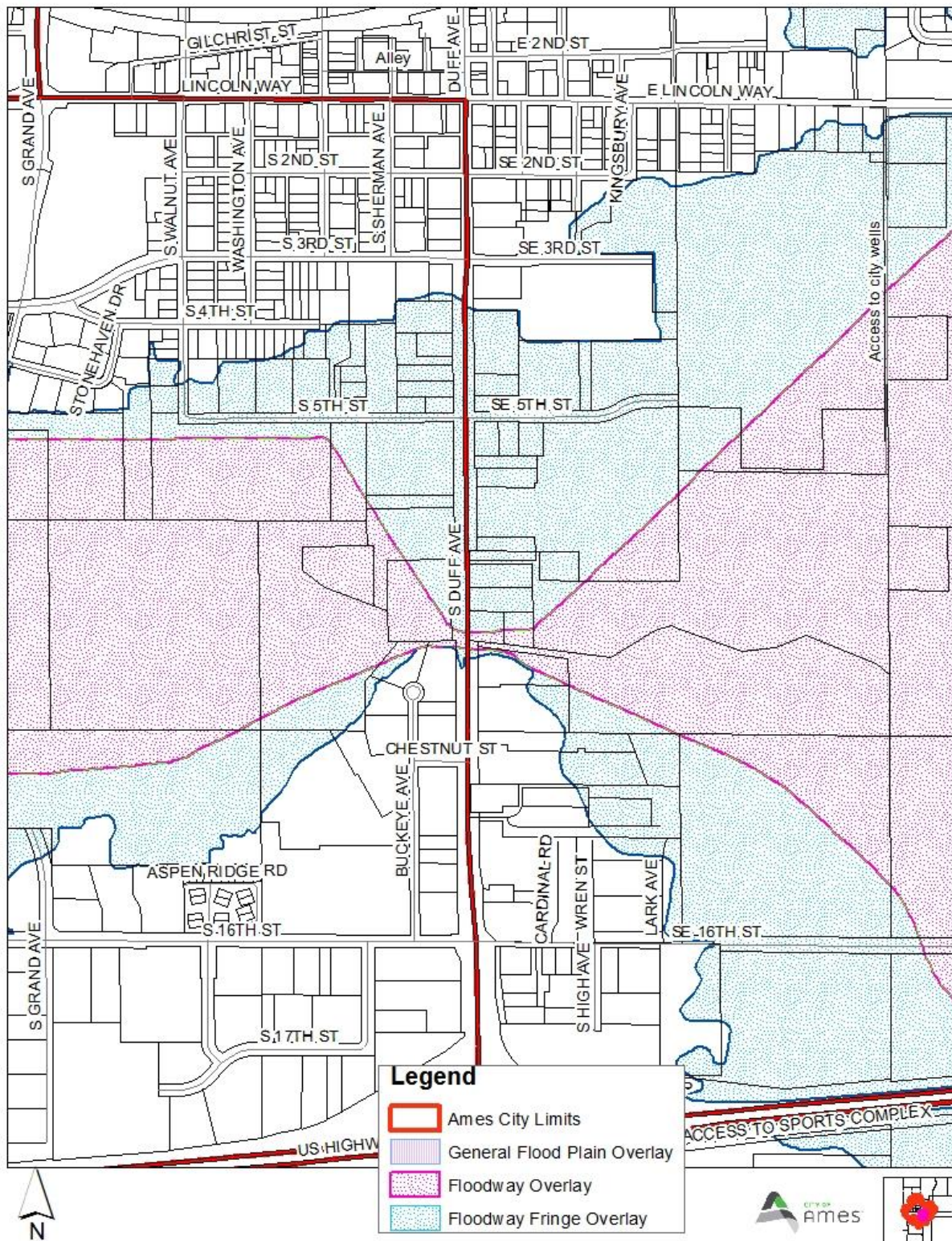
a. Factors Upon Which the Decision of the Board Shall be Based. In passing upon requests for Conditional Uses or Variances, the Zoning Board shall consider all relevant factors specified in other sections of this ordinance and:

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.

