

**ORDINANCE # ZA-23-03**  
**AN ORDINANCE TO AMEND THE TOWN OF SMITHFIELD**  
**UNIFIED DEVELOPMENT ORDINANCE**  
**ARTICLE 10, SECTION 10.95 AIRPORT HEIGHT HAZARD OVERLAY**

**WHEREAS**, the Smithfield Town Council wishes to amend certain provisions in the Town of Smithfield Unified Development Ordinance by making changes to Unified Development Ordinance Article 7, Section 7.3 Accessory Uses and Structures to allow two accessory structures per residential lot.

**WHEREAS**, it is the objective of the Smithfield Town Council to have the UDO promote regulatory efficiency and consistency and the health, safety, and general welfare of the community;

**NOW, THEREFORE**, be it ordained that the following Articles are amended to make the following changes set forth in the deletions (strikethroughs) and additions (double underlining) below:

[Revise Article 10, Section 10.95 Airport height hazard overlay regulations.]

**PART 1**

That the Unified Development Ordinance shall be page numbered and revision dated as necessary to accommodate these changes.

**SECTION 10.95 AIRPORT HEIGHT HAZARD OVERLAY (AHH).**

***10.95.1. Purpose.***

The purpose of the airport height hazard district (AHH) is to provide regulations that prohibits the creation or establishment of hazards that endangers public health, safety, welfare, or impacts an individual's quality of life, or prevents the safe movement of aircraft at the Johnston County Regional Airport and and promotes the most appropriate use of land to prevent the creation or establishment of airport hazards. ~~provide a higher level of control from activities, situations and obstructions that could have the potential for endangering the lives and property of users of the Johnston Regional Airport, and property or occupants of land in its vicinity. Further, the creation or establishment of an obstruction may effect existing and future instrument approach minimums of the Johnston Regional Airport, and that obstruction may present a hazard to air navigation and/or reduce the size of areas available for the safe landing, takeoff and maneuvering of aircraft.~~

***10.95.2. Intent.***

It is the intent of this section to prevent the creation or establishment of hazards to air navigation, eliminate, remove, alter or mitigate hazards to air navigation, by regulating the height of structures, and the use of property in the vicinity of the airport.

***10.95.3. Airport Hazard District Zones.***

In order to carry out the provisions of this section, there are created and established certain zones which include all of the land lying beneath the runway protection zone, the approach surface,

~~transitional surface, horizontal surface and conical surface approach surfaces, transitional surfaces, horizontal surfaces, and conical surfaces as they apply to the Johnston Regional Airport. Such These zones are identified as A, B, C, D and E and are defined in Appendix A, in Section 10.95.3.4 and zones are identified on the Airport Height Hazard Overlay Map which is on file in the office of the Johnston County planning office and the geographical informational services office and the Town of Smithfield planning office. An area located in one or more than one of the following zones is considered to be the only area in the zone with the more restrictive height regulations.~~

**Section 10.95.3.4. Dimensions for Airport Overlay Zones – Precision Runway**

| <u>Zone</u>   | <u>Inner Width</u>                            | <u>Outer Width</u>                               | <u>Length</u>                                   | <u>Height or Slope</u>                                      |
|---|---|--|---|---|
| <u>A</u><br><u>(Runway Protection Zone – Begins at end of turf runway, 200' past hard surface runway)</u> | <u>RWY 3 – 1,000'</u><br><u>RWY 21 – 500'</u> | <u>RWY 3 – 1,750'</u><br><u>RWY 21 – 700'</u>    | <u>RWY 3 – 2,500'</u><br><u>RWY 21 – 1,000'</u> | <u>RWY 3 – 50:1</u><br><u>RWY 21 – 34:1</u>                 |
| <u>B</u><br><u>(Approach zone - Begins at end of turf runway, 200' past hard surface runway.)</u>         | <u>RWY 3 – 1,000'</u><br><u>RWY 21 – 500'</u> | <u>RWY 3 – 16,000'</u><br><u>RWY 21 – 3,500'</u> | <u>RWY 3 - *</u><br><u>RWY 21 – 10,000'</u>     | <u>RWY 3 - *</u><br><u>RWY 21 – 34:1</u>                    |
| <u>C width</u><br><u>(Transitional Surface)</u>   | <u>1,000'</u>                                 | <u>RWY 3 – 16,000'</u><br><u>RWY 21 – 3,500'</u> | <u>RWY 3 - *</u><br><u>RWY 21 – 10,000'</u>     | <u>7:1**</u>  |
| <u>D radius</u><br><u>(Horizontal Surface)</u>  | <u>Begins at edge of transitional surface</u> | <u>10,000'</u>                                   |   | <u>150' above runway</u><br><u>(excludes approach zone)</u> |
| <u>E radius</u><br><u>(Conical Surface)</u>   | <u>Begins at edge of horizontal surface</u>   | <u>4,000'</u>                                    |   | <u>20:1</u>   |

