Chapter 15
AIRPORT HEIGHT REGULATIONS

9-15-1: PURPOSE AND TITLE:

This chapter shall be known and cited as the *NORTHWEST IOWA REGIONAL AIRPORT HEIGHT REGULATIONS ORDINANCE.*

This chapter is adopted in order to:

A. Prevent the establishment of airspace obstructions in airport approaches to the Northwest Iowa regional airport and surrounding areas.

B. Minimize potential dangers from, and conflicts with, the use of aircraft at the Northwest Iowa regional airport.

C. Address federal aviation regulations ("FAR") part 77 and all other applicable federal and states laws regulating hazards to air navigation. (Ord. 697, 3-1-2010)

9-15-2: DEFINITIONS:

As used in this chapter, unless the context otherwise requires, the following terms shall be defined:

AIRPORT: The Northwest Iowa regional airport.

AIRPORT ELEVATION: One thousand three hundred forty and seven-tenths feet (1,340.7') above mean sea level.

AIRPORT HAZARD: Any structure or object of natural growth located on or in the vicinity of a public airport, or any use or land near such airport, which obstructs the airspace required for the flight of aircraft in landing or takeoff at such airport or is otherwise hazardous to such landing or takeoff of aircraft.

AIRPORT PRIMARY SURFACE: A surface longitudinally centered on a runway. When the runway has a specially prepared hard surface, the primary surface extends two hundred feet (200') beyond each end of that runway. The width of the primary surface of a runway will be that width prescribed in part 77 of the federal aviation regulations (FAR) for the most precise approach existing or planned for either end of that runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline.

AIRSPACE HEIGHT MEASUREMENT: For the purpose of determining the height limits in all zones set forth in this chapter and shown on the zoning map, the datum shall be mean sea level elevation unless otherwise specified.

BUILDING RESTRICTION LINE (BRL): A line which identifies suitable building area locations on airports. The BRL should encompass the runway protection zones, the runway object free area, the runway visibility zones, NAVAID critical areas required for terminal instrument procedures, and areas addressed under 14 CFR part 77(C) (airport imaginary surfaces) to appoint where the surfaces obtain a height of at least thirty five feet (35') above the primary surface.

DECISION HEIGHT: The height at which a decision must be made, during an ILS instrument approach, to either continue the approach or to execute a missed approach.

INSTRUMENT RUNWAY: A runway having an existing instrument approach procedure utilizing air navigation facilities or area type navigation equipment, for which an instrument approach procedure has been approved or planned.

MINIMUM DESCENT ALTITUDE: The lowest altitude, expressed in feet above mean sea level, to which descent is authorized on final approach or during circle to land maneuvering in execution of a standard instrument approach procedure, where no electronic glide slope is provided.

MINIMUM EN ROUTE ALTITUDE: The altitude in effect between radio fixes which assures acceptable navigational signal coverage and meets obstruction clearance requirements between those fixes.

MINIMUM OBSTRUCTION CLEARANCE ALTITUDE: The specified altitude in effect between radio fixes on VOR airways, off airway routes, or route segments which meets obstruction clearance requirements for the entire route segment and which assures acceptable navigational signal coverage only within twenty two (22) miles of a VOR.

NONCONFORMING USE: Any preexisting structure, object of natural growth, or use of land that is inconsistent with the provisions of this chapter or amendments hereto.

NOTICE TO THE FAA OF THE PROPOSED CONSTRUCTION: 14 CFR part 77, objects affecting navigable airspace, requires persons proposing any construction or alteration described in 14 CFR section 77.13(A) to give thirty (30) days' notice to the FAA of their intent. This includes any construction or alteration of structures more than two hundred feet (200') in height above the ground level or at a height that penetrates defined imaginary surfaces located in the vicinity of the Northwest Iowa regional airport, as well as construction or alteration of greater height than an imaginary surface extending outward and upward at one hundred feet (100') to one foot (1') for a horizontal distance of twenty thousand feet (20,000') from the nearest point of the nearest runway. The affected area includes portions of the city of Spencer, unincorporated portions of Clay County, and unincorporated portions of Dickinson County.

