

Appendix A

Zoning Ordinance

Sec. 94-164. Brookings Airport Zoning Ordinance.

(a) *Purpose and authority.*

(1) It is hereby found that an airport obstruction has the potential of endangering the lives and property of users of the Brookings Airport and property of occupants of land in its vicinity; that an obstruction may reduce the size of areas available for landing, takeoff and maneuvering of aircraft, thus tending to impair or destroy the utility of the Brookings Airport and the public investment therein. Accordingly, it is declared:

a. The creation or establishment of an obstruction has the potential of being a public nuisance and may injure the region served by Brookings Airport;

b. It is necessary in the interest of the public health, public safety and general welfare that the creation or establishment of obstructions that are a hazard to air navigation be prevented; and

c. The prevention of these obstructions should be accomplished, to the extent legally possible, by the exercise of the police power without compensation.

(2) The prevention of the creation or establishment of airport obstructions and the elimination, removal, alteration, mitigation or marking and lighting of existing obstructions are public purposes for which political subdivisions may raise and expend public funds and acquire land or interests in land.

(b) Definitions. The following words, terms and phrases, when used in this section, shall have the meanings ascribed to them in this subsection, except where the context clearly indicates a different meaning:

Airport: The area designated and referred to in the Brookings Airport Zoning Map as the Brookings Municipal Airport.

Airport elevation: The established elevation of the highest point on the usable land area which elevation is established to be 1,637 feet above mean sea level.

Approach surface: A surface longitudinally centered on the extended runway center line, extending outward and upward from the end of the primary surface and at the same slope as the approach zone height limitation slope. In plan, the perimeter of the approach surface coincides with the perimeter of the approach zone.

Conical surface: A surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to one for a horizontal distance of 4,000 feet.

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Hazard to air navigation: An obstruction determined to have a substantial adverse effect upon the safe and efficient utilization of the navigable airspace.

Height: The elevation based on mean sea level.

Horizontal surface: A horizontal plane 150 feet above the established airport elevation, the perimeter of which in plan coincides with the perimeter of the horizontal zone.

Larger than utility runway: A runway that is constructed for and intended to be used by propeller driven aircraft of greater than 12,500 pounds maximum gross weight and jet-powered aircraft.

Nonprecision instrument runway: A runway having an existing instrument approach procedure utilizing air navigation facilities with only horizontal guidance, or area type navigation equipment, for which a straight-in nonprecision instrument approach procedure has been approved or planned.

Obstruction: Any structure, growth or other object, including a mobile object.

Primary surface: A surface longitudinally centered on a runway. When the runway has a specially prepared hard surface, the primary surface extends 200 feet beyond each end of that runway; for military runways or when the runway has no specially prepared hard surface, or planned hard surface, the primary surface ends at each 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.

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 not limited to buildings, towers, cranes, smokestacks, earth formation and overhead transmission lines.

Transitional surfaces: Surfaces which extend outward at 90-degree angles to the runway at a slope of seven feet horizontally for each one foot vertically from the sides of the primary and approach surfaces to where they intersect the horizontal and conical surfaces.

Utility runway: A runway that is constructed for and intended to be used by propeller driven aircraft of 12,500 pounds maximum gross weight or less.

(c) Airspace obstruction zones and height limitations.

(1) There are hereby created and established airspace zones which include all of the land lying beneath the approach surfaces, transitional surfaces, horizontal surfaces and conical surfaces as they apply to Brookings Airport. Such zones are shown on Brookings Airport

Zoning Map consisting of one sheet, prepared by Banner Associates, Inc., Consulting Engineers, Brookings, South Dakota, and dated May 1978, which is hereby made a part of this chapter. The various zones are hereby established and defined as follows:

- a. Utility runway visual approach zone (designated as existing runway 18/36 and 8/26): The inner edge of this approach zone coincides with the width of the primary surface and is 250 feet wide. The approach zone expands outward uniformly to a width of 1,250 feet at a horizontal distance of 5,000 feet from the primary surface. Its centerline is the continuation of the centerline of the runway.
- b. Utility runway nonprecision instrument approach zone (designated as ultimate runway 18/36): The inner edge of this approach zone coincides with the width of the primary surface and is 500 feet wide. The approach zone expands outward uniformly to a width of 2,000 feet at a horizontal distance 5,000 feet from the primary surface. Its centerline is the continuation of the centerline of the runway.
- c. Runway larger than utility with a visibility minimum as low as three-fourths of a mile nonprecision instrument approach zone (designated as runway 12/30): The inner edge of this approach zone coincides with the width of the primary surface and is 1,000 feet wide. The approach zone expands outward uniformly to a width of 4,000 feet at a horizontal distance of 10,000 feet from the primary surface. Its centerline is the continuation of the centerline of the runway.
- d. Transitional zone: The transitional zones are the areas beneath the transitional surfaces.
- e. Horizontal zone: The horizontal zone is established by swinging arcs of 10,000 feet radii from the center of each end of the primary surface of runway designated as runway 12/30 and connecting the adjacent arcs by drawing lines tangent to those arcs. The horizontal zone does not include the approach and transitional zones.
- f. Conical zones: The conical zone is established as the area that commences at the periphery of the horizontal zone and extends outward therefrom a horizontal distance of 4,000 feet.