\*Precision instrument approach slope is 50:1 for inner 10,000 feet and 40:1 for an additional 40,000 feet

\*\*7:1 slope until intersection with the Horizontal Surface (RWY 3 and RWY 21), then add 7:1 slope on each side of RWY 3 Approach Surface for a horizontal distance of 5,000 feet laterally measured from the edge of the Approach Surface.

**10.95.4. Airport Zone Height Limitations and Lighting Requirements**

Unless otherwise provided for in this Ordinance, no structure, object, natural vegetation, or terrain shall be erected, altered, allowed to grow or be maintained within any airport zone established by this Ordinance to a height in excess of the applicable height limitations established by this Ordinance in Section 10.95.3.4. and shown on the "Airport Height Hazard Overlay Map."

Lighting and marking requirements will be determined through an FAA 7460-1 airspace analysis. The owner of any structure, object, natural vegetation, or terrain is hereby required to install,

~~**10.95.3.6. Horizontal Zone.** This zone is defined as that area established by swinging arcs of 5,000 feet radii for all runways designated as utility or visual and 10,000 feet for all others from the center of each and the primary surface of each runway connecting the adjacent arcs by drawing lines tangent to those arcs. The horizontal zone does not include approach and transitional at the periphery of the horizontal zone, and extends outward from a horizontal distance of 4,000 feet.~~

***10.95.4. Airport Environs Height Regulations.***

Except as otherwise provided in this section, no building or structure shall be erected, altered, or maintained, and no tree shall be allowed to grow in any airport hazard district zone to a height in excess of the applicable height established for such zone. The maximum height regulations are as follows:

~~**10.95.4.1. Runway Larger Than Utility Visual Approach Zone.** 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.~~

~~**10.95.4.2. Runway Larger Than Utility with a Visibility Minimum Greater than Three-Quarter Mile Non-precision Instrument Approach Zone.** Slopes 34 feet outward for each foot upward beginning at the end of, and extending to a horizontal distance of 10,000 feet along the extended runway centerline.~~

~~**10.95.4.3. Runway Larger Than Utility with a Visibility Minimum as Low as Three-Quarter Mile Non-precision Instrument Approach.** Slopes 34 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 10,000 feet along the extended runway centerline.~~

~~**10.95.4.4. Precision Instrument Runway Approach Zone.** Slopes 50 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 upward of 40 feet horizontally for each foot vertically to an additional horizontal distance of 40,000 feet along the extended runway centerline.~~

~~**10.95.4.5. Transitional Zone.** Slopes 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 (165 feet above 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 the same elevation as the approach surface, and extending to where they intersect the conical surface. Where the precision instrument runway approach zone projects beyond the conical zone, there are established height limits sloping seven feet outward for each foot upward beginning at the sides of, and the same elevation as the approach surface and extending a horizontal distance of 5,000 feet measured at 90 degree angles to the extended runway centerline.~~

~~**10.95.4.6. Horizontal Zone.** Established at 150 feet above the airport elevation or at a height of 315 feet above mean sea level.~~

~~**10.95.4.7. 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.~~

~~**10.95.5. Airport Environs Height Regulations Exceptions.**~~

~~Nothing in this section shall be construed as prohibiting the construction or maintenance of any structure, or growth of any tree to a height up to 50 feet above the surface of the land.~~

