

FOWLER TOWNSHIP

Military Compatibility Area Overlay District

SECTION 1 - MILITARY COMPATIBILITY AREA OVERLAY DISTRICT (MCAOD)

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- 1.02 Applicability
- 1.03 Exemptions
- 1.04 Relationship of MCAOD to Underlying Zoning
- 1.05 Conflicting Provisions
- 1.06 Establishment - MCAOD and MCA Boundaries
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- 1.11 Vertical Obstruction MCA
- 1.12 Definitions

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 Fowler Township.

1.03 EXEMPTIONS

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

A. Agricultural Use. This regulation shall not be used to regulate any operational aspect of an existing agricultural use, including the cultivation and harvesting of crops, land management activities (controlled burning, clearing, spraying and trimming), livestock management, hunting, or use and application of water. Expansion of existing structures and construction of new structures that are accessory for agricultural uses are subject to these regulations to the extent permitted by state law.

B. 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.

C. Single Residential Units on Existing Parcels. These regulations shall not prevent the construction of one (1) single-family residential unit on a legally established parcel if all the following conditions are met:

1. The footprint of the residential structure is entirely outside the 75 dB noise contour.
2. The height of the residential structure, including all buildings and accessory structures, is in compliance with the height regulations in this Section.

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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 Fowler Township and the figure below. The MCAOD and the four (4) MCAs comprising the MCAOD are described as follows:

MCAOD

The MCAOD is the combined geospatial area of all four (4) 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 four (4) MCAs is depicted on the Fowler Township MCAOD Overlay map on the following page.

Airfield Safety MCA

Addresses safety issues associated with Clear Zones (CZs) and Accident Potential Zones I and II (APZ I and APZ II).

BASH MCA

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

Noise MCA

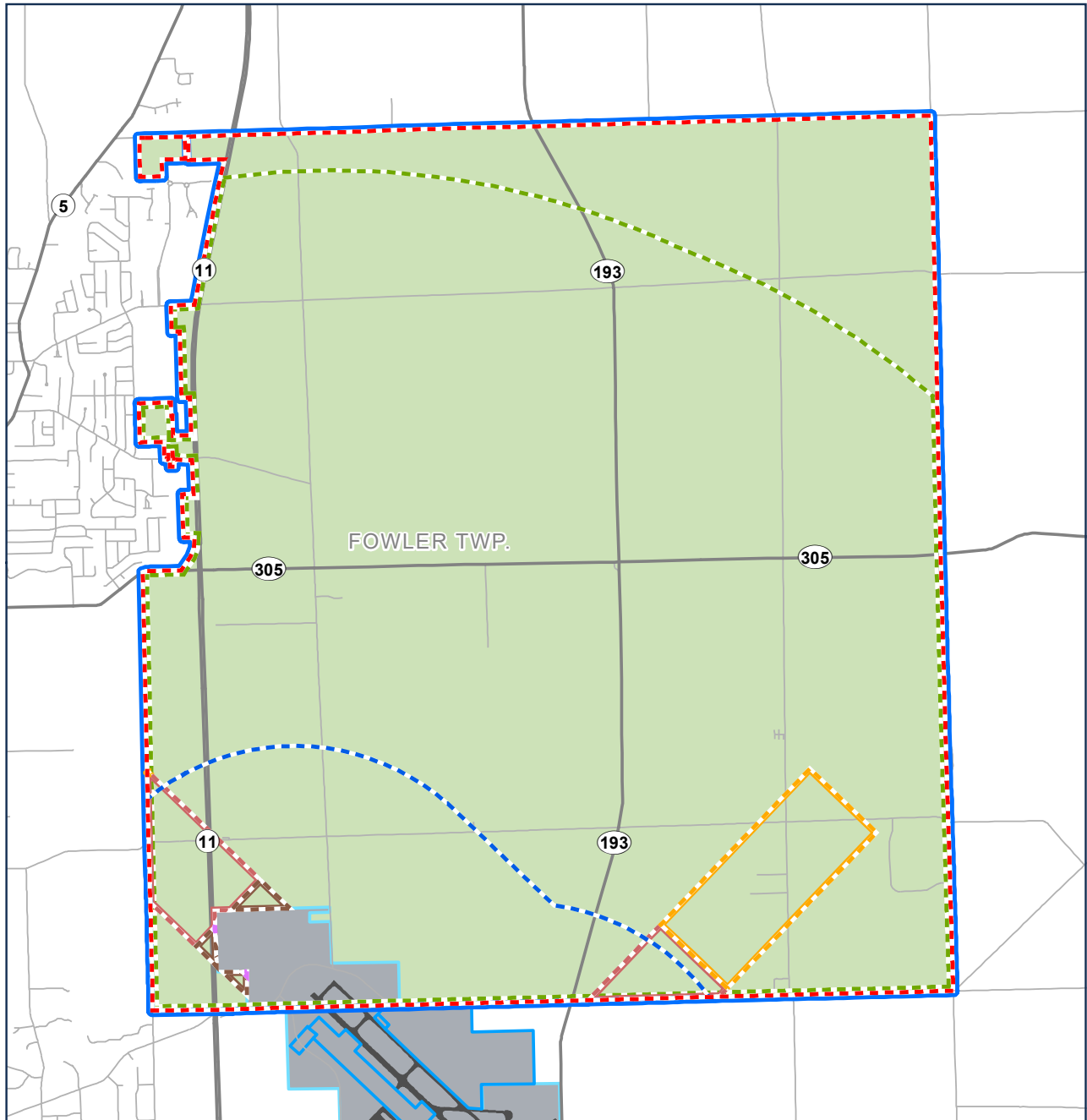
Addresses noise impact issues within the 65 dB and 70 dB noise contours.