PRECISION INSTRUMENT RUNWAY: A runway having an existing instrument approach procedure providing course and vertical path guidance conforming to instrument landing system (ILS) or microwave landing system (MLS), precision system performance standards, utilizing ILS, LAAS, WAAS, MLS, and other precision systems. It also means a runway for which a precision approach system has been approved or planned.

RUNWAY: A defined area on an airport prepared for landing and takeoff of aircraft along its length.

STRUCTURE: An object, including a mobile object, constructed or installed by man, including, but without limitation, buildings, towers, cranes, smokestacks, earth formation, and overhead transmission lines.

VISUAL RUNWAY: A runway intended solely for the operation of aircraft using visual approach procedures with no straight in instrument approach procedure and no instrument designation indicated on an FAA approved airport layout plan, a military services approved military airport layout plan, or by any planning document submitted to the FAA by competent authority. (Ord. 210, 10-17-1977; Ord. 697, 3-1-2010)

9-15-3: AIRPORT HEIGHT ZONES AND AIRSPACE HEIGHT LIMITATIONS:

In order to carry out the provisions of this section, there are hereby created and established certain zones, which include all of the land lying beneath the approach surfaces, transitional surfaces, and conical surfaces as they apply to the Northwest Iowa regional airport. Such zones are shown on the Northwest Iowa regional airport zoning map prepared by the city of Spencer and made a part hereof. An area located in more than one of the following zones is considered to be only in the zone with the more restrictive standard. The various zones and height limitations are hereby established and defined as follows:

A. Airport Zones:

1. Approach Surface Zone: A surface longitudinally centered on the extended runway centerline, extending outward and upward from the end of the primary surface and at the same slope as the approach zone height limitation slope set forth below. In plan, the perimeter of the approach surface coincides with the perimeter of the approach zone.

2. Inner Approach Surface Zone: The inner portion of the approach surface extends out from the runway end to the where the part 77(C) approach surface reaches a one hundred foot (100') height above the ground elevation.

3. Runway With A Precision Instrument Approach Zone: The inner edge of this approach zone coincides with the width of the primary surface and is one thousand feet (1,000') wide. The approach zone expands outward uniformly to a width of sixteen thousand feet (16,000') at a horizontal distance of fifty thousand feet (50,000') from the primary surface. Its centerline is the continuation of the centerlines of runway 12 (existing) and runway 18 (planned).

4. Runway Protection Zone (RPZ): An area off the runway end to enhance the protection of people and property on the ground.

5. Runway 30 And Runway 36 Instrument Approach Zone: The inner edge of this approach zone coincides with the primary surface and is one thousand feet (1,000') wide. The approach zone extends out uniformly to a width of sixteen thousand feet

(16,000') at a horizontal distance of fifty thousand feet (50,000') from the primary surface. Its centerline is the continuation of the centerlines of runways 30 and 36.

6. Transitional Zones: The transitional zones are the areas beneath the transitional surfaces.

7. Horizontal Zone: The horizontal zone is established by swinging arcs of ten thousand feet (10,000') radii from the center of each end of the primary surface of each runway and connecting the adjacent arcs by drawing lines tangent to those arcs. The horizontal zone does not include the approach and transitional zones.

8. Conical Zone: The conical zone is a surface extending outward and upward from the periphery of the horizontal surface at a slope of twenty to one (20:1) for a horizontal distance of four thousand feet (4,000').

9. Primary Surface Zone: The surface longitudinally centered on a runway. The primary surface is extended two hundred feet (200') beyond each end of each runway. The width of the primary surface is one thousand feet (1,000'). The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline.

B. Height Limitations: Except as otherwise provided in this chapter, no structure shall be erected, altered or maintained, and no tree shall be allowed to grow in any zone created by this chapter to a height in excess of the applicable height limit herein established for such zone. Such applicable height limitations are hereby established for each of the zones in question as follows:

1. Runway 30: Slopes forty feet (40') outward for each foot upward beginning at the end of, and at the same elevation as the primary surface, and extending to a horizontal distance of fifty thousand feet (50,000') along the extended centerline.

