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Airspace Protection and Land Use Zoning: A Nationwide Review of State Statutes

The purpose of this TRS is to serve as a synthesis of pertinent legislation and related resources to be used for further study and evaluation by MnDOT. This TRS does not represent the conclusions of either CTC & Associates or MnDOT.

Introduction

Airport owners are responsible for protecting airports from hazards that could interfere with the safe operation and navigation of the aircraft they serve. Airport owners must comply with various state and federal regulations designed to prevent obstructions to airspace and to ensure compatible land uses around airports. States use several methods to achieve this compliance, including requiring permits for tall structures and establishing airport zoning.

Airport zoning generally falls into two categories: height limitation zoning and land use zoning. Most states empower local governments to adopt and enforce airport zoning ordinances, and some states require it. MnDOT is analyzing Minnesota's existing statutes and rules regarding airport safety zoning to determine whether updates are needed. MnDOT is especially interested in identifying how other states approach the issue of requiring local governments to enact land use zoning. This synthesis serves as a step toward identifying other states' approaches to airport zoning and will help inform future updates to Minnesota statutes and rules.

Summary

To identify other states' approaches to empowering local governments to enact airport safety zoning ordinances, we reviewed the statutes of all 50 states and conducted a survey of state aviation and aeronautics offices. Representatives from 32 states responded to our survey. We found the following regarding state provisions for local zoning:

- **Airspace protection zoning**: 42% of states *authorize* local governments to adopt this zoning, while 44% *require* it (either directly or to receive state grants); 14% do neither.
- **Land use compatibility zoning**: 48% of states *authorize* local governments to adopt this zoning, while 34% *require* it (either directly or to receive state grants); 18% do neither.

The table on the next page shows which states fall into each category. The "Neither" category encompasses states that neither authorize nor require local governments to enact airport zoning ordinances. Many of these states

address airspace protection at the state level instead, such as by requiring state-issued permits for tall structures or authorizing a state agency to enact zoning.

Airspace Protection Zoning		
Authorized	**Required**	**Neither**
Alabama, Arizona, Arkansas, California, Colorado, Delaware, Illinois, Indiana, Kansas, Louisiana, Maine, Maryland, Mississippi, Missouri, Nevada, New York, North Carolina, North Dakota, Utah, Vermont, Wyoming	Connecticut, Florida, Iowa*, Michigan, Minnesota, Montana*, Nebraska, New Hampshire*, New Jersey, New Mexico, Ohio, Oklahoma*, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas*, Virginia, Washington, Wisconsin	Alaska, Georgia, Hawaii, Idaho, Kentucky, Massachusetts, West Virginia
Land Use Zoning		
Authorized	**Required**	**Neither**
Alabama, Arizona, Arkansas, California, Colorado, Indiana, Kansas, Louisiana, Maine, Maryland, Mississippi, Missouri, Nebraska*, Nevada, New York, North Carolina, North Dakota, Ohio, Tennessee, Utah, Vermont, Virginia, West Virginia*, Wisconsin	Connecticut, Florida*, Iowa*, Michigan, Minnesota, Montana*, New Hampshire*, New Jersey, New Mexico, Oklahoma*, Oregon, Pennsylvania*, Rhode Island, South Carolina, South Dakota, Texas*, Washington	Alaska, Delaware, Georgia, Hawaii, Idaho, Illinois, Kentucky, Massachusetts, Wyoming

* Indicates that the category was chosen based on CTC's analysis of the statute text; this categorization differs from the state's survey response. In some cases the difference reflects that municipalities are not directly required to enact zoning, but are required to in order to receive state airport grants. See individual state entries beginning on page 6 for details.

This synthesis contains a preliminary rather than an exhaustive list of state statutes regarding airport zoning. Some states may have additional statutes or administrative rules that were not identified during our search, and these additional statutes may affect whether local zoning is categorized as authorized or required.