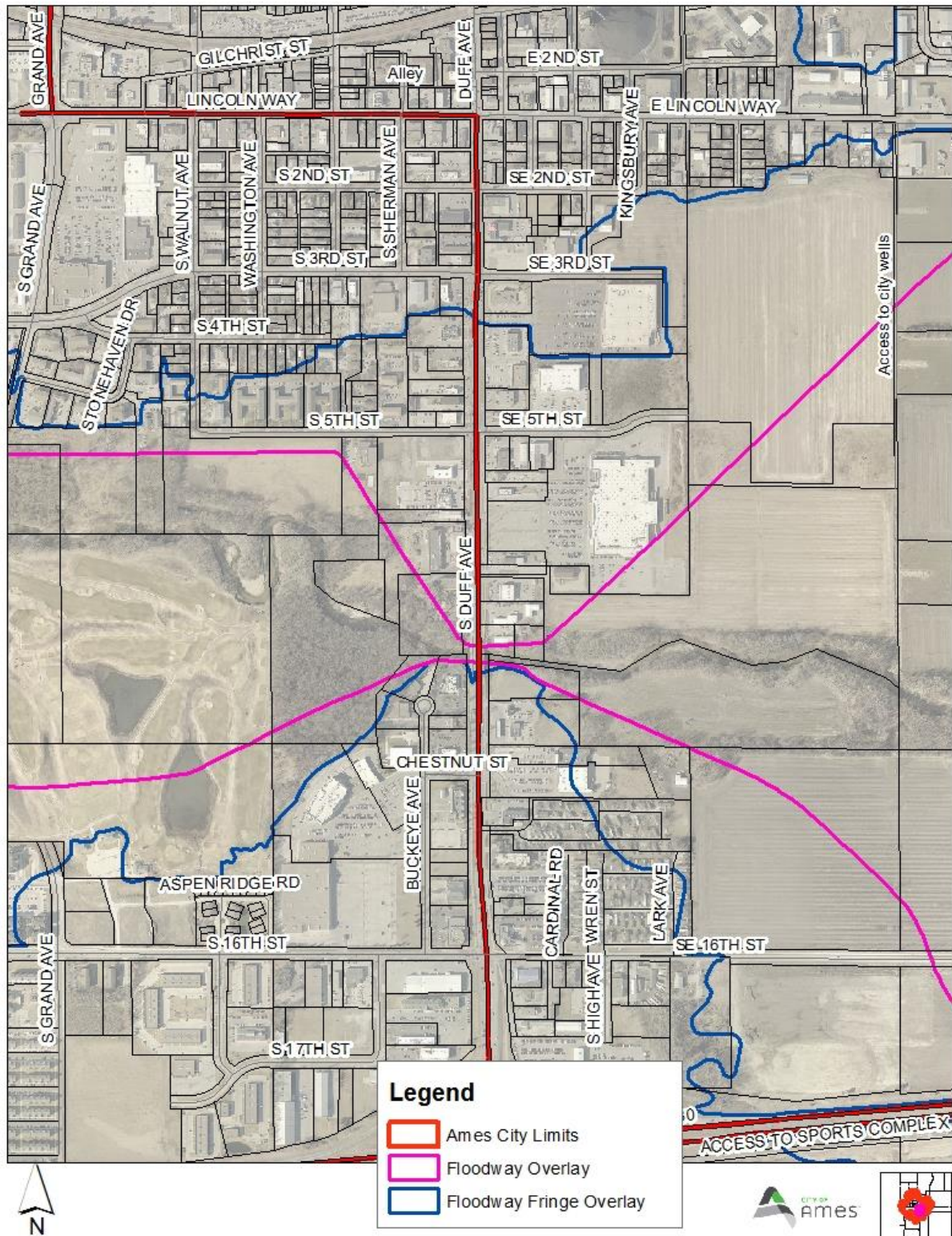
ATTACHMENT 3: FULL CITY FLOOD PLAIN MAP



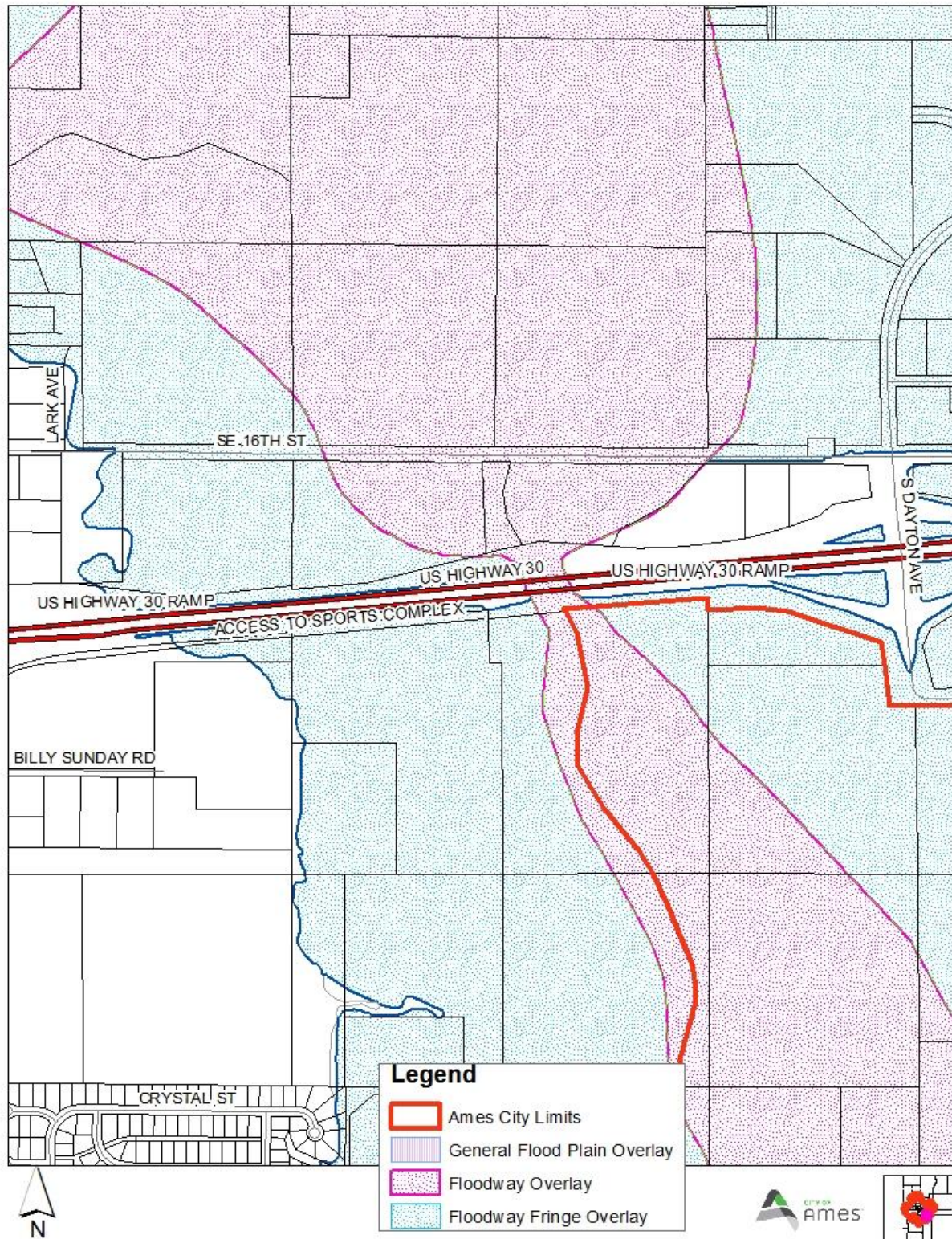
ATTACHMENT 4: SOUTH DUFF AVENUE FLOOD PLAIN MAP