~~**10.95.6. Use Regulations.**~~

~~Notwithstanding any other provision of this section, no use may be made of land or water within any zone established by this section in such a manner as to:~~

~~**10.95.6.1.** Create electrical interference with navigational signals or radio communication between airport and aircraft;~~

~~**10.95.6.2.** Make it difficult for pilots to distinguish between airport lights and other lights;~~

~~**10.95.6.3.** Result in glare in the eyes of pilots using the airport;~~

~~**10.95.6.4.** Impair visibility in the vicinity of the airport;~~

~~**10.95.6.5.** Create bird strike hazards; or~~

~~**10.95.6.6.** Otherwise in any way endanger or interfere with the landing, takeoff, or maneuvering of aircraft intending to use the airport.~~

~~**10.95.7. Existing Uses.**~~

~~The regulations prescribed in this section shall not be construed to require the removal, alteration, lowering or other change of any structure or tree not conforming to the regulations as of May 7, 1984, or otherwise interfere with the continuance of a nonconforming use. Nothing contained in this section shall require any change in the construction, alteration, or intended use of any structure, the construction or alteration of which was begun prior to May 7, 1984.~~

~~**10.95.8. Marking and Lighting.**~~

~~Notwithstanding the provisions of this section, the owner of any existing structure that exceeds the height requirements of subsection 10.95.4 of this section, is required to permit the installation, operation, and maintenance thereon of such markers and lights as shall be deemed necessary by the Johnston County Airport Authority to indicate to 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 Johnston County Airport Authority.~~

~~**10.95.9. Permits Required.**~~

operate, and maintain such markers, lights, and other aids to navigation necessary to indicate to the aircraft operators in the vicinity of an airport the presence of an airport hazard.

#### **10.95.5. Airport Zoning Map**

The Airport Land Use & Height Overlay Zones established by this Ordinance are shown on the Airport Height Hazard Overlay Map which is on file in the office of the Johnston County planning office and the geographical informational services office and the Town of Smithfield planning office. The Official Airport Land Use & Height Overlay Zoning Map, may be amended, and all notations, references, elevations, data, zone boundaries, and other information thereon, is hereby adopted as part of this Ordinance.

~~**10.95.3.1. Runway Larger Than Utility Visual Approach Zone.** This zone is defined as the inner edge of the approach zone that coincides with the width of the primary surface and is 500 feet wide. The approach zone expands outward uniformly to a width of 1,500 feet at a horizontal distance of 5,000 feet from the primary surface. Its centerline is the continuation of the centerline of the runway.~~

~~**10.95.3.2. Runway Larger Than Utility with a Visibility Minimum Greater than Three-Quarter Mile Non-precision Instrument Approach Zone.** This zone is defined as the inner edge of this approach zone that coincides with the width of the primary surface and is 500 feet wide. The approach zone expands outward uniformly to a width of 3,500 feet at a horizontal distance of 10,000 feet from the primary surface. Its centerline is the continuation of the centerline of the runway.~~

~~**10.95.3.3. Runway Larger Than Utility with a Visibility Minimum as Low as Three-Quarter Mile Non-precision Instrument Approach.** This zone is defined as the inner edge of this approach zone that 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.~~

~~**10.95.3.4. Precision Instrument Runway Approach Zone.** This zone is defined as the inner edge of this approach zone that coincides with the width of the primary surface and is 1,000 feet wide. The approach zone expands outward uniformly to a width of 16,000 feet at a horizontal distance of 50,000 feet from the primary surface. Its centerline is the continuation of the centerline of the runway.~~

~~**10.95.3.5. Transitional Zone.** The transitional zones are those zones that are the areas beneath the transitional surfaces.~~

~~Except as specifically provided in this subsection, no material change shall be made in the use of land, no structure shall be erected or otherwise established, and no tree shall be planted in any zone hereby created unless a permit thereof shall have been applied for and granted. Each application for a permit shall indicate the purpose for which the permit is desired, with sufficient information in order to determine whether the resulting use, structure, or tree would conform to the regulations prescribed in this article.~~

