

**COUNCIL ACTION FORM**

**SUBJECT: ZONING TEXT AMENDMENT REGARDING OBSTRUCTIONS AROUND AIRPORT**

**BACKGROUND:**

Planning staff was previously directed by Council to work on development of options for protecting the continued viability of the Municipal Airport in its current location. In response to this directive, a workshop was held on April 24, 2012 regarding the issue of airport protection against obstructions and incompatible uses. The presentation by a consultant, Mead Hunt, described the full range of protection techniques employed in varying jurisdictions across the country. Council provided comments to go forward with a limited approach to 3 miles around the airport for master planning efforts involving land use changes and for coordination with the county.

**The proposed text amendment addresses an immediate need within Ames to clarify existing and augment the review of potential obstructions to airport approaches in support of modernization of the airport.** Obstructions are generally features that impair vision of a pilot and include controls for tall buildings, vegetation, open water, and wildlife concentration. The proposed amendment does not address general land use compatibility around the airport that would be part of a broader master plan effort.

The Federal Aviation Administration (FAA) does not directly regulate airport obstructions of uses or buildings. The FAA assesses the condition of operations of an airport, and if obstructions impact the airport operations, it then limits the airport's use, rather than the use of the adjoining properties. It is incumbent upon a local jurisdiction to control surrounding obstructions to support the operation of an airport. Typically this protection is accomplished through zoning controls, which restrict building heights and certain land uses in key areas, such as areas in direct alignment with runways. Currently, the only protective regulation in the Municipal Code requires building height compliance with FAA restrictions within only 750 feet of airport property. (See Attachment A) Chapter 329 of the Code of Iowa allows cities to implement controls of obstructions to airport operations beyond those currently employed by the City of Ames.

Previous research was conducted looking at Dubuque, Sioux City, Ankeny, and Council Bluffs to determine their airport protection policies. That research showed that many cities with airport protection ordinances regulated land uses around their airports. This information came from a Department of Transportation (DOT) database. Most ordinances included only generalized statements about prohibiting uses that cause glare to a pilot's visibility or create electromagnetic interference. Of the cities researched, only the Council Bluffs ordinance truly regulated specific land uses. In that case, the restrictions were only in the Runway Protection Zone (RPZ), also known as Zone A in modern ordinances. (See Attachment B)

The RPZ is the trapezoidal area immediately beyond the runway itself, but not as long as the Approach Surface to the airport. Controlling uses and building height as obstructions is most critical in this area. Fortunately, the City of Ames controls nearly all of its RPZ area either by ownership or easement. However, the City only controls some of the approach surface due to its large size. It is within the approach area that properties have the most potential to violate the height restrictions of the established FAA airport airspace zones (FAR Part 77 Imaginary Surfaces). (See Attachment B, Land Use Plan of Airport Property, an excerpt from the 2008 Ames Municipal Airport Master Plan, showing actual RPZ's.)

FAR Part 77 identifies a plane of imaginary surfaces above an airport and within the approach path of the runways that creates a clear zone for safety of air traffic in and out of the airport. The size and location of each imaginary surface is based on the category of each runway according to the type of instrument approach available or planned for that runway. The height restriction is then calculated in relation to the ground elevation, airplane approach, and distance from the airport runway.

The proposed text amendment is in response to a desire to apply for a General Aviation Vertical Infrastructure (GAVI) Program grant through the Iowa Department of Transportation's Office of Aviation. Publicly owned general aviation airport sponsors may apply for GAVI projects that include such uses as landside development and renovation of airport terminals, hangars, maintenance buildings, and fuel facilities. As a requirement of the grant approval, the City is required to have in place an ordinance that addresses obstructions such as uses and heights within the airspace zones of the airport.

Based on the FAA's regulations for imaginary airspace surfaces, which is described in FAR Part 77 of the FAA guidance on airspace protection and which sets the airspace zones based on the type and size of the airport runway, staff has found that only approximately 20 properties could potentially exceed the airspace zone height restrictions based on the underlying zoning district height allowances. (See Attachment C) With the small number of properties affected by the clear zones, staff did not feel that an overlay district was needed for regulations. Staff determined that obstruction regulations incorporated into the zoning code could address height and use restrictions needed to protect the airport viability, as well as to meet the needs of the airport for future grant applications.