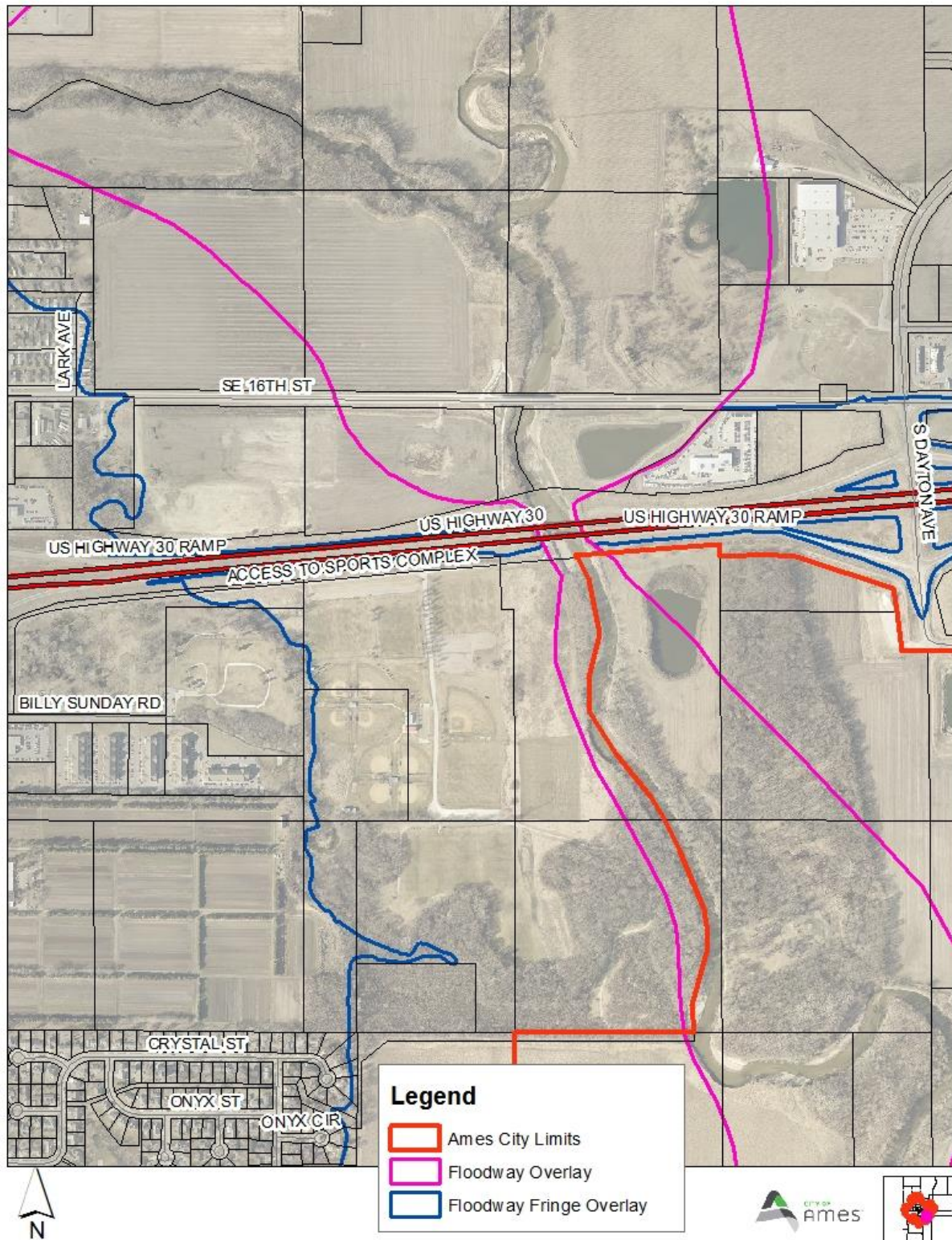
ATTACHMENT 4A: SOUTH DUFF AVENUE FLOOD PLAIN MAP W/ AERIAL



