CITY OF GIRARD
Military Compatibility Area Overlay District

SECTION 1 - MILITARY COMPATIBILITY AREA OVERLAY DISTRICT (MCAOD)

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1.01 PURPOSE AND INTENT

The Military Compatibility Area Overlay District (MCAOD) implements and codifies the recommendations of the Youngstown Air Reserve Service (ARS) Joint Land Use Study (JLUS). The purpose of these regulations is to protect the public health, safety and welfare of the community and to preserve and maintain existing and future operational capabilities of Youngstown ARS.

1.02 APPLICABILITY

This Section establishes regulations applicable to all land located within the boundary of the Military Compatibility Overlay District (MCAOD), as adopted and depicted on the official Zoning Map for the City of Girard.

1.03 EXEMPTIONS

The following uses are exempt from the MCAOD regulations of this **Section 1:**

A. Existing Structures. This regulation shall not restrict or limit the use of legally established, existing land uses and structures as of the effective date of these regulations.

1.04 RELATIONSHIP OF MCAOD TO UNDERLYING ZONING

The MCAOD is a zoning overlay, with underlying zoning entitlements in place and in effect. The MCAOD permits only land uses supported by the underlying zoning district entitlements. The MCAOD does not, in any case, permit land uses of a greater density and/or intensity, unless the underlying zoning district and the MCAOD both permit the increased density and/or intensity in land use. The MCAOD regulations established herein supplement, modify, and where indicated, supersede the regulations of the underlying zoning district. All definitions, references, requirements, and other land use controls not specifically defined or modified by the regulations herein shall conform to provisions of this Zoning Code applicable to the underlying zoning district.

1.05 CONFLICTING PROVISIONS

The general provisions, zoning district regulations and all other development standards established within all other Sections of this Zoning Code are applicable within the MCAOD to the extent such regulations within the MCAOD establish a less restrictive standards(s) covering the same subject matter. Whenever a provision of the Zoning Code contains a specific standard(s) covering the same subject matter as this overlay, the more restrictive requirement(s) shall control.

1.06 ESTABLISHMENT – MCAOD AND MCA BOUNDARIES

The MCAOD and component parts – Youngstown ARS and Military Compatibility Areas (MCAs), are hereby established as depicted on the official Zoning Map for the City of Girard in the figure below. The MCAOD and the two (2) MCAs comprising the MCAOD are described as follows:

MCAOD

The MCAOD is the combined geospatial area of the two (2) MCAs, the outer boundary of which is defined by the outer boundary of the largest MCA, which is the Vertical Obstruction MCA. The boundary of the MCAOD and the two (2) MCAs is depicted on the City of Girard MCAOD Overlay Map**.**

BASH MCA

Establishes regulations to reduce impacts associated with increased bird and wildlife attractant land uses, activities and/or habitation.

Vertical Obstruction MCA

Establishes height limitations for structures and buildings to protect flight paths for aircraft at Youngstown ARS.