At this time staff is not proposing specific use limitations for the Runway Protection Zone, due primarily to the limited extent of the RPZ. An overlay zone could be created to specifically limit the types of uses where concentrations of people may occur, such as in shopping centers, churches, etc. Such an overlay would go beyond the general height limitations and obligation to maintain properties free of obstructions that are recommended by staff.

## **CURRENT CODES:**

The following sections of the City's zoning ordinance contain provisions applicable to airports:

### General Development Standards:

Section 29.408(6) Height Near Airports.

Heights of buildings constructed within 750 feet of the property boundary of any airport shall be in compliance with height restrictions from the Federal Aviation Administration.

### Wireless Communication Facilities:

Section 29.1307(7)(l) Air Safety.

Support structures 200 feet in height or taller, or those near airports, shall meet all Federal Aviation Administration regulations.

### Wind Energy Systems (WES):

Section 29.1310(28)(b):

No Small WES shall be constructed, altered, or maintained so as to project above any of the imaginary airspace surfaces described in FAR Part 77 of the FAA guidance on airspace protection.

## **PROPOSED AMENDMENTS:**

The following sections describe proposed amendments to the Zoning Code to further the intent of limiting obstructions in the approach zones and RPZ. New language is underlined and deleted language is in strike-out format. A draft ordinance is also included with this report for reference (See Attachment D).

### Add to Article 2, Definitions (Section 29.201):

RUNWAY PROTECTION ZONE (RPZ) - Runway protection zone is a trapezoidal area "off the end of the runway threshold established to enhance the protection of people and property on the ground" in the event an aircraft lands or crashes beyond the runway end. Runway Protection Zones underlie a portion of the approach closest to the airport.

### Add to Article 4, General Development Standards (Section 29.408(6)):

~~Height Near Airports.~~ **Airport Obstruction Regulations:**

~~Heights of buildings constructed within 750 feet of the property boundary of any airport shall be in compliance with height restrictions from the Federal Aviation Administration.~~

#### (a) Height Limitations:

Except as otherwise provided in this section, no structure shall be erected, altered, or maintained, and no tree or vegetation shall be allowed to grow in any airport airspace zone (FAA Part 77 Imaginary Surfaces) described in the Ames Municipal Airport Master Plan to a height in excess of the applicable height limit therein established for such zones.

(b) Site Improvements Limitations:

Notwithstanding any other provisions of this Ordinance, no use may be made of land or water within any airport airspace zone in such a manner as to create electrical interference with navigational signals or radio communication between the airport and aircraft, make it difficult for pilots to distinguish between airport lights and others, result in glare in the eyes of pilots using the airport, impair visibility in the vicinity of the airport, create bird strike hazards, or otherwise in any way endanger or interfere with the landing, takeoff, or maneuvering of aircraft intending to use the airport.

Add to Article 13, Wireless Communication Facilities (Section 29.1307(7)(c)):

Antenna Height.

The applicant shall demonstrate, to the reasonable satisfaction of the Zoning Board of Adjustment, that the antenna is the minimum height required to function satisfactorily. ~~No antenna that is taller than this minimum height shall be approved.~~ No antenna or antenna support structure shall be constructed, altered, or maintained so as to project above any of the imaginary airspace surfaces described in FAR Part 77 of the FAA guidance on airspace protection.

**Planning and Zoning Commission Recommendation**

The Planning and Zoning commission held a public hearing on this proposed text amendment on May 7, 2014, and voted 5-0 in support of the amendment with discussion about effects on use of properties near the airport and how the FAA does not restrict use directly, but instead controls how an airport may operate.

**ALTERNATIVES:**

1. The City Council can adopt the zoning text amendment and approve the specified revisions to Article 2, Article 4, and Article 13 of the Zoning Code in order to establish obstruction restrictions for land within the FAA airport imaginary surfaces airspace zones as described in the Ames Municipal Airport Master Plan.
2. The City Council can deny the proposed text amendment.
3. The City Council can refer this issue back to staff for further information.