State Statutes

States take a range of approaches to addressing airport zoning. In 1987, the Federal Aviation Administration (FAA) issued Advisory Circular No. 150/5190-4A, *A Model Zoning Ordinance to Limit Height of Objects Around Airports*, and many states have used this model ordinance as a guide in creating an Airport Zoning Act. *Airport Cooperative Research Program Legal Research Digest 15: Compilation of State Airport Authorizing Legislation* contains a discussion of which provisions of the model ordinance states typically adopt (http://www.trb.org/Publications/Blurbs/167625.aspx; see page 25).

In part because of the model ordinance's guidance, many state statutes contain similar provisions. Regarding authorizing or requiring local governments to adopt airport zoning regulations, many states contain wording similar to this paragraph from Tennessee's statutes (Tennessee Code §42-6-103):

> In order to prevent the creation or establishment of airport hazards, every municipality or county having an airport hazard area within its territorial limits shall adopt, administer and enforce, under the police power and in the manner and upon the conditions prescribed in this chapter, airport zoning regulations for such airport hazard area, which regulations may divide such area into zones, and, within such zones, specify the land uses permitted and prohibited and regulated and restrict the height to which structures and trees may be erected or allowed to grow; provided, that these regulations are solely for the purposes of preventing airport hazards.

Location of zoning requirements. Of the states that require airport zoning, some states outline the requirement directly in a paragraph like the one above, while others use this paragraph only to authorize zoning, establishing the requirement in a separate section of the statutes or administrative rules (such as a section outlining conditions for receiving certain funding). As noted above, this synthesis provides a preliminary compilation of state statutes and may not include all statutes and rules for each state. This may affect whether a state is classified as authorizing or requiring local zoning.

Tall structure permitting. As Minnesota does, some states require permitting through an administrative agency such as the DOT or the aviation office for structures exceeding a certain height and within a certain distance from the airport. In some states, this permitting is in addition to local zoning, while in a few it is the primary mechanism for controlling airspace obstructions. A few states that require tall structure permitting are Alabama, Delaware, Florida, Kentucky, Maryland, Ohio, and Oklahoma.

Notable statutes

The following states are among those that have noteworthy approaches to the content of their statutes or how they are structured.

- **California:** Created county Airport Land Use Commissions that are required to prepare land use compatibility plans with a 20-year planning horizon. Cities and counties have final say on local land use issues.
- **Florida:** Statute outlines items to be considered in local land use ordinances. Statute has undergone extensive revisions focused on simplifying, streamlining and updating to correspond with current FAA rules, regulations and standards, and draft chapter is up for consideration in 2015 legislative session.
- **New Jersey:** State code outlines land use ordinance standards.
- **Ohio:** Statute requires that local zoning regulations be based in whole upon federal obstruction standards.
- **South Carolina:** State law requires local jurisdictions to enact local airport zoning ordinances, but only as per any pertinent state and federal regulations. If no such regulations exist, local jurisdictions still may adopt such ordinances.

Notable outreach efforts

The following states are among those that have made noteworthy outreach efforts to inform stakeholders about their laws and assist local governments in enacting zoning:

- **Kansas:** Created an airspace awareness tool for municipalities (www.ksdot.org/airspacetool), provided planning grants to help communities pass local height and hazard ordinances, and provide continuing education for lawyers on the topic.
- **Rhode Island:** In conjunction with creating its land use compatibility guidebook, the state compared the Airport Hazard Area with the local zoning for each airport to identify areas of compatibility and incompatibility. Efforts were coordinated with local town planners.

- **Washington**: The state Growth Management Act requires local governments to adopt comprehensive plans and regulations discouraging incompatible development near airports. The WSDOT technical assistance program helps communities meet the law's requirements.

Land Use Resources

The table below compiles states' land use compatibility manuals and related resources. For a full list of resources from each state, see the individual state entries beginning on page 6.