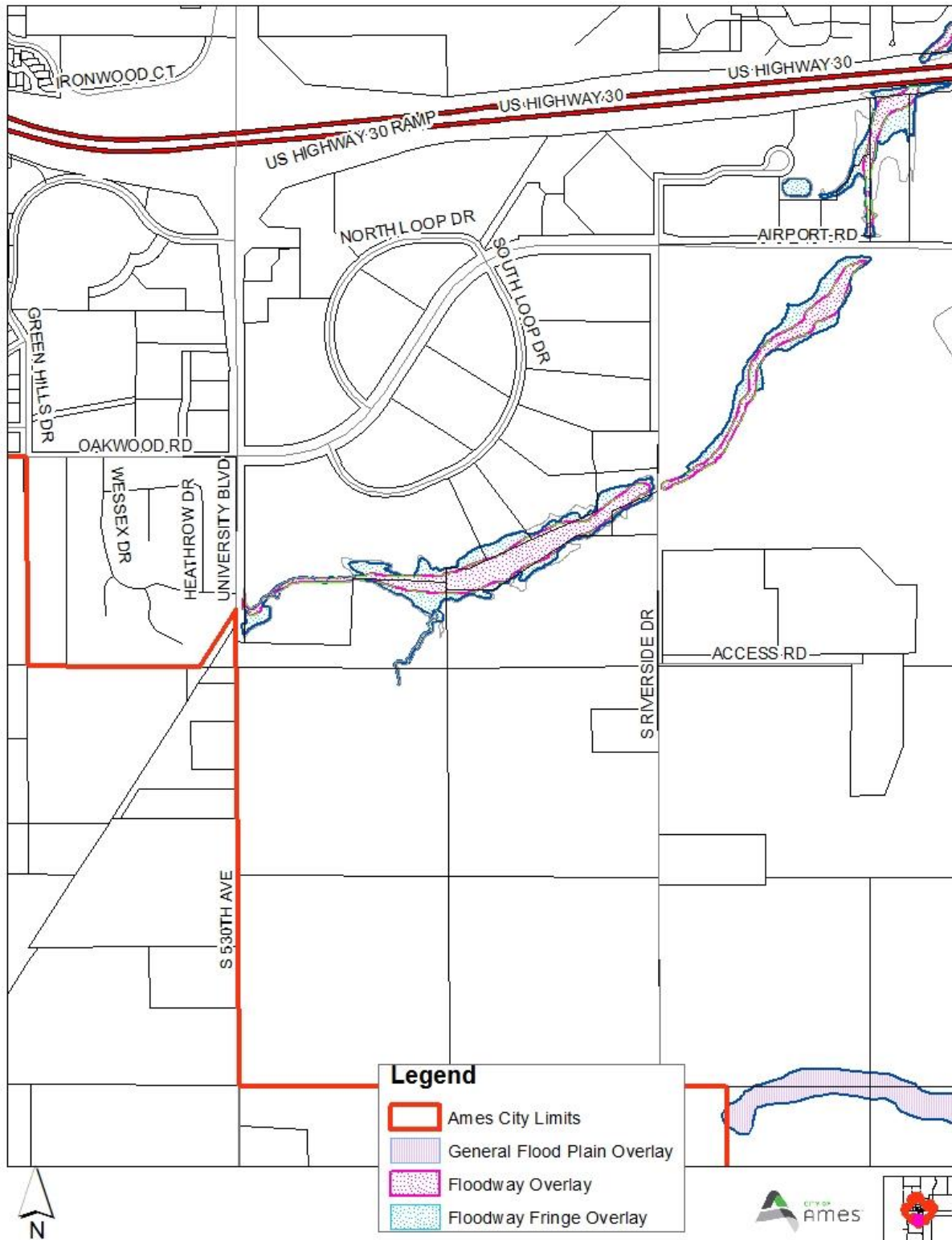
ATTACHMENT 5: SE 16TH STREET FLOOD PLAIN MAP