~~**10.95.9.1.Existing Uses.** No permit shall be granted that would allow the establishment or creation of an obstruction, or permit a nonconforming use, structure or tree, to become a greater hazard to air navigation than it was on May 7, 1984, or than it is when the application permit is made.~~

~~**10.95.9.2. Nonconforming Uses, Abandoned or Destroyed.** Whenever the UDO Administrator determines that a nonconforming structure or tree has been abandoned, or more that 80 percent physically deteriorated, destroyed, or decayed, no permit shall be granted that would allow such structure or tree to exceed the height regulations of subsection 10.93.4 of this section, or otherwise deviate from the requirements of this section.~~

~~**10.95.9.3.Permit Exceptions.**~~

~~**10.95.9.3.1.** In the area lying within the limits of the horizontal zone and conical zone, no permit shall be required for any structure or tree less than 75 feet of vertical height above the ground, except when, because of existing terrain, land contour, or topographic feature, such structure or tree would extend above the required height limits prescribed for such zones.~~

~~**10.95.9.3.2.** In areas lying within the limits of the approach zones, but at a horizontal distance of not less than 4,200 feet from each end of the runway, no permit shall be required for any structure or tree less than 75 feet of vertical height above the ground, except when such structure or tree, because of existing terrain, land contour, or topographic feature, would extend above the required height limit prescribed for such zones. Nothing contained in any of the foregoing exceptions shall be construed as permitting or intending to permit any construction, or alteration, of any structure, or growth of any tree in excess of any of the required height limits established in subsection 10.95.4 of this section.~~

**10.95.6. Variances.**

Any person desiring to erect or increase the height of any building or structure not in accordance with the regulations prescribed in this section, may apply to the Board of Adjustment for a variance from such regulations. The application for a variance must be accompanied by a determination letter from the Federal Aviation Administration as to the effect of the variance request on the operation of air navigation facilities and the safe, efficient use of navigable air space. An

application for a variance from the requirements of this section shall be referred to the Airport Manager for advice as to the aeronautical effects of the variance request on the operation of the airport facilities. If the Airport Manager does not respond to the application request within 15 days after receipt of the application, the Board of Adjustment may act on its own to grant or deny such application. ~~The Board of Adjustment, based on findings of fact, shall grant the variance if it:~~

~~**10.95.10.1.** Is found that a literal application of enforcement of the regulations will result in unnecessary hardship and relief granted will not be contrary to the public interest;~~

~~**10.95.10.2.** Will not create a hazard to air navigation;~~

~~**10.95.10.3.** Will do no injustice; and~~

~~**10.95.10.4.** Will be in accord with the spirit and intent of this section.~~

~~**10.95.11. Obstruction Marking and Lighting.**~~

~~Any permit or variance granted may, if such action is deemed advisable to carry out the purpose of this section, and is reasonable in the circumstances, be so conditioned as to require the owner of the structure to install, operate, and maintain, at the owner's expense, such markings and lights as necessary. If deemed proper by the Board of Adjustment, this condition may be modified to permit the Johnston County Airport Authority, at its own expense, to install, operate and maintain the necessary markings and lights.~~

[Revise Appendix A to update definitions related to AHH Overlay zoning.]

**PART 2**

That the Unified Development Ordinance shall be page numbered and revision dated as necessary to accommodate these changes.

***Airport height hazard district definitions***

For the purposes of Article 10, Part IX, Section 10.93, Airport Height Hazard District, the following items, phrases, and words shall have the meaning herein:

- (1) ***Airport elevation.*** The topographical elevation above mean sea level. At the Johnston Regional Airport this elevation is 165 feet.
- (2) ***Approach and runway protection zone map.*** The Approach and Runway Protection Zone Map is compiled from the criteria in 14 CFR Part 77, "Objects Affecting Navigable Airspace." It shows the five-airport overlay zones affected by the Airport Overlay Zoning Ordinance, and includes the layout of runways, airport boundaries, elevations, and area topography. Applicable height limitation areas are shown in detail.
- (3) ***Airport overlay zones.*** Zones intended to place height and land use conditions on land impacted by airport operations while retaining the existing underlying

zone. The Title 14 Code of Federal Regulations Part 77 (14 CFR Part 77) Surfaces and runway protection zones have been combined to create five airport overlay zones. The five specific zones create a comprehensive area focused on maintaining compatible land use around airports.