Land Use Compatibility Resources	
State	**Resources**
California	• Caltrans webpage, "Airport Compatible Land Use in California": http://www.dot.ca.gov/hq/planning/aeronaut/documents/alucp/index.htm This webpage contains links to several Caltrans documents on land use planning near airports. • *Airport Land Use Planning Handbook*, October 2011 http://www.dot.ca.gov/hq/planning/aeronaut/documents/alucp/AirportLandUsePlanningHandbook.pdf • "Airport Land Use Compatibility Planning in California" (brochure for public): http://www.dot.ca.gov/hq/planning/aeronaut/documents/alucp/ALUCbrochure2.pdf
Florida	FDOT webpage (scroll to "Airports and Airspace Protection"): http://www.dot.state.fl.us/aviation/flpub.shtm • *Airport Compatible Land Use Guidebook* [17MB PDF file], 2010. • *Airport Compatible Land Use Guidebook* booklet, 2010. • *Airport Compatible Land Use Guidebook* brochure, 2010.
Iowa	Iowa DOT webpage, "Compatible Land Use Near Airports": http://www.iowadot.gov/aviation/studiesreports/compatibleland.html • *Iowa Airport Land Use Guidebook*, 2008: http://www.iowadot.gov/aviation/airports/IowaAirportLandUseGuidebook2008.htm • "Recommended Airport Land Use Zones" poster: http://www.iowadot.gov/aviation/airports/Land_Use_Poster.pdf • "Airports and Communities" brochure: http://www.iowadot.gov/aviation/airports/Iowa%20Brochure_Airport%20and%20Communities%20Final.pdf
Michigan	*Zoning for Public Use Airports in the State of Michigan*: http://mi.gov/documents/aero/Zoning_Overview-Approach_Plans_and_AirportZoningAct_203533_7.pdf

Land Use Compatibility Resources	
State	**Resources**
Nevada	*Analysis of Land Use Around Nevada Airports: A Framework for Action,* prepared by Aries Consultants Ltd., January 2009. https://www.nevadadot.com/uploadedFiles/NDOT/About_NDOT/NDOT_Divisions/Planning/Aviation/AP_Systemplan.pdf Chapter 4 of this research report provides case studies of how six other states have used planning, zoning and other approaches to achieve a desirable level of control over airport incompatible land use.
North Dakota	*North Dakota Airport Managers' Manual*, 1995-1996, Chapter 17: Land Use Compatibility Guidelines. See Appendix A.
Ohio	*Good Neighbors By Design: A Guide to Land Use Planning for Ohio Airports*, 1993, revised November 2001. See Appendix B.
Oregon	*Airport Land Use Compatibility Guidebook*, 2003: http://www.oregon.gov/Aviation/Pages/landuseguidebook.aspx • Chapter 5, "Federal and State Regulations Related to Airport Compatible Land Use Planning."
Pennsylvania	*Pennsylvania Airport Land Use Compatibility Guidelines*, March 1996: ftp://ftp.dot.state.pa.us/public/bureaus/aviation/palanduse.pdf
Rhode Island	*Rhode Island Airport Land Use Compatibility Guidebook,* April 2013: http://www.pvdairport.com/documents/planning%20docs/_ri%20airport%20land%20use%20compatibility%20study_april%202013_complete.pdf
Texas	*Airport Compatibility Guidelines,* January 2003: http://ftp.dot.state.tx.us/pub/txdot-info/avn/avninfo/Airport_Compatibility_Guidelines.pdf
Utah	*Compatible Land Use Planning Guide for Utah Airports,* December 2000: http://www.udot.utah.gov/main/uconowner.gf?n=200411180926131
Virginia	• "A Guide to Compatible Airport Land Use Planning for Virginia Communities": http://www.doav.virginia.gov/land_use_planning.htm • "Building Blocks for Airport Land Use Compatibility": http://www.doav.virginia.gov/building_blocks_for_land-use.htm • Available upon request: *Airport Safety Zoning: A User's Guide for Local Government Officials.*
Washington	*WSDOT Airports and Compatible Land Use Guidebook*, January 2011: http://www.wsdot.wa.gov/aviation/Planning/ACLUguide.htm • Appendix G, "Learning More About: The Legal Framework for Compatibility Planning": http://www.wsdot.wa.gov/NR/rdonlyres/EC29C443-40D7-4BDC-9919-41D35A9A9051/0/AppendixG.pdf

Land Use Compatibility Resources	
State	**Resources**
Wisconsin	*Wisconsin Airport Land Use Guidebook*, June 2011, http://www.dot.wisconsin.gov/library/publications/topic/air/airportlanduseguide2011.pdf

Survey Results and Statute Citations

We conducted an online survey of state aviation and aeronautics offices. We sent the survey to representatives in all 50 states and received responses from 32 states. When possible, we identified staff in the offices' planning units or other staff who would be likely to have experience with airport zoning laws. For the remaining states, we sent the survey to the staff member who serves as the state's representative with the National Association of State Aviation Officials.