Vertical Obstruction MCA

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

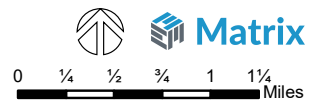
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- | | | |
|------------------------------|------------------------------------|-------------|
| MCAOD Overlay | Fowler | Interstate |
| Vertical Obstructions MCA | Youngstown ARS | US Route |
| Airfield Safety MCA - CZ | Youngstown-Warren Regional Airport | State Route |
| Airfield Safety MCA - APZ I | | Local Roads |
| Airfield Safety MCA - APZ II | | |
| BASH MCA | | |
| Noise MCA | | |
| Noise Awareness Area | | |

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



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

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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 all four (4) 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

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- 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 AIRFIELD SAFETY Military Compatibility Area

- A. Airfield Safety Military Compatibility Area Development Standards.** All development within the CZs and APZ I and APZ II shall conform to the **Table 1 – Table of Land Uses**, including residential density and nonresidential intensity (Floor Area Ratio or FAR) standards, where density is expressed as dwelling units per acre (Du/Ac) and floor area ratio (FAR) is defined as the total square footage of the habitable portion of a building divided by the total property area.
- B. Non-conforming Uses.** Existing legal non-conforming uses in the CZs that do not conform to the Table of Land Uses and their structures shall be permanently removed if the structure is more than 50 percent damaged or destroyed based on the replacement value. In no case shall the use be intensified, or the structure improved to enlarge the footprint, square footage or any vertical component.

Existing legal non-conforming uses in the APZs that do not conform to the Table of Land Uses may be replaced, but not expanded. Such replacement may not expand or increase the density and intensity of the original nonconforming use.