(2) 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 airspace 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 as follows:

- a. Utility runway visual approach zone (designated as existing runway 18/36 and 8/26): Slopes 20 feet 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 5,000 feet along the extended runway centerline.

b. Utility runway nonprecision instrument approach zone (designated as ultimate runway 18/36): Slopes 20 feet 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 5,000 feet along the extended runway centerline.

c. Runway larger than utility with a visibility minimum as low as three-fourths of a mile nonprecision instrument approach zone (designated as runway 12/30): Slopes 34 feet outward for each foot upward beginning at the end of the same elevation as the primary surface and extending to a horizontal distance of 10,000 feet along the extended runway centerline.

d. Transitional zones: Slope seven feet 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 150 feet above the airport elevation which is 1,637 feet mean sea level. In addition to the foregoing, there are established height limits sloping seven feet 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.

e. Horizontal zone: Established at 150 feet above the airport elevation or at a height of 1,787 feet above mean sea level.

f. Conical zone: Slopes 20 feet outward for each foot upward beginning at the periphery of the horizontal zone and at 150 feet above the airport elevation and extending to a height of 350 feet above the airport elevation.

(d) Safety zones.

(1) In order to carry out the purpose of this chapter, as set forth above and also, in order to restrict those uses which may be hazardous to the operational safety of aircraft operating to and from Brookings Airport, and furthermore to limit population and building density in the runway approach areas, thereby creating sufficient open space so as to protect life and property in case of an accident, there are hereby created and established the following safety zones:

a. Safety zone A: All land in that portion of the approach zones of a runway, as defined in subsection (c)(1) hereof, which extends outward from the end of the primary surface a distance equal to one-third of the planned length of the runway, which distance shall be:

1. One thousand eight hundred nine feet for runway 12/30.
2. One thousand two hundred feet for ultimate runway 18/36.

b. Safety zone B: All land in that portion of the approach zones of a runway, as defined in subsection (c)(1) hereof, which extends outward from safety zone A, a distance equal to two-thirds of the planned length of the runway, which length shall be:

1. Three thousand six hundred nineteen feet for runway 12/30.
 2. Two thousand four hundred feet for ultimate runway 18/36.
- c. Safety zone C: All that land which is enclosed within the perimeter of the horizontal zone, as defined in subsection (c)(1) of this section, and is not included in safety zone A or B.
- (e) Land use restrictions. Subject at all times to the height restrictions set forth in subsection (c)(2) of this section, no use shall be made of any land in any of the safety zones which creates or causes interference with the operations of radio or electronic facilities located upon the airport, with radio or electronic communications between the airport and aircraft, makes it difficult for pilots to distinguish between airport lights and other lights, results in glare in the eyes of pilots using the airport, impairs visibility in the vicinity of the airport, or otherwise endangers the landing, taking off or maneuvering of aircraft.
- (1) Safety zone A. Subject at all times to the height restrictions and to the general restrictions areas designated as safety zone A shall contain no buildings or temporary structures, exposed transmission lines, or other similar land use structural hazards and shall be restricted to those uses which will not create, attract, or bring together an assembly of persons thereon. Permitted uses may include agriculture (seasonal crops), outdoor recreation facilities, cemeteries and auto parking.
- (2) Safety zone B. Subject at all times to the height restrictions and general restrictions, areas designated as safety zone B shall be restricted in use as follows:
- a. Each use shall be on a site whose area shall not be less than one-half acre. A building, used for residential purposes, where permitted, shall be considered as one use.
 - b. A building plot shall be a single, uniform and non-contrived area, whose shape is uncomplicated and whose area shall not exceed the following minimum ratios with respect to the total site area:

TABLE INSET:

Site Area at Least (Acres)	But Less Than (Acres)	Ratio of Site Area to Building Plot Area	Building Plot Area (Sq. Ft.)	Maximum Site Population (16 persons/acre)
1/2	1	8:1	2,720	8
1	3	10:1	4,350	15
3	4	12:1	10,890	45
4	6	10:1	17,420	60
6	10	8:1	32,670	90
10	20	6:1	72,600	150
20	and up	4:1	218,000	300

c. Each use shall meet all applicable requirements of the underlying zoning district.

d. The following uses are specifically prohibited in zone B: Churches, hospitals, schools, theaters, stadiums, hotels and motels, trailer courts, camp grounds and other places of public assembly.

(3) *Safety zone C.* Safety zone C is subject only to height restrictions and to the general restrictions.

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Secs. 94-165--94-200. Reserved.