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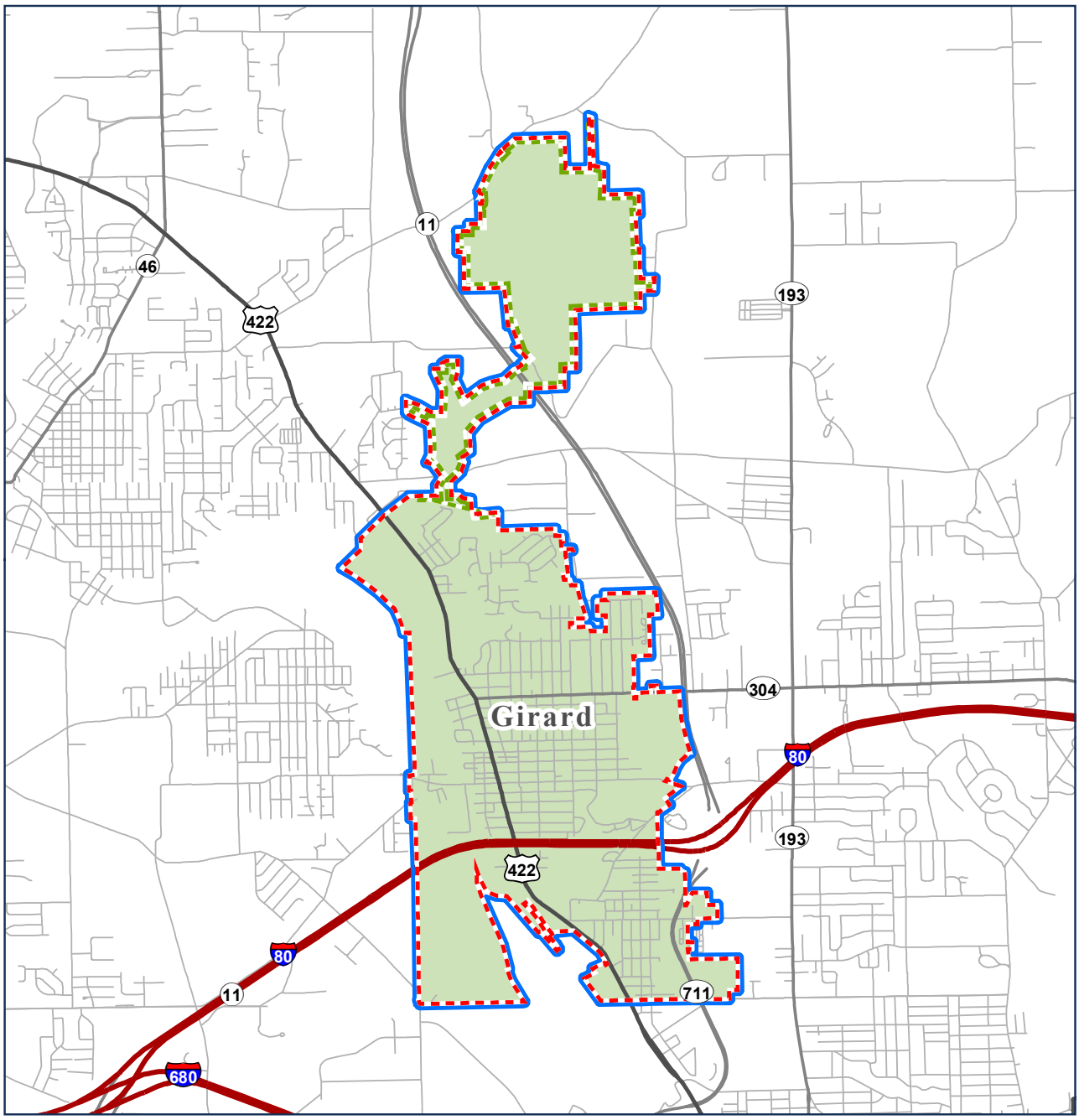


MCAOD Overlay
Vertical Obstructions MCA
BASH MCA
Girard
Interstate
US Route
State Route
Local Roads

This map is for planning purposes only and should not be considered legally accurate

Matrix

0 ¼ ½ ¾ 1 1¼ 1½ Miles

Source: U.S. Geographic Survey, 2019; Ohio Dept. of Transportation, 2019; Youngstown Air Reserve Station, 2018.

1.07 MCAOD DEVELOPMENT STANDARDS

This Section establishes regulations applicable to the overall MCAOD boundary and applies to all land within the combined and consolidated boundary of the two (2) MCAs.

A. Lighting.

1. **Purpose.** The purpose of this section is to establish limitations to outdoor lighting to reduce visibility impacts to military aviation operations.

2. **Applicability.** All properties within the MCAOD are subject to the lighting requirements established in this Section. The requirements of this section shall apply to any property in the MCAOD involving one or more of the following:

   a. Any new development or building; and/or

   b. Any addition to an existing development in excess of fifty (50) percent of the building square footage shall meet the requirements for the entire development and property.

3. **Prohibited Lighting.** The following lighting is prohibited:

   a. Lighting that is aimed, directed, or focused so as to cause upward directed light;

   b. The operation of searchlights for advertising purposes; and

   c. The use of laser source light or any similar high intensity light, such as used for outdoor advertising or entertainment, when projected above the horizontal plane.