The survey consisted of the following questions:

1. Please provide your contact information.
2. Many states have statutes authorizing local governments to enact zoning ordinances to (1) protect the airspace surrounding airports by establishing height limitations and (2) restrict land use near airports to compatible uses. Some states also require local governments to enact these ordinances in order for an airport to receive state funds.

   Please indicate whether the statutes of your state AUTHORIZE local governments to enact each type of zoning ordinance, and if so, whether the statutes REQUIRE them to do so in order for an airport to receive state funds.
3. Please list the section(s) of your state statutes that address this issue (for example, "Minnesota Statutes § 360.062"). Please include a hyperlink if available.
4. If your state has an airport land use compatibility manual or similar guidance documents, please provide hyperlinks to these documents. You can also email documents to andrea.thomas@ctcandassociates.com.
5. Please use this space to provide any additional comments about your answers above.

For ease of reference, the individual state entries below include all 50 states. For states that responded to the survey, the state entry includes both the state's response text and a "Statute links" section added by CTC that provides more detailed statute citations. For states that did not respond to the survey, the state entries indicate that CTC identified the statute citations and, based on an analysis of the statute text, classified the states as authorizing or requiring each type of zoning.

Note that some survey respondents checked both "required" and "authorized" regarding their state's zoning provisions. In this case, we analyzed the statute text, generally selecting the "required" classification for the table on page 2. Also, states' systems for displaying online statutes vary in ease of navigation. In the entries below, we included links to table of contents directories as needed to facilitate navigation.

Alabama

1. **Contact:** John Eagerton, Chief, Aeronautics Bureau, Alabama Transportation Department, 334-242-6820, eagertonj@dot.state.al.us. For additional information, contact Frank Farmer at 334-242-6820.
2. **Airspace/height limitation zoning:** Authorized by statute
   Land use zoning: Authorized by statute
3. **Statute citation:** Code of Alabama 1975, Sections 4-6-1 to 4-6-15, authorize public airport owners to establish airport zoning ordinances and local laws.

   Statute links:
   - Section 4-6-4, Authority of counties and municipalities to adopt regulations; zoning jurisdiction of counties and municipalities: http://alisondb.legislature.state.al.us/acas/codeofalabama/1975/4-6-4.htm

   Title 23, Article 13, Airport Airspace Safety Act of 2009 (Sections 23-1-410 to 23-1-417).
   - Section 23-1-412, Airport hazards—Permits for construction, alteration, etc.; removal, modification, etc.: http://alisondb.legislature.state.al.us/acas/CodeOfAlabama/1975/23-1-412.htm

   See also:
   - Code of Alabama 1975 Table of Contents: http://alisondb.legislature.state.al.us/acas/codeofalabama/1975/coatoc.htm

4. **Airport land use compatibility manual or similar guidance documents:** N/A
5. **Additional comments:** In 2008, the Alabama legislature adopted a permitting process for tall structures that authorized the Aeronautics Bureau to review and permit tall structures that created a hazard to airports or air navigation. Opponents of the legislation were successful in amending it to the point that its implementation was seriously compromised. Consequently, the legislation is virtually useless.

Alaska

1. **Contact:** Roger Maggard, Airport Development Manager, Statewide Aviation, Alaska State Department of Transportation & Public Facilities, 907-269-0727, roger.maggard@alaska.gov.
2. **Airspace/height limitation zoning:** Neither authorized nor required
   Land use zoning: Neither authorized nor required
   Comments: Alaska does not have statutes specifically authorizing local governments to enact zoning ordinances regarding airports, although they do have the authority to enact zoning ordinances. Alaska Statutes Section 02.25.010 only applies to the Alaska Department of Transportation and Public Facilities, and this statute has never been implemented.
3. **Statute citation:** [No response.]