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Table 1 Table of Land Uses¹

LAND USE	CLEAR ZONE	APZ I	APZ II	DENSITY / INTENSITY
RESIDENTIAL				
Single Units; Detached	N	N	Y ²	Maximum Density 2 du/ac
Single Units; Semi-Detached, Single Units; Attached Row, Two Units; Side-by-Side, Two Units; One Above the Other	N	N	N	
Apartment; Walk-Up, Apartment; Elevator, Residential Hotel, Group Quarters	N	N	N	
Mobile Home Parks or Courts, Transient Lodgings, Other Residential	N	N	N	
TRADE				
Wholesale Trade	N	Y	Y	Maximum FAR 0.28 in APZ I & .56 in APZ II
Building Material Stores, Hardware and Farm Equipment Sales	N	Y ⁸	Y ⁸	
Discount Club Stores, Home Improvement Stores, Electronic Superstores, Other Retail Trade	N	N	Y	Maximum FAR 0.16 in APZ II
Shopping Centers - Neighborhood, Community, Regional, Super-Regional ⁹	N	N	N	
Food Stores	N	N	Y	Maximum FAR 0.24 in APZ II
Automotive Sales, Marine Craft Sales, Aircraft Sales	N	Y	Y	Maximum FAR 0.14 in APZ I & 0.28 in APZ II
Apparel Stores, Furniture Stores, Home Stores	N	N	Y	Maximum FAR 0.28 in APZ II
Eating and Drinking Establishments	N	N	N	
SERVICES				
Offices, Finance, Insurance and Real Estate Services, Personal Services, Business Services (Credit Reporting, Mail, Stenographic, Reproduction, Advertising), Miscellaneous Services	N	N	Y	Maximum FAR of 0.22 in APZ II
Cemeteries	N	Y ¹¹	Y ¹¹	
Warehousing and Storage Facilities	N	Y	Y	Maximum FAR 1.0 in APZ I & 2.0 in APZ II
Repair Services, Contract Construction Services	N	Y	Y	Maximum FAR 0.11 in APZ I & 0.22 in APZ II

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LAND USE	CLEAR ZONE	APZ I	APZ II	DENSITY / INTENSITY
Government Services	N	N	Y	Maximum FAR 0.24 in APZ II
Hospitals, Nursing Homes, Other Medical Facilities, Education Services, Child Care Services, Child Development Centers, and Nurseries, Religious Institutions, Resorts, Group Camps	N	N	N	
CULTURAL, ENTERTAINMENT AND RECREATIONAL				
Cultural Activities, Public Assembly, Auditoriums, Concert Halls, Outdoor Music Shells and Amphitheatres, Outdoor Sports Arenas, Spectator Sports	N	N	N	
Nature Exhibits	N	Y ¹³	Y ¹³	
Amusements, Fairgrounds, Miniature Golf, Driving Ranges, Amusement Parks	N	N	Y ²⁰	
Recreational Activities, Riding Stables, Water Recreation, Parks	N	Y ¹³	Y ¹³	Maximum FAR 0.11 in APZ I & 0.22 in APZ II
Other Cultural, Entertainment and Recreational Uses	N	Y ¹¹	Y ¹¹	
MANUFACTURING				
Food and Kindred Products, Textile Mill Products	N	N	Y	Maximum FAR 0.56 in APZ II
Lumber and Wood Products, Furniture and Fixtures, Paper and Products, Printing, Publishing, Miscellaneous Manufacturing	N	Y	Y	Maximum FAR 0.28 in APZ I & 0.56 in APZ II
Apparel and Other Finished Products. Fabrics and Leather Products, Chemical Plants, Petroleum Refining, Rubber, Plastic Products	N	N	N	
Stone, Clay, Glass, Primary Metal Products, Fabricated Metal Products	N	N	Y	Maximum FAR 0.56 in APZ II
TRANSPORTATION, COMMUNICATION AND UTILITIES				
Railroads, Rapid Rail Transit, Street Railway Transportation, Motor Vehicle Transportation, Aircraft Transportation, Marine Craft Transportation, Automobile Parking, Communication	N	Y ⁶	Y	Maximum FAR 0.28 in APZ I & 0.56 in APZ II
Highway and Street Right-of-Way	Y ⁵	Y ⁶	Y	
Utilities	N	Y ⁶	Y	
Solid Waste Disposal, Landfills, Incinerators	N	N	N	