4. **General Lighting Requirements.**

   a. All LED lighting shall have a Correlated Color Temperature (CCT) of 3000K or less.

   b. All lighting shall be fully shielded (downward directed) and full cutoff.

B. Alternative Energy.

1. **Purpose.** The purpose of this Section is to establish regulations for utility-scale (generating 10 or more megawatts) Alternative Energy facilities and structures to ensure impacts to military and aviation operations are minimized.

2. **Applicability.** The requirements of this Section shall apply to any application for municipal approval for the erection and maintenance of the following utility-scale Alternative Energy facilities and structures within the MCAOD:

   a. Solar Energy Facility;

   b. Wind Energy Facility; and

c. Other similar uses which involve the production, storage and distribution of energy resources and involve vertical structures, glare or other impacts to aviation operations at Youngstown ARS.

3. Alternative Energy Development Standards.

a. Applications for energy development projects shall include a mission compatibility evaluation from the DoD Military Aviation and Installation Assurance Siting Clearinghouse.

b. Applications for energy development projects shall include details related to the siting of facilities, energy capacity output, height of structures and facilities, and construction technology.

c. Applications for solar energy development projects shall include a glare analysis that satisfies the requirements of the 2013 FAA Interim Policy 78 FR 63276 regarding yellow glare, glare at Air Traffic Control Towers and analysis and observer characteristics.

d. Height Limits. No facility, building, or structure associated with the operation an Alternative Energy Facility shall exceed the heights established per the Vertical Obstruction MCA.

4. The information in subsections 3 a-d shall be reviewed and considered before any decision is rendered to approve an application for an energy development project.

1.08 Bird /Wildlife Aircraft Strike Hazard (BASH) Military Compatibility Area

A. BASH Military Compatibility Area Development Standards. All development within a five (5) statute mile radius of the Air Operations Area at Youngstown-Warren Regional Airport shall adhere to the following use standards:

1. Solid Waste Landfills. New solid waste landfills are prohibited. Solid waste landfills are defined as any discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile.

2. Solid Waste Landfill Transfer Stations. All new landfill transfer stations shall meet the following criteria:

a. Shall be fully enclosed and receive garbage behind closed doors;

b. Process received garbage via compaction, incineration, or similar manner; and

c. Remove all residue by enclosed vehicles.

d. Solid Waste Landfill Transfer Stations are prohibited if they:

(1) Handle or store putrescible waste outside or in a partially enclosed structure accessible to wildlife.

(2) Are open on one or more sides.

(3) Store uncovered quantities of municipal solid waste outside, even if only for a short time.

(4) Use semi-trailers that leak or have trash clinging to the outside.

(5) Do not control odors by ventilation and filtration systems (odor masking is not acceptable).

3. **Water Management Facilities.** Water management facilities include drinking water intake and treatment facilities, storm water and wastewater treatment facilities, associated retention and settling ponds, ponds built for recreational use, and ponds that result from mining activities. For the purpose of this section, ponds refer to stagnant bodies of water that may be natural or constructed and exclude residential and public swimming pools and other constructed facilities where water is circulated for filtration and chemical treatment.

   All new water management facilities shall meet the following criteria:

   a. Designed and operated so as not to create above-ground standing water.

   b. Stormwater detention ponds shall be designed, engineered, constructed, and maintained for a maximum 48–hour detention period after the design storm and remain completely dry between storms. To facilitate the control of hazardous wildlife, steep-sided, riprap lined, narrow, linearly shaped water detention basins shall be used.

   c. The following Water Management Facilities are prohibited:

      (1) New wastewater management facilities or associated settling ponds.

      (2) Artificial marshes.

4. **Livestock Production.** Confined livestock operations (i.e., feedlots, dairy operations, hog or chicken production facilities, or egg laying operations) often attract flocking birds, such as starlings, that pose a hazard to aviation. These facilities are prohibited. Any livestock operation shall have a program developed to reduce the attractiveness of the site to species that are hazardous to aviation safety.

5. **Aquaculture.** All new aquaculture activities shall be within fully enclosed buildings. Aquaculture activities outside fully enclosed buildings are prohibited.

6. **Golf courses.** Water traps at new golf courses shall be constructed with riprap along the length of the water edge to deter birds and wildlife.