**MANAGER'S RECOMMENDATION:**

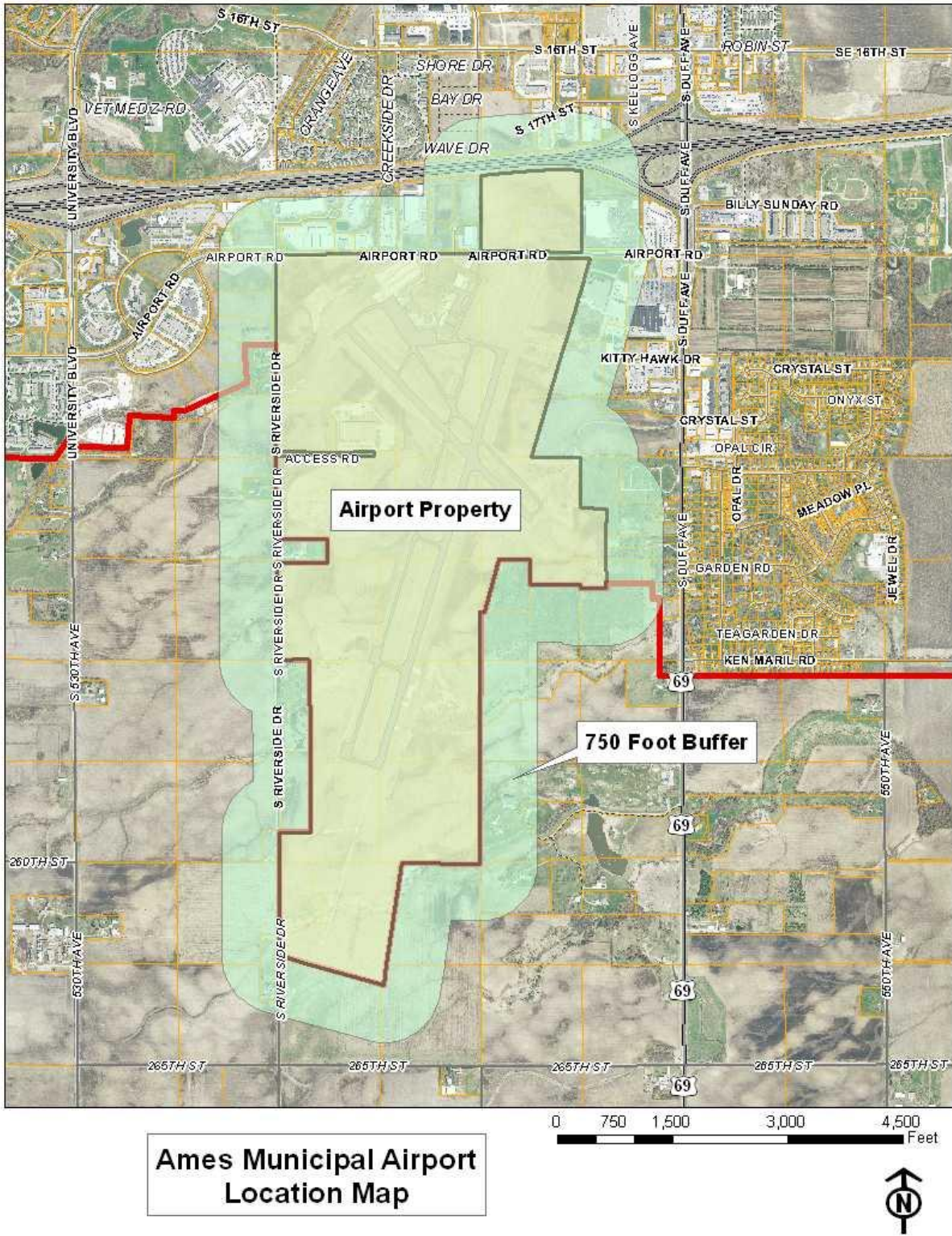
Staff currently administers the airport restrictions through site plan review to the extent practicable, based on a height limit of buildings within 750 feet of the property line of the airport. However, this practice is not consistent with DOT requirements to have explicit ordinances addressing issues of obstructions. Staff believes that the proposed amendments are a reasonable revision to the Zoning Code to address the concern over obstructions within the airport airspace clear zones and to meet DOT grant requirements.