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LAND USE	CLEAR ZONE	APZ I	APZ II	DENSITY / INTENSITY
RESOURCE PRODUCTION AND EXTRACTION				
Agriculture, excluding Livestock Production	Y ⁴	Y ¹⁴	Y ¹⁴	
Agriculture, Livestock Farming including Grazing and Feedlots	N	Y ¹⁴	Y ¹⁴	
Agriculture Related Activities	N	Y ¹⁵	Y ¹⁵	
Forestry Activities	N	Y	Y	Maximum FAR 0.28 in APZ I & 0.56 in APZ II, no activity which produces Smoke, Glare, or involves Explosives
Fishing Activities	N ¹⁷	Y	Y	
Mining Activities	N	Y ¹⁸	Y ¹⁸	
Other Resource Production or Extraction	N	Y	Y	
OTHER				
Undeveloped Land	Y	Y	Y	
Water Areas	N ¹⁹	N ¹⁹	N ¹⁹	

KEY NOTES:

1. A “Yes” or a “No” designation for compatible land use is to be used only for general comparison. Within each, uses exist where further evaluation may be needed in each category as to whether it is clearly compatible, normally compatible, or not compatible due to the variation of densities of people and structures. In order to assist air installations and local governments, general suggestions as to FARs are provided as a guide to density in some categories. In general, land use restrictions that limit occupants, including employees, of commercial, service, or industrial buildings or structures to 25 an acre in APZ I and 50 an acre in APZ II are considered to be low density. Outside events should normally be limited to assemblies of not more than 25 people an acre in APZ I, and maximum assemblies of 50 people an acre in APZ II. Recommended FARs are calculated using standard parking generation rates for various land uses, vehicle occupancy rates, and desired density in APZ I and II. For APZ I, the formula is FAR = 25 people an acre/ (Average Vehicle Occupancy x Average Parking Rate x (43560/1000)). The formula for APZ II is FAR = 50/ (Average Vehicle Occupancy x Average Parking Rate x (43560/1000)).
2. The suggested maximum density for detached single-family housing is two Du/Ac. In a planned unit development (PUD) of single-family detached units, where clustered housing development results in large open areas, this density could possibly be increased slightly provided the amount of surface area covered by structures does not exceed 20 percent of the PUD total area. PUD encourages clustered development that leaves large open areas.

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3. Other factors to be considered: Labor intensity, structural coverage, explosive characteristics, air-pollution, electronic interference with aircraft, height of structures, and potential glare to pilots.
4. No structures (except airfield lighting and navigational aids necessary for the safe operation of the airfield when there are no other siting options), buildings, or above-ground utility and communications lines should normally be located in Clear Zone areas on or off the air installation. The Clear Zone is subject to the most severe restrictions.
5. Roads within the graded portion of the Clear Zone are prohibited. All roads within the Clear Zone are discouraged, but if required, they should not be wider than two lanes and the rights-of-way should be fenced (frangible) and not include sidewalks or bicycle trails. Nothing associated with these roads should violate obstacle clearance criteria.
6. No above ground passenger terminals and no above ground power transmission or distribution lines. Prohibited power lines include high-voltage transmission lines and distribution lines that provide power to cities, towns, or regional power for unincorporated areas.
7. Development of renewable energy resources, including solar and geothermal facilities and wind turbines, may impact military operations through hazards to flight or electromagnetic interference. Each new development should to be analyzed for compatibility issues on a case-by-case basis that considers both the proposal and potentially affected mission.
8. Within SLUCM Code 52, maximum FARs for lumberyards (SLUCM Code 521) are 0.20 in APZ-I and 0.40 in APZ-11; the maximum FARs for hardware, paint, and farm equipment stores, (SLUCM Code 525), are 0.12 in APZ I and 0.24 in APZ II.
9. A shopping center is an integrated group of commercial establishments that is planned, developed, owned, or managed as a unit. Shopping center types include strip, neighborhood, community, regional, and super-regional facilities anchored by small businesses, a supermarket or drug store, discount retailer, department store, or several department stores, respectively.
10. Ancillary uses such as meeting places, auditoriums, etc. are not recommended.
11. No chapels or houses of worship are allowed within APZ I or APZ II.
12. Big box home improvement stores are not included as part of this category.
13. Facilities must be low intensity, and provide no playgrounds, etc. Facilities such as clubhouses, meeting places, auditoriums, large classes, etc., are not recommended.
14. Activities that attract concentrations of birds creating a hazard to aircraft operations should be excluded.