1.09 VERTICAL OBSTRUCTION Military Compatibility Area

A. Purpose and Intent. The purpose and intent of the Vertical Obstruction MCA is to establish the geography and regulations to protect important flight areas for aircraft at Youngstown ARS. These requirements are to ensure compliance of development with FAA Regulation Title 14 Part 77, commonly known as Part 77, and provide a basis for evaluation of vertical obstruction compatibility.

B. Vertical Obstruction Military Compatibility Area Development Standards.

1. **Applicability.** FAA Part 77.17 establishes standards to determine obstructions within navigable airspace, based on the height of the proposed building/structure(s) or natural features above ground level (AGL) in relation to the military installation and operations. Pursuant to Part 77.17 an obstruction to air navigation is an object that is greater than specific heights relative to military operations within established height thresholds.

   FAA Part 77.21 establishes imaginary surfaces for military airports. An existing object, including a mobile object, is, and a future object would be an obstruction to air navigation if it is of greater height than the imaginary surfaces.

2. **Development with Structures Greater than 199 Feet AGL.** An FAA Part 77 compliance review is required to be submitted with any development application that proposes structures greater than 199 feet AGL in height.

1.12 DEFINITIONS

The following words and phrases applicable to the MCAOD, unless the context clearly indicates a different meaning or construction, shall mean:

A. Air Operations Area. Any area of an airport used or intended to be used for landing, takeoff, or surface maneuvering of aircraft. An Air Operations Area included such paved areas or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiways, or apron.

B. Airport Elevation. The highest point of an airport's usable runway measured in feet above mean sea level.

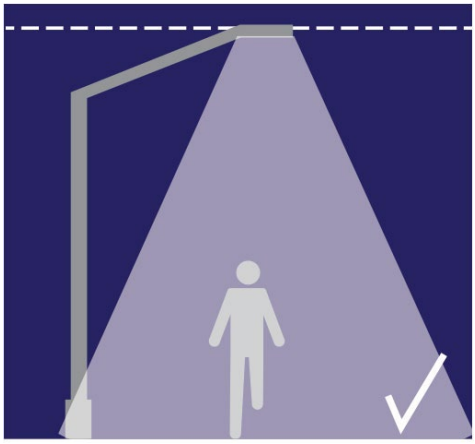
C. Alternative Energy. The term alternative energy is applied broadly to energy derived from renewable sources (e.g., solar, hydroelectric, wind).

D. Bird / Wildlife Aircraft Strike Hazard (BASH) MCA. The BASH MCA is an FAA designated area extending five (5) statute miles in all directions from the Air Operations Area at an airfield where there is the potential for a collision between birds and wildlife and an aircraft due to aircraft flying at lower altitudes and slower speeds.

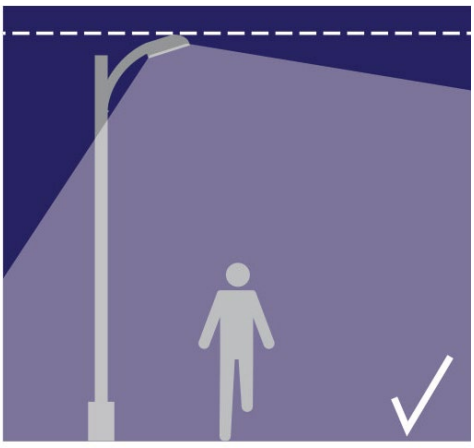
E. FAA. The Federal Aviation Administration.

F. Federal Aviation Regulation (FAR) Part 77. This regulation, titled "Objects Affecting Navigable Airspace," establishes standards for determining obstructions and their potential effects on aircraft operations. Objects are obstructions to air navigation according to FAR Part 77 if they exceed certain heights or penetrate certain imaginary surfaces established in relation to airport operations. Objects classified as obstructions are subject to an FAA aeronautical analysis to determine their potential effects on aircraft operations.