   Statute links:
   No statutes related to local governments. The following statute authorizes Alaska DOT&PF to adopt and enforce zoning regulations:

Chapter 02.25, Airport Zoning Act
http://www.legis.state.ak.us/basis/statutes.asp#02.25

- See Section 02.25.020, Power to adopt regulations.

4. **Airport land use compatibility manual or similar guidance documents:** [No response.]
5. **Additional comments:** [No response.]

Arizona

Arizona did not respond to our survey; all information about Arizona's statutes was compiled by CTC.

1. **Contact:** N/A
2. **Airspace/height limitation zoning:** Authorized by statute
   Land use zoning: Authorized by statute
3. **Statute citation:**
   Arizona Revised Statutes, Title 28, Chapter 25, Article 7: Airport Zoning and Regulation:
   http://www.azleg.gov/ArizonaRevisedStatutes.asp?Title=28
   - Section 28-8464, Political subdivisions; airport zoning regulations: http://www.azleg.gov/FormatDocument.asp?inDoc=/ars/28/08464.htm&Title=28&DocType=ARS

4. **Airport land use compatibility manual or similar guidance documents:** N/A
5. **Additional comments:** N/A

Arkansas

1. **Contact:** Richard Mills, State Airport Engineer, Arkansas Department of Aeronautics, 501-376-6781, Richard.mills@arkansas.gov.
2. **Airspace/height limitation zoning:** Authorized by statute
   Land use zoning: Authorized by statute
   Comments: The Department of Aeronautics strongly encourages our sponsors to enact local zoning ordinances that protect airspace as allowed by state law.
3. **Statute citation:** Act 1278 of 1999, "An Act to Protect the Users of Public Airports by Establishing a Minimum Distance Between Towers and Runways."

   Statute links:
   Arkansas Code main link:
   http://www.lexisnexis.com/hottopics/arcode/Default.asp
   - Chapter 363, Airport Zoning.
   - See also Chapter 117, Approach Zones.

4. **Airport land use compatibility manual or similar guidance documents:** We encourage airport sponsors to follow land use guidelines developed by the FAA.
5. **Additional comments:** [No response.]

California

1. **Contact:** Terry Barrie, Chief, Office of Aviation Planning, California Department of Transportation, 916-654-4151, terry.barrie@dot.ca.gov.
2. **Airspace/height limitation zoning:** Authorized by statute
   Land use zoning: Authorized by statute
3. **Statute citation:** California Public Utilities Code, Sections 21655 and 21670.

   Statute links:
   - Section 21655, Regulation of Obstructions: http://www.leginfo.ca.gov/cgi-bin/displaycode?section=puc&group=21001-22000&file=21655-21660
   - Section 21670, Airport Land Use Commission: http://www.leginfo.ca.gov/cgi-bin/displaycode?section=puc&group=21001-22000&file=21670-21679.5

   California Government Code:
   - Section 50485, Airport Approaches Zoning Law http://www.leginfo.ca.gov/cgi-bin/displaycode?section=gov&group=50001-51000&file=50485-50485.14

   See also:
   - California Public Utilities Code Table of Contents: http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=puc
   - California Government Code Table of Contents: http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=gov

4. **Airport land use compatibility manual or similar guidance documents:**
   - Public Utilities Code: http://www.dot.ca.gov/hq/planning/aeronaut/documents/regulations/cpuc_21001.pdf
   - *Airport Land Use Planning Handbook*, October 2011 http://www.dot.ca.gov/hq/planning/aeronaut/documents/alucp/AirportLandUsePlanningHandbook.pdf

   Related resources:
   - Caltrans webpage, "Airport Compatible Land Use in California": http://www.dot.ca.gov/hq/planning/aeronaut/documents/alucp/index.htm
     This webpage contains links to several Caltrans documents on land use planning near airports.
   - Airport Land Use Compatibility Planning in California (brochure for public): http://www.dot.ca.gov/hq/planning/aeronaut/documents/alucp/ALUCbrochure2.pdf

5. **Additional comments:** [No response.]

