**Section 64.40 Surfaces and Height Limitations**

a) Establishment and Creation

1) The following airport imaginary surfaces are established with relation to the airport and to each runway. The size of each such imaginary surface is based on the category of each runway according to the type of approach available or planned for that runway. The slope and dimensions of the approach surface applied to each end of a runway are determined by the most precise approach existing or planned for that runway end.

2) Such airport imaginary surfaces are hereby created and established, in order to carry out the provisions of these zoning regulations. Such surfaces shall include all of the land lying within the horizontal surface, conical surface, primary surface, approach surface to include non-precision instrument approach, precision instrument approach and visual approach, transitional surface and circling approach surface. These surfaces are shown on the Airport Zoning Map for Marshall County Airport prepared by William J. Murray and Associates, Inc., Springfield, Illinois, (Note: this zoning map can be viewed at the Department of Transportation, Division of Aeronautics, Capital Airport, Springfield, Illinois, 62706. For an example of this information see 92 Ill. Adm. Code 18, Exhibits A, B and C.). An area located in more than one of the following surfaces is considered to be only in the surface with the more restrictive height limitation.

3) Except as otherwise provided in these zoning regulations, no structure or growth shall be erected, altered, allowed to grow, or maintained in any surface created by these zoning regulations to a height in excess of the height limit herein established for such surfaces.

4) The various surfaces are hereby established, and the height limitations are hereby established for each of the surfaces, as follows:

b) Horizontal Surface

1) A horizontal plane 150' above the established airport elevations of 567.5' AMSL, the perimeter of which is constructed by swinging arcs of specified radii from the center of each end of the primary surface of each runway and connecting the adjacent arcs by lines tangent to those arcs. The radius of each arc is:

A) 5,000 feet for all runways designated as utility or visual;

B) 10,000 feet for all other runways.

2) The radius of the arc specified for each end of a runway will have the same arithmetical value. That value will be the highest determined for either end of the runway. When a 5,000 foot arc is encompassed by tangents connecting two adjacent 10,000 foot arcs, the 5,000 foot arc shall be disregarded on the construction of the perimeter of the horizontal surface. The horizontal surface does not include the approach and transitional surfaces.

c) Conical Surface

1) A surface extending outward and upward from the periphery of the horizontal surface, at 150 feet above the airport elevation, at a slope of 20 feet horizontally for each foot vertically for a horizontal distance of 4,000 feet.

2) The conical surface does not include the precisions instrument approach surfaces and the transitional surfaces.

d) Primary Surface

1) 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; but 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. The width of a primary surface is:

A) 250' for utility runways having only visual approaches;

B) 500' for utility runways having non-precision instrument approaches;

C) For other than utility runways, the width is:

i) 500' for visual runways having only visual approaches;

ii) 500' for non-precision instrument runways having visibility minimums greater than three-fourths statute mile;

iii) 1,000' for a non-precision instrument runway having a non-precision instrument approach with visibility minimums as low as three-fourths statute mile, and for precision instrument runways.

2) The width of the primary surface of a runway will be the width prescribed in this Section for the most precise approach existing or planned for either end of that runway.

e) Approach Surface – A surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. An approach surface is applied to each end of each runway based upon the type of approach available or planned for that runway end.

1) The inner edge of the approach surface is the same width as the primary surface and it expands uniformly to a width of:

A) 1,250' for that end of a utility runway with only visual approaches;

B) 1,500' for that end of runway other than a utility runway with only visual approaches:

C) 2,000' for that end of a utility runway with a non-precision instrument approach;

D) 3,500' for that end of a non-precision instrument runway other than utility, having visibility minimums greater than three-fourths of a statute mile;

E) 4,000' for that end of a non-precision instrument runway, other than utility, having a non-precision instrument approach with visibility minimums as low as three-fourths statute mile; and

F) 16,000' for precision instrument runways.

2) The approach surface extends for a horizontal distance of:

A) 5,000' at a slope of 20' horizontally for each foot vertically for all utility and visual runways;

B) 10,000' at a slope of 34' horizontally for each foot vertically for all non-precision instrument runways other than utility; and

C) 10,000' at a slope of 50' horizontally for each foot vertically with an additional 40,000' at a slope of 40 feet horizontally for each foot vertically for all precision instrument runways.

3) The outer width of an approach surface to an end of a runway will be that width prescribed in this subsection for the most precise approach existing or planned for that runway end.

f) Transitional Surface – These surfaces extend outward and upward at right (90°) angles to the runway centerline and the runway centerline extended at a slope of 7 feet horizontally for each foot vertically beginning at the sides of and at the same elevation of the primary surface and the approach surfaces extending to a height of 150' above the airport elevation which is 567.5' AMSL. Transitional surfaces for those portions of the precision approach surface which project through and beyond the limits of the conical surface, extend a distance of 5,000' measured horizontally from the edge of the approach surface and at right (90°) angles to the runway centerline.

g) Circling Approach Surface – This is a surface 200' above ground level (AGL) or above the established airport elevation, whichever is greater, within three (3) nautical miles of the established reference point of Marshall County Airport and this surface increases in height in the proportion of 100 feet for each additional nautical mile of distance from the airport reference point up to a maximum of 500 feet.

h) Excepted Height Limitations – Nothing in these regulations shall be construed as prohibiting the growth, construction or maintenance of any growth or structure to a height up to 50 feet above the surface of the land.