ATTACHMENT 5A: SE 16TH STREET FLOOD PLAIN MAP W/ AERIAL



ATTACHMENT 6: ISU RESEARCH PARK FLOOD PLAIN MAP



ATTACHMENT 6: MAJOR SITE DEVELOPMENT PLAN CRITERIA

(vii) City Council Decision. After the transmittal of the recommendation from the Planning and Zoning Commission, the City Council shall consider the application at a public hearing conducted as part of a regularly scheduled meeting. Notification of the public hearing shall be made by mail and posting, in accordance with Sections 29.1500(2)(d)(i) and (iii) above. The City Council must approve, deny or modify the Major Site Development Plan approval application within 60 days of the public hearing.

(d) Design Standards. When acting upon an application for a major site plan approval, the City Council shall rely upon generally accepted site planning criteria and design standards. These criteria and standards are necessary to fulfill the intent of the Zoning Ordinance, the Land Use Policy Plan, and are the minimum necessary to safeguard the public health, safety, aesthetics, and general welfare. These criteria and standards include:

(i) The design of the proposed development shall make adequate provisions for surface and subsurface drainage to limit the rate of increased runoff of surface water to adjacent and down stream property;

(ii) The design of the proposed development shall make adequate provision for connection to water, sanitary sewer, electrical and other utility lines within the capacity limits of those utility lines;

(iii) The design of the proposed development shall make adequate provision for fire protection through building placement, acceptable location of flammable materials, and other measures to ensure fire safety;

(iv) The design of the proposed development shall not increase the danger of erosion, flooding, landslide, or other endangerment to adjoining and surrounding property;

(v) Natural topographic and landscape features of the site shall be incorporated into the development design;

(vi) The design of interior vehicle and pedestrian circulation shall provide for convenient flow of vehicles and movement of pedestrians and shall prevent hazards to adjacent streets or property;

(vii) The design of outdoor parking areas, storage yards, trash and dumpster areas, and other exterior features shall be adequately landscaped or screened to minimize potential nuisance and impairment to the use of adjoining property;

(viii) The proposed development shall limit entrances and exits upon adjacent streets in order to prevent congestion on adjacent and surrounding streets and in order to provide for safe and orderly vehicle movement;

(ix) Exterior lighting shall relate to the scale and location of the development in order to maintain adequate security, while preventing a nuisance or hardship to adjacent property or streets;

(x) The proposed development shall ensure that dust and other forms of air pollution, noise disturbances, odor, glare, and other nuisances will be limited to acceptable levels as prescribed in other applicable State and City regulations; and

(xi) Site coverage, building scale, setbacks, and open spaces shall be in proportion with the development property and with existing and planned development and structures, in adjacent and surrounding property.