- (4) **Approach surface.** 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 in Section 10.93.4 of this Ordinance. In plan, the perimeter of the approach surface coincides with the perimeter of the approach zone.
- (5) **Conical surface (Zone E) -** The conical surface extends upward and outward from the periphery of the horizontal surface at a slope of 20 feet horizontally for every one-foot vertically (20:1) for a distance of 4,000 feet. It is the outermost zone of the overlay areas and has the least number of land use restriction considerations. 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.
- (6) **Hazard to air navigation.** An obstruction determined to have a substantial adverse effect on the safe and efficient utilization of the navigable air space.
- (7) **Height.** The height limits set forth in Section 10.93 and as shown on the height hazard map, the datum shall mean sea level elevation except as otherwise specified.
- (8) **Horizontal surface (Zone D) -** The horizontal surface is a horizontal plane located 150 feet above the established airport elevation and begins at the edge of the transitional surfaces and primary surface for a distance of 5,000 feet for visual approach runways, the perimeter of which in plan coincides with the perimeter of the horizontal zone.
- (9) **Larger than utility runway.** The runway that is constructed for and intended to be used for propeller driven aircraft or greater than 12,500 pounds maximum gross weight or jet powered aircraft.
- (10) **Non-precision instrument runway.** The 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 non-precision instrument approach procedure has been approved or planned.
- (11) **Obstruction.** Any building, structure, growth, or other object, including a mobile object which exceeds a limiting height as set out in Section 10.93.4 of this



Ordinance.

- (12) **Precision instrument runway.** A runway having an existing instrument approach procedure utilizing an instrument landing system (ILS) or a precision approach radar (PAR), or a runway for which a precision approach system is planned and is so indicated on the approved airport layout plan or any other planning document.
- (13) **Primary surface.** The primary surface is 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.~~ When the runway has no specially prepared hard surface, the primary surface ends at each end of that runway. The width of the primary surface is 1,000 feet, or 500 feet on either side of the runway centerline, for a precision instrument runway. ~~The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline.~~
- (14) **Runway.** A defined area on an airport prepared for landing and takeoff of aircraft along its length.
- (15) **Runway approach surface (Zone B)** - A critical overlay surface that reflects the approach and departure areas for each runway at an airport. The approach surface is longitudinally centered on the extended runway centerline, extending outward and upward from the end of the runway. The approach slope for visual runways is 20:1 for a distance of 5,000 feet.
- (16) **Runway protection zone (RPZ) (Zone A)** - The area off the end of the runway end designed to provide a clear area that is free of above ground obstructions and structures to enhance the protection of people and property on the ground. Zone A is intended to provide a clear area that is free of above-ground obstructions and structures.
- (17) **Transitional surfaces (Zone C).** The transitional A surface extending outward and upward at right 90 degree angles to the runway centerline and extends extended at a slope of seven feet horizontally for each one-foot vertically (7:1) from the sides of the primary and approach surfaces. ~~to where they intersect the horizontal and conical approach surfaces.~~ The Transitional surfaces for those portions of the precision approach surfaces, which project through and beyond the limits of the conical surface, extend to the point at which they intercept the horizontal surface at a height of 150 feet above the established airport elevation a distance of 5,000 feet measured horizontally from the edge of the approach surface and at a 90 degree angle to the extended runway centerline.

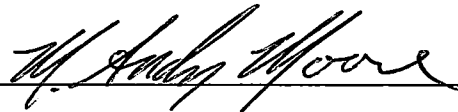
- (18) **Utility runway.** A runway intended solely for the operation of aircraft using visual approach procedures.
- (19) **Visual runway.** A runway intended solely for the operation of aircraft using visual approach procedures.


**PART 3**

That these amendments of the Unified Development Ordinance shall become effective upon adoption.

That these amendments of the Unified Development Ordinance shall become effective upon adoption.

Duly adopted this the 2nd day of May, 2023.

  
M. Andy Moore, Mayor

ATTEST  
  
Shannan L. Parrish, Town Clerk