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15. Factors to be considered: labor intensity, structural coverage, explosive characteristics, and air pollution.
16. Lumber and timber products removed due to establishment, expansion, or maintenance of Clear Zone lands owned in fee will be disposed of in accordance with applicable DoD guidance.
17. Controlled hunting and fishing may be permitted for the purpose of wildlife management.
18. Surface mining operations that could create retention ponds that may attract waterfowl and present bird/wildlife aircraft strike hazards (BASH), or operations that produce dust or light emissions that could affect pilot vision are not compatible.
19. Naturally occurring water features (e.g., rivers, lakes, streams, wetlands) are pre-existing, nonconforming land uses. Naturally occurring water features that attract waterfowl present a potential BASH. Actions to expand naturally occurring water features or construction of new water features should not be encouraged. If construction of new features is necessary for storm water retention, such features should be designed so that they do not attract waterfowl.
20. Amusement centers, family entertainment centers or amusement parks designed or operated at a scale that could attract or result in concentrations of people, including employees and visitors, greater than 50 people per acre at any given time are incompatible in APZ II.

1.09 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 Airfield 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.

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- (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.

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1.10 NOISE Military Compatibility Area

A. Noise Military Compatibility Area Development Standards.

Sound Attenuation Building Standards for New Construction.

1. **Noise Sensitive Land Uses.** For the purposes of this section, the term Noise Sensitive Land Use includes any residential, medical, elder care facilities, schools, and places of worship, or other uses that are substantially similar in character and located within the 65 dB noise contour as defined herein.
2. **Minimum Required Sound Attenuation Measures for New Construction.** Proposed plans shall reflect compliance with the following minimum sound attenuation measures:
 - a. The minimum Sound Transmission Class (STC) rating of structure components shall be in compliance with the following table:

dB LDN	Minimum STC of Exterior Walls and Roof Ceiling	Minimum STC of Doors and Windows
65-69	39	25
70-74	44	33
>75	49	38

- b. **Alternative Compliance.** As an alternative to the requirements in the table in subsection a. above, structures may be permitted by Fowler Township to be designed and constructed to limit the interior noise level to no greater than 45 dB DNL. Exterior structures, terrain, and permanent plantings shall be permitted to be included as part of an alternative design. The alternative design shall be certified by an acoustical engineer at the expense of the applicant. The certification requirement may be waived if the proposed alternative design conforms with accepted acoustical engineering standards.
 - c. All plans subject to the requirements herein shall be designed to meet accredited acoustical engineering standards accepted by Fowler Township as meeting the purpose and intent of these requirements and accepted industry building construction methods to achieve sound attenuation of buildings. Fowler Township may administratively adopt building construction methods which are acceptable in meeting the standards herein.

1.11 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.

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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.
3. **Development with Structures less than 199 Feet AGL.** Fowler Township shall verify compliance of the development project with the adopted Vertical Obstruction Assessment Tool.

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. **A-weighted Decibel (dBA).** A unit of measurement for noise using a logarithmic scale and measured using the A-weighted sensory network on a noise-measuring device. An increase or decrease of 10 decibels corresponds to a tenfold increase or decrease in sound energy. A doubling or halving of sound energy corresponds to a 3 dBA increase or decrease.
- B. **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.
- C. **Airfield Safety Zones.** Per Air Force regulations, airfield safety zones are developed to assist military and community planners in developing land uses that are compatible with airfield operations, thereby protecting health and safety. Within these zones, there are recommended types, densities, and intensities of land uses. The individual areas that compose the Department of Defense (DoD) airfield safety zones for Youngstown ARS and Youngstown - Warren Regional Airport are described as follows:
 1. **Clear Zone (CZ).** A CZ is the area that begins at each end of a runway and measures 3,000 feet wide by 3,000 feet long. The center line of the zone corresponds to the center line of the runway. This is the area with greatest statistical potential for an aircraft mishap due to aircraft flying at slower speeds and lower altitudes. It is recommended that development of any type is prohibited in the CZ.