2. Runway 36: Slopes forty feet (40') outward for each foot upward beginning at the end of, and at the same elevation as the primary surface, and extending to a horizontal distance of fifty thousand feet (50,000') along the extended centerline.

3. Runway 18: Slopes fifty feet (50') outward for each foot upward beginning at the end of, and at the same elevation as the primary surface, and extending to a horizontal distance of ten thousand feet (10,000'), then slopes forty feet (40') outward for each foot upward extending to a horizontal distance of forty thousand feet (40,000') along the extended centerline.

4. Runway 12: Slopes fifty feet (50') outward for each foot upward beginning at the end of, and at the same elevation as the primary surface, and extending to a horizontal distance of ten thousand feet (10,000'), then slopes forty feet (40') outward for each foot upward extending to a horizontal distance of forty thousand feet (40,000') along the extended centerline.

5. Transitional zones: Slope seven feet (7') outward for each foot upward beginning at the sides of and at the same elevation as the primary surface and the approach surface, and extending to a height of one hundred fifty feet (150') above the airport elevation which is 1,340.7 feet above mean sea level. In addition to the foregoing, there are established height limits sloping seven feet (7') outward for each foot upward beginning at the sides of and at the same elevation as the approach surface, and

extending to where they intersect the conical surface. Where the runway approach zone projects beyond the conical zone, there are established height limits sloping seven feet (7') outward for each foot upward beginning at the sides of and at the same elevation as the approach surface, and extending a horizontal distance of five thousand feet (5,000') measured at ninety degree (90°) angles to the extended runway centerline.

6. Horizontal zone: Established at one hundred fifty feet (150') above the airport elevation or at a height of 1,490.70 feet above mean sea level.

7. Conical zone: Slopes twenty feet (20') outward for each foot upward beginning at the periphery of the horizontal zone and at one hundred fifty feet (150') above the airport elevation and extending to a height of three hundred fifty feet (350') above the airport elevation. (Ord. 697, 3-1-2010)

9-15-4: USE RESTRICTIONS:

Notwithstanding any other provisions of this chapter, no use may be made of land or water within any zone established by this chapter 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.

A. Runway Protection Zone: 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.

Compatible land use within the RPZ is generally restricted to such land uses as agricultural and uses that do not involve congregations of people or construction of buildings or other improvements that may be obstructions. The following land use criteria apply within the RPZ:

1. While it is desirable to clear all objects from the RPZ, some uses are permitted, provided they do not attract wildlife, are outside the runway object free area, and do not interfere with navigational aids. Agricultural operations (other than forestry or livestock farms) are expressly permitted under this provision. Golf courses (but not clubhouses), although discouraged, may be permitted if a wildlife hazard assessment determines that it will not provide an environment attractive to birds. Automobile parking facilities, although discouraged, may be permitted, provided the parking facilities and any associated appurtenances, in addition to meeting all of the preceding conditions, are located outside of the object free area extension.

2. Land uses prohibited from the RPZ are: residences and places of public assembly. Churches, schools, hospitals, office buildings, shopping centers, and other uses with similar concentrations of persons typify places of public assembly.

B. Building Restriction Line: No structures, other than those approved by the federal aviation administration and the city of Spencer, and which conform to the underlying zoning designation, shall be constructed within the building restriction line (BRL).

C. Exemption For Airport Operations: Use restrictions shall not apply to necessary and incidental airport operations.

D. Prohibited Uses: Regardless of any other provisions of this chapter, no use may be made of land or water within any zone established by this chapter in such a manner as to do any of the following:

1. Create Electrical Interference: Create electrical interference with navigational signals or radio communication between the airport and aircraft,

2. Imitate Airport Lights: All lights or illumination used in conjunction with streets, parking, signs or use of land and structures shall be arranged and operated in such a manner that is not misleading or dangerous to aircraft operating from the Northwest Iowa regional airport, or in the vicinity thereof,

3. Result In Glare: Result in glare in the eyes of pilots using the airport,

4. Impair Visibility In The Vicinity Of The Airport: No operations from any use shall produce smoke, glare or other visual hazards within three (3) statute miles of any runway of the Northwest Iowa regional airport,