G. Full Cutoff. A lighting fixture that projects all of its light in a downward direction.



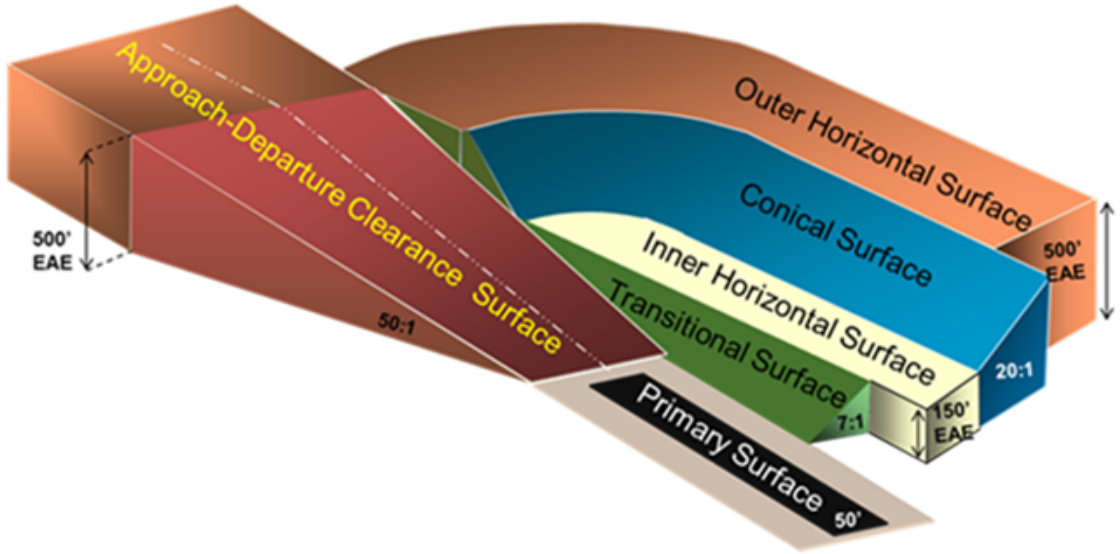
H. Fully Shielded. A light fixture that has a solid barrier (cap) at the top of the fixture in which the bulb is located so the lamp is not visible below the cap and no light is visible above the horizontal plane.



I. Glare. Light entering the eye directly from luminaires or indirectly from reflective surfaces that causes visual discomfort or reduced visibility. `

J. Height. The highest point of a structure or tree, plant or other object of natural growth or ground, measured from mean sea level

K. Imaginary Surfaces. The imaginary surfaces that help to define acceptable height limits are established by the DoD, according to military branch and runway type, e.g., Class A versus Class B. The surfaces utilized by the United States Air Force for a Class B runway like that at the Youngstown-Warren Regional Airport are depicted in the following graphic and defined as follows:



1. **Primary Surface**. The primary surface is an area in the immediate vicinity of the landing or takeoff area forming a large rectangle around the active runway. It extends 200 feet in length past the end of the runway surface and has a varied width depending on the runway requirements but may be from 250 to 2,000 feet wide.

2. **Approach-Departure Clearance Surface**. The approach-departure clearance surface is symmetrical about the runway centerline and begins as an inclined plane (glide angle) 200 feet past the end of the primary surface, and measures 50,000 feet long. The slope of the approach-departure clearance surface is 50:1 along the extended runway (glide angle) centerline until it reaches an elevation of 500 feet above the established airfield elevation. It continues horizontally at this elevation to a point 50,000 feet from the start of the glide angle. The width of the surface is 2,000 feet at its start near the runway end and flares uniformly to a width of 16,000 feet at the farthest edge.

3. **Conical Surface**. The conical surface is an oval-shaped area 7,000 feet wide, connecting the outside edge of the inner horizontal surface to the inside edge of the outer horizontal surface. It slopes from the inner horizontal surface to the outer horizontal surface at a ratio of 20 to one meaning that it extends 20 horizontal feet for every one vertical foot.

4. **Inner Horizontal Surface**. The inner horizontal surface is an oval-shaped area that surrounds the runway at a height of 150 feet above the established airfield elevation (EAE). It measures a total of 15,000 feet wide, including the area above the runway. It extends 7,500 feet out from the centerline of the runway and forms a half-circle at the runway ends.

5. **Outer Horizontal Surface**. The outer horizontal surface is an oval-shaped area that measures 30,000 feet in width out from the farthest edge of the conical surface. The height of the outer horizontal surface is 500 feet above the EAE.