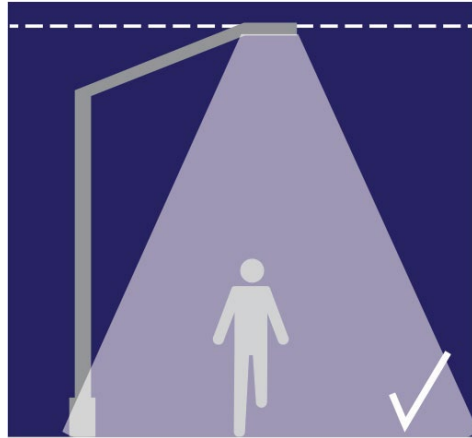
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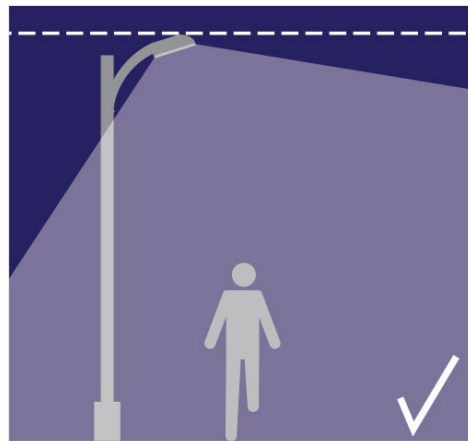
2. **Accident Potential Zone I (APZ I).** APZ I begins at the end of the Clear Zone. It is 3,000 feet wide and 5,000 feet long. Within APZ I some development is acceptable but is limited to specific types with low occupancy levels.
 3. **Accident Potential Zone II (APZ II).** APZ II begins at the end of the APZ I and is 3,000 feet wide and 7,000 feet long. Some types of development are restricted.
- D. Airport Elevation.** The highest point of an airport's usable runway measured in feet above mean sea level.
- E. Alternative Energy.** The term alternative energy is applied broadly to energy derived from renewable sources (e.g., solar, hydroelectric, wind).
- F. Ambient Noise.** The total noise associated with an existing environment (built or natural) and usually comprising sounds from many sources, both near and far.
- G. Attenuation.** Attenuation is a reduction in the level of sound resulting from an object's distance from the noise source or absorption by the surrounding topography, the atmosphere, barriers, construction techniques and materials, and other factors. Sound attenuation in buildings can be achieved using special construction practices that reduce the amount of noise from the exterior structure environment that penetrates the windows, doors, and walls of a building. Sound attenuation measures may be incorporated during initial construction for new buildings or as renovations for existing buildings.
- H. 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.
- I. Day-Night Average Sound Level (DNL).** DNL represents an average sound exposure over a 24-hour period. During the nighttime period (10:00 p.m. to 7:00 a.m.), averages are artificially increased by 10 dB. This weighting reflects the added intrusiveness and the greater disturbance potential of nighttime noise events attributable to the fact that community background noise typically decreases by 10 dB at night.
- J. dB (Decibels).** A unit of measure based on a logarithmic scale. A 10 dB increase in noise level corresponds to a 100 percent increase (doubling) in perceived loudness.
- K. FAA.** The Federal Aviation Administration.
- L. 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 considered to be 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.