The height limitations will be consistent with current practice and do allow for reasonable use of the property within the approach zones to the runways. The general site improvement use limitations will eliminate the most general obstructions to the RPZ.

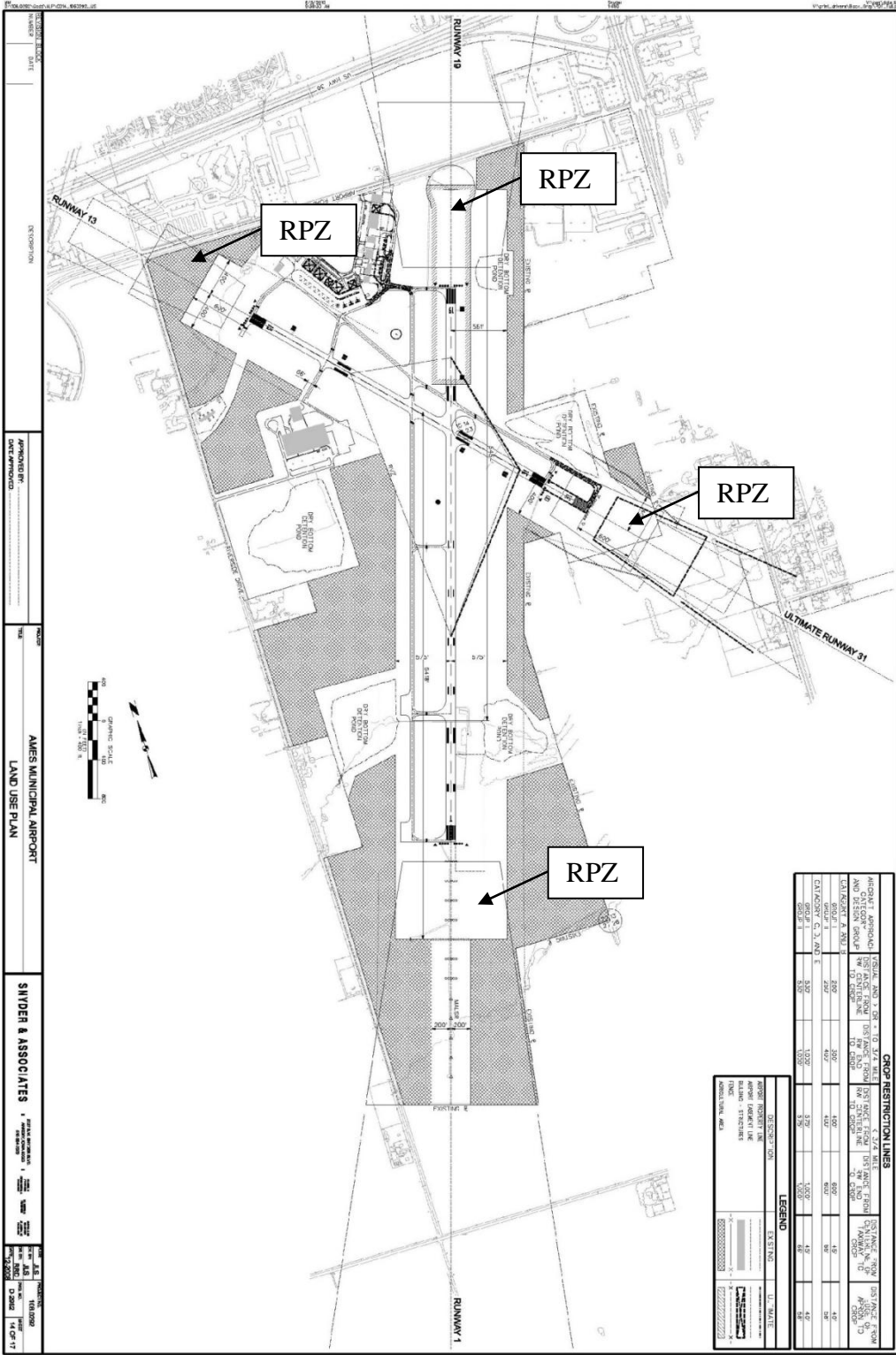
It will allow for use of the property consistent with the zoning with no direct limitations on uses. Final site design and arrangement of uses on a site will still be subject to minor site plan approvals.