6. **Transitional Surfaces**. Transitional surfaces include several vertical and vertically-sloped areas that connect all of the previously mentioned surfaces together. One set of transitional surfaces connects the outside edge of the primary surface to the inside edge of the inner horizontal surface. This connection is sloped at a ratio of seven to one, meaning that it extends seven horizontal feet for every one vertical foot. The second set of transitional surfaces connects the approach-departure clearance surfaces with the inner horizontal, conical, and outer horizontal surfaces. This connection is also sloped at a seven to one ratio.

L. Joint Land Use Study. A Joint Land Use Study (JLUS) is a collaborative planning process accomplished through the efforts of a military installation and/or airport and surrounding jurisdictions to identify and establish compatible land uses, enhanced communication procedures, and growth management guidelines for new development and other community activities in the vicinity of air operations. The overarching goal of a JLUS to identify compatible land uses and growth management guidelines to reduce incompatibilities.

M. Military Compatibility Area Overlay District (MCAOD). The MCAOD is a comprehensive zoning overlay district combining the two (2) MCAs for Youngstown ARS, reflected on the City of Girard Zoning Map. The MCAOD is defined by the outermost MCA boundary when all MCAs are combined, which is the Vertical Obstruction MCA. The City of Girard MCAOD Overlay map provides a mapped view of the influence the Youngstown ARS has on the region, and the various compatibility areas that should be considered when planning future growth and development in the region.

N. Military Compatibility Area (MCA). In compatibility planning, the term “Military Compatibility Area” (MCA) is used to formally designate a geographic area where military operations may impact local communities and, conversely, where local activities may affect the military’s ability to conduct its mission. The two (2) MCAs within the City of Girard are:

1. **BASH MCA.** The BASH MCA extends five (5) statutory miles in all directions from the Air Operations Area at the Youngstown-Warren Regional Airport. The BASH MCA is depicted on the City of Girard MCAOD Overlay map**.**

2. **Vertical Obstruction MCA**. The Vertical Obstruction MCA comprises all land within City of Girard within the six (6) Imaginary Surfaces defined herein. The Vertical Obstruction MCA protects important flight areas for aircraft that operate at Youngstown ARS and is where regulations apply to prevent vertical obstructions for aircraft operating at Youngstown ARS. The Vertical Obstruction MCA is depicted on the City of Girard MCAOD Overlay map**.**

O. Non-conforming Building. A building or portion of which was lawful when established but does not conform to a subsequently established overlay regulation.

P. Non-conformity, Legal. A use of a building, structure, lot, or site that was legally established prior to the adoption or amendment of this Zoning Code, but which would be prohibited, regulated, or restricted differently under the terms of this Zoning Code or future amendments.

Q. Non-Residential. Includes any of the following:

1. A commercial establishment where goods and commodities or services are provided, displayed, exchanged, sold or bought;

2. An industrial establishment where goods and commodities are manufactured, stored, or assembled; or

3. A public building in which the possession and/or use, as well as the property inside the structure, gives members of the public free access or use and includes buildings in which the public may enter for a purpose, including where a fee is charged; or otherwise classified as occupiable space.

R. Obstruction. Any structure or tree, plant or other object of natural growth that penetrates an imaginary surface. An obstruction can also mean anything that is determined to interfere with the established traffic pattern, even if that object or device does not penetrate an imaginary surface.

S. Part 77 or Part 77 Compliance. Federal Regulation Title 14 Part 77 establishes standards and notification requirements for objects affecting navigable airspace. Commonly referred to as Part 77 compliance, this regulation provides details to evaluate the potential for a vertical obstruction based on the elevation of the airfield, the height and resulting elevation of the new structure or facility, and the location of the structure or facility in relation to the airfield in question.

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

U. Substantial Improvement. A modification, alteration, expansion, or other improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the replacement value of the structure before the start of construction of the improvement.

V. Surface Impoundment. Includes wastewater treatment settling ponds, surface mining ponds, detention and retention ponds, artificial lakes and ponds, and similar water features. A new water impoundment includes an expansion of an existing water impoundment except where such expansion was previously authorized by land use action approved prior to the effective date of this Code.