Colorado

1. **Contact:** David Gordon, Director, Colorado Division of Aeronautics, 303-512-5254, davidc.gordon@state.co.us.
2. **Airspace/height limitation zoning:** Authorized by statute
   Land use zoning: Authorized by statute
   Comments: Local zoning entities have the right to regulate land uses and height of objects to navigable airspace if they so choose, but are not required to do so.

3. **Statute citation:** Colorado House Bill 1040 provides guidelines for zoning entities to use as a guide when implementing land use rules. CR 43-10-113 also stipulates that zoning and building permit authorities shall adopt and enforce, at a minimum, rules and regulations to protect the land areas defined in 14 CFR part 77.

   Statute links:
   Colorado Revised Statutes main link: http://www.lexisnexis.com/hottopics/colorado/

   - Section 41-4-108, Removal of airport hazards
   - Section 43-10-113, Safe operating areas around airports—establishment
   - Section 43-10-102, Definitions
     - See subparagraph (3)(a)(VII)
   - Section 43-10-103, Division of aeronautics created—duties
     - See subparagraph (2)(f)

   See also:
   - Section 41-4-101, Operation a governmental function
   - Section 41-4-201, Power to establish airports

4. **Airport land use compatibility manual or similar guidance documents:** House Bill 1040 provides this guidance. Also, CR 43-10-102 allows the Division to acquire land, or any interest therein, to protect or prevent any easement through or other interest in airspace, including land for future airport development, to mitigate any hazard to the safe operation of aircraft.
5. **Additional comments:** [No response.]

Connecticut
Connecticut did not respond to our survey; all information about Connecticut's statutes was compiled by CTC.

1. **Contact:** N/A
2. **Airspace/height limitation zoning:** Required by statute
   Land use zoning: Required by statute
3. **Statute citation:**
   Connecticut General Statutes Section 15-88, Airport zoning:
   http://www.cga.ct.gov/current/pub/chap_266.htm#sec_15-88

   - Section 15-91, Adoption of airport zoning regulations:
     http://www.cga.ct.gov/current/pub/chap_266.htm#sec_15-91

4. **Airport land use compatibility manual or similar guidance documents:** N/A
5. **Additional comments:** N/A

Delaware

1. **Contact:** Bobbie Geier, Assistant Director, Planning, Delaware DOT, 302-760-2119, roberta.geier@state.de.us.
2. **Airspace/height limitation zoning:** Authorized by statute
   Land use zoning: Neither authorized nor required
   Comments: Agencies with land use jurisdiction must submit to DelDOT a request for a building permit, if the building/tower is within a certain radius of a public use airport. DelDOT reviews Federal Aviation Regulation (FAR) Part 77, and if there is an obstruction into airspace, we can disapprove the building.
3. **Statute citation:** Delaware Code, Title 2, Chapter 6, Obstructions in Airport Approach Areas; Section 602.

   Statute links:
   Chapter 6, Obstructions in Airport Approach Areas:
   http://delcode.delaware.gov/title2/c006/index.shtml
   - Section 602, Erection or maintenance of obstructions; prohibitions.

   Chapter 9, Airports of Political Subdivisions:
   http://delcode.delaware.gov/title2/c009/sc01/index.shtml
   - Section 909, Specific powers of political subdivisions.
   - Section 910, Encroachment upon airport protection privileges; abatement.

4. **Airport land use compatibility manual or similar guidance documents:** [No response.]
5. **Additional comments:** This statute is very helpful in preventing an obstruction from being built and in eliminating existing structures if being replaced (i.e., cell towers).