Therefore, it is the recommendation of the City Manager that the Council adopt Alternative #1, thereby approving the zoning text amendment to Article 2, Article 4, and Article 13 of the Zoning Code in order to establish use and height restrictions for land within the FAA airport imaginary surfaces airspace zones as described in the Ames Municipal Airport Master Plan.

# Attachment A Airport Property



# Attachment B Land Use Plan of Airport Property

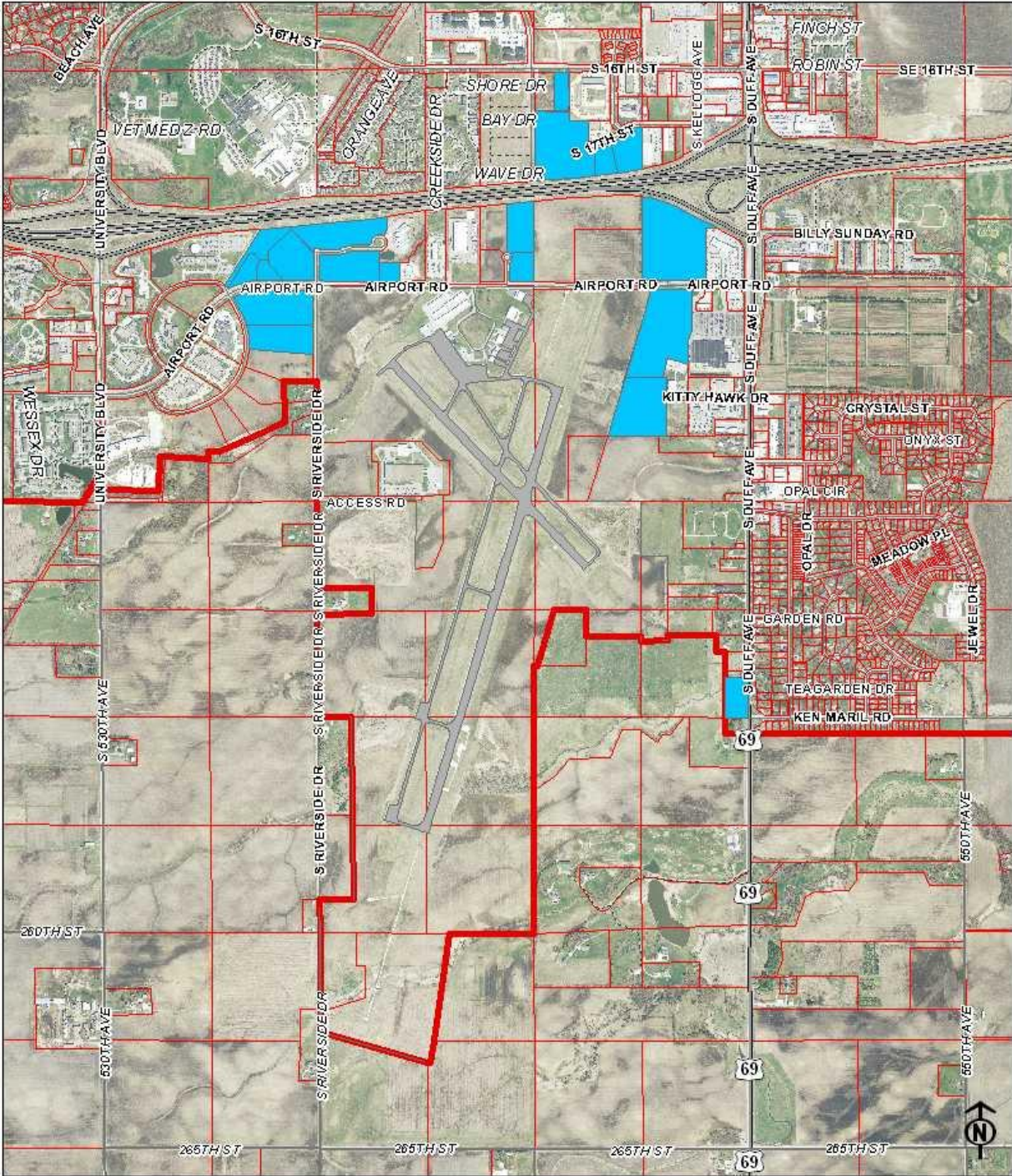


GROUP	DESCRIPTION	APPROXIMATE AREA (SQ. FT.)	APPROXIMATE AREA (ACRES)
GROUP 1	RESTRICTED PARKING ZONE	200	0.0046
GROUP 2	RESTRICTED PARKING ZONE	200	0.0046
GROUP 3	RESTRICTED PARKING ZONE	200	0.0046
GROUP 4	RESTRICTED PARKING ZONE	200	0.0046