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



N. 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.



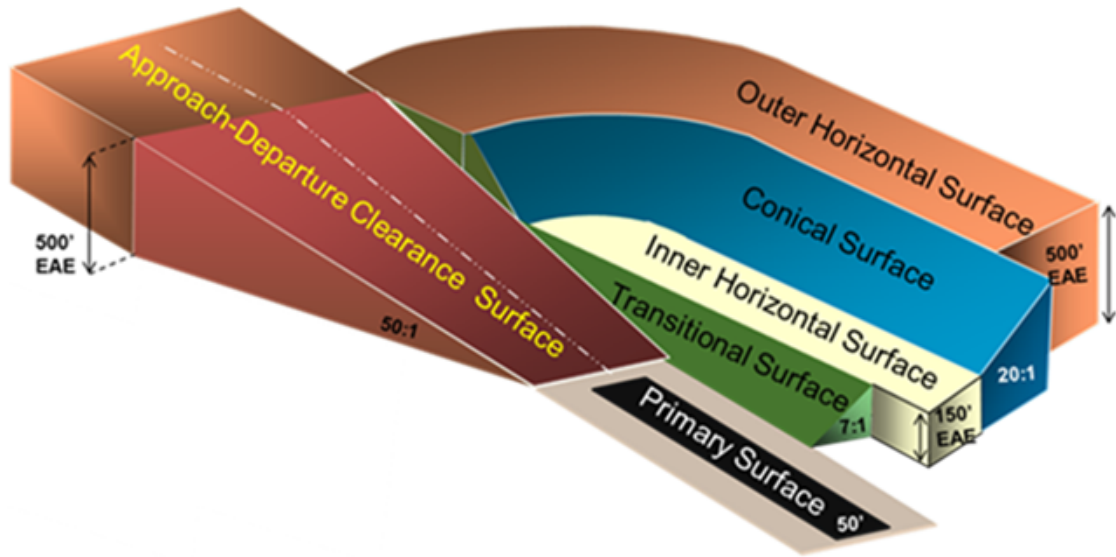
O. Glare. Light entering the eye directly from luminaires or indirectly from reflective surfaces that causes visual discomfort or reduced visibility.

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

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Q. 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 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 (EAG). 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.

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- 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.
- R. 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.
- S. Military Compatibility Area Overlay District (MCAOD).** The MCAOD is a comprehensive zoning overlay district combining the four (4) MCAs, reflected on the Fowler Township Zoning Map. The MCAOD is defined by the outermost MCA boundary when all MCAs are combined, which is the Vertical Obstruction MCA. The Fowler Township 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.
- T. 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 four (4) MCAs within Fowler Township are:
- 1. Airfield Safety MCA.** The Airfield Safety MCA includes all land within the Clear Zones (CZs) and Accident Potential Zones (APZ I and APZ II). The Airfield Safety MCA is depicted on the Fowler Township MCAOD Overlay map.
 - 2. 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 Fowler Township MCAOD Overlay map.
 - 3. Noise MCA.** The Noise MCA includes all land within Fowler Township under the 65 dB DNL and higher noise contours produced from air operations and training at Youngstown ARS. The Noise MCA is depicted on the Fowler Township MCAOD Overlay map.

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- 4. Vertical Obstruction MCA.** The Vertical Obstruction MCA comprises all land within Fowler Township 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 Fowler Township MCAOD Overlay map.
- U. Noise.** From a technical perspective, sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. More simply stated, sound is what we hear. Sound that reaches unwanted levels is referred to as noise.
- V. Noise Contour.** Noise contours consist of noise impact lines constructed by connecting points of equal noise level measured in dB and identify areas on a map that fall within that particular dB noise contour.
- W. Noise Level Reduction (NLR).** Building construction measures that reduce noise to mitigate noise exposure.
- X. Noise Sensitive Land Uses.** Land Uses including any residential, medical, elderly care facilities, schools, places of public assembly and religious institutions, or other uses which in the opinion of the administrative official are substantially similar in character and located within the 65 dB noise contour within the Noise MCA.
- Y. Non-conforming Building.** A building or portion of which was lawful when established but does not conform to a subsequently established overlay regulation.
- Z. 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 thereof.
- AA 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.
- BB 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.

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CC 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.

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

EE Sound Transmission Class (STC) Rating. An integer rating of how well a building wall or building component attenuates airborne sound.

FF 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.

GG 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 ordinance.