5. Create Bird Strikes: Create bird strike hazards, or

6. Endangerment Of Aircraft: Otherwise endanger or interfere with the landing, takeoff, or maneuvering of aircraft intending to use the airport. (Ord. 697, 3-1-2010)

9-15-5: LIGHTING:

A. Notwithstanding the provisions of section 9-15-4 of this chapter, the owner of any structure over two hundred feet (200') above ground level must install, on the structure, lighting in accordance with federal aviation administration (FAA), advisory circular 70-7460-1D and amendments. Additionally, any structure, constructed after the effective date of this chapter and exceeding nine hundred forty nine feet (949') above ground level, must install on that structure high intensity white obstruction lights in accordance with chapter 6 of FAA advisory circular 70-7460-1D and amendments.

B. Any permit or variance granted may be so conditioned as to require the owner of the structure or growth in question to permit the city of Spencer at its own expense to install,

operate and maintain thereto such markers or lights as may be necessary to indicate to pilots the presence of an airspace hazard. (Ord. 210, 10-17-1977)

9-15-6: VARIANCES:

Any person desiring to erect or increase the height of any structure, or to permit the growth of any tree, or otherwise use his property in violation of any section of this chapter, may apply to the board of adjustment for variance from such regulations. No application for variance to the requirements of this chapter may be considered by the board of adjustment unless a copy of the application has been submitted to the Spencer superintendent of public works. If the superintendent of public works does not respond to the board of adjustment within fifteen (15) days from receipt of the copy of the application, the board may make its decision to grant or deny the variance. (Ord. 210, 10-17-1977)

9-15-7: JUDICIAL REVIEW:

Any persons aggrieved, or any taxpayer affected, by any decision of the board of adjustment, may appeal to the court of record as provided in Iowa statutes, section 414.15. (Ord. 210, 10-17-1977)

9-15-8: SEVERABILITY:

If any provisions of this chapter or the application thereof to any person or circumstances is held invalid, such invalidity shall not affect other provisions or applications of this chapter which can be given effect without the invalid provision or application, and to this end the provisions of this chapter are declared to be severable. (Ord. 210, 10-17-1977)

9-15-9: EFFECTIVE DATE:

Whereas, the immediate operation of the provisions of this chapter is necessary for the preservation of the public health, public safety and general welfare and this chapter shall be in full force and effect from and after its passage by the city council and publication and posting as required by law. (Ord. 210, 10-17-1977)

9-15-10: NONCONFORMING USES:

A. Regulations Not Retroactive: Ordinance 697 amendments shall not be construed to require the removal, lowering, or other change or alteration of any structure or tree which complied with this chapter prior to the adoption of the ordinance codified herein, or which existed prior to the adoption of this chapter. Nothing contained herein shall require any change in the construction, alteration, or intended use of any structure, the construction or alteration of which was begun prior to the effective date hereof and is diligently prosecuted.

B. Marking And Lighting: Notwithstanding the preceding provision of this section, the owner of any existing nonconforming structure or tree is hereby required to permit the installation, operation and maintenance thereon of such markers and lights as shall be deemed necessary by the manager of the Northwest Iowa regional airport to indicate the operators of aircraft in the vicinity of the airport the presence of such airport obstruction. Such markers and lights shall be installed, operated and maintained at the expense of the Northwest Iowa regional airport. Any permit granted may be conditioned to require the owner of the structure in question to install, operate and maintain, at the owner's expense, such marking and lights as may be necessary.

C. Alteration Or Change Of Nonconforming Use: No permit shall be granted that would allow a nonconforming use or structure to become a greater hazard to air navigation than it was on the effective date hereof, or any amendment hereto, or than it is when the application for a permit is made.

D. Nonconforming Uses Abandoned Or Destroyed: Whenever the administrative agency or its designee determines that a nonconforming structure is abandoned for one year or destroyed, by any means, to the extent of more than sixty percent (60%) of the replacement cost, said structure shall not be rebuilt, restored, or reoccupied for any purpose unless it shall thereafter conform to all regulations of this chapter. (Ord. 697, 3-1 -2010)