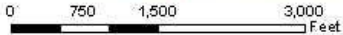
  

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**Attachment C**  
**Properties with Potential to Impact Airspace Based on Zoning Standards**



**Properties with Potential to Impact Airspace Restrictions Based on Height**







**ORDINANCE NO.**

**AN ORDINANCE TO AMEND THE MUNICIPAL CODE OF THE CITY OF AMES, IOWA, BY REPEALING CHAPTER 29 SECTION 29.201(184) AND ENACTING NEW SECTIONS 29.184(A) AND 29.184(B), REPEALING CHAPTER 29 SECTION 408(6) AND ENACTING A NEW CHAPTER 29 SECTION 408(6)(A)&(B) AND REPEALING CHAPTER 29 SECTION 1307(7)(C) AND ENACTING A NEW CHAPTER 29 SECTION 29.1307(7)(C) THEREOF, FOR THE PURPOSE OF ESTABLISHING DEFINITIONS AND USE AND HEIGHT RESTRICTIONS FOR LAND WITHIN THE FAA AIRPORT IMAGINARY SURFACES AIRSPACE ZONES AS DESCRIBED IN THE AMES MUNICIPAL AIRPORT MASTER PLAN; REPEALING ANY AND ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT TO THE EXTENT OF SUCH CONFLICT; 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 as follows:

**“Sec. 29.201. DEFINITIONS.**

\* \* \*

(184A) **RUNWAY PROTECTION ZONE (RPZ)** - Runway protection zone is a trapezoidal area “off the end of the runway threshold established to enhance the protection of people and property on the ground” in the event an aircraft lands or crashes beyond the runway end. Runway Protection Zones underlie a portion of the approach closest to the airport.

(184B) **SALVAGE YARD** means any open area on any parcel of land used for dismantling, storing, abandonment or keeping of junk or machinery, or the dismantling or abandonment of motor vehicles, other vehicles or parts thereof. “Salvage Yard” shall not include any vehicular storage areas.

\* \* \*

**Sec. 29.408. OTHER GENERAL DEVELOPMENT STANDARDS.**

\* \* \*

**(6) Airport Obstruction Regulations:**

(a) **Height Limitations:** Except as otherwise provided in this section, no structure shall be erected, altered, or maintained, and no tree or vegetation shall be allowed to grow in any airport airspace zone (FFA Part 77 Imaginary Surfaces) described in the Ames Municipal Airport Master Plan to a height in excess of the applicable height limit therein established for such zones.

(b) **Site Improvements Limitations:** Notwithstanding any other provisions of this Ordinance, no use may be made of land or water within any airport airspace zone in such a manner as to create electrical interference with navigational signals or radio communication between the airport and aircraft, make it difficult for pilots to distinguish between airport lights and others, result in glare in the eyes of pilots using the airport, impair visibility in the vicinity of the airport, create bird strike hazards, or otherwise in any way endanger or interfere with the landing, takeoff, or maneuvering of aircraft intending to use the airport.

\* \* \*

**Sec. 29.1307. WIRELESS COMMUNICATIONS FACILITIES**

\* \* \*

(7) **Standards for Special Use Permit.** The following standards and procedures, in addition to those contained in Section 29.1503, shall apply to the issuance of a Special Use Permit for a cell site with antenna:

\* \* \*

(c) **Antenna Height.** The applicant shall demonstrate, to the reasonable satisfaction of the Zoning Board of Adjustment, that the antenna is the minimum height required to function satisfactorily. No antenna or antenna support structure shall be constructed, altered, or maintained so as to project above any of the imaginary airspace surfaces described in FAR Part 77 of the FAA guidance on airspace protection.”

\* \* \*

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

Section Three. 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