Florida

1. **Contact:** Sergey Kireyev, Airspace and Land Use Manager, Aviation Office, Florida Department of Transportation, 850-414-4502, sergey.kireyev@dot.state.fl.us.
2. **Airspace/height limitation zoning:** Required by statute
   Land use zoning: Authorized by statute [*We classified this as "required" based on our analysis of the statute text.*]
   Comments: Chapter 333 of Florida Statutes requires all local governments having an area within their jurisdiction upon which an airport hazard may be established to adopt, administer and enforce airport protection zoning. The required protections extend to prevention of hazards to air navigation. The statute also states that local governments shall develop land use zoning regulations that consider the following:
   - Locations of sanitary landfills.
   - Attractants of wildlife.
   - Location of educational and residential facilities in the airport vicinity (both noise and

safety considerations).
- Development in the Runway Protection Zone.

3. **Statute citation:** Florida Statutes, Chapter 333, Airport Zoning: http://www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&URL=0300-0399/0333/0333.html
    - Section 333.03, Power to adopt airport zoning regulations: http://www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0300-0399/0333/Sections/0333.03.html

    See also:
    - Chapter 332, Airports and Other Air Navigation Facilities: http://www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&URL=0300-0399/0332/0332.html
    - Chapter 330, Regulation of Aircraft, Pilots and Airports: http://www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&URL=0300-0399/0330/0330.html
    - Florida Administrative Code, Rule 14-60.009, Airspace Protection: https://www.flrules.org/gateway/RuleNo.asp?title=AIRPORT%20LICENSING,%20REGISTRATION,%20AND%20AIRSPACE%20PROTECTION&ID=14-60.009

4. **Airport land use compatibility manual or similar guidance documents:** The office has published an Airport Land Use Compatibility Guidebook, which was last updated in 2010. It is supplemented by the guidebook brochure and primer. All of these publications can be located at http://www.dot.state.fl.us/aviation/flpub.shtm.

5. **Additional comments:** The state of Florida has an extensive history of established "home rule" authority and private property rights. The involvement of the state is limited to tall structure permitting (in some cases), and provision of technical review and assistance for zoning variances, proposed airport protection zoning ordinances and amendments thereto, and local government comprehensive plan amendments. In all other matters, the mechanism of protection of public-use facilities from encroachment rests in state airport grant assurances.

    Florida Statutes Chapter 333, referenced above, has undergone significant revisions focused on simplifying, streamlining and updating the regulations to correspond with current FAA rules, regulations and standards. The draft chapter is up for consideration during the 2015 legislative session.

Georgia

Georgia did not respond to our survey; all information about Georgia's statutes was compiled by CTC.

1. **Contact:** N/A
2. **Airspace/height limitation zoning:** Neither authorized nor required
   Land use zoning: Neither authorized nor required
3. **Statute citation:** According to *ACRP Legal Research Digest 15*, Georgia has no major state provisions regarding airport zoning, and our review of Georgia's statutes confirmed this. The statutes cited below are the most closely related to this topic.

Statute links:

Georgia Code main link: http://www.lexisnexis.com/hottopics/gacode/Default.asp

- Title 6, Chapter 3, Article 2, Powers of Local Governments as to Air Facilities.
    - Section 6-3-20, Acquisition, construction, maintenance, and control of airports and landing fields by local governments authorized

4. **Airport land use compatibility manual or similar guidance documents:** N/A
5. **Additional comments:** N/A

Hawaii

Hawaii did not respond to our survey; all information about Hawaii's statutes was compiled by CTC.

1. **Contact:** N/A
2. **Airspace/height limitation zoning:** Neither authorized nor required
   Land use zoning: Neither authorized nor required
   Comments: Hawaii's Airport Zoning Act authorizes the state's director of transportation to adopt and enforce airport zoning regulations.
3. **Statute citation:**
   Hawaii Revised Statutes, Chapter 262, Airport Zoning Act:
   http://www.capitol.hawaii.gov/hrscurrent/Vol05_Ch0261-0319/HRS0262/HRS_0262-.htm
    - Section 262-3, Power to adopt airport zoning regulations: http://www.capitol.hawaii.gov/hrscurrent/Vol05_Ch0261-0319/HRS0262/HRS_0262-0003.htm

4. **Airport land use compatibility manual or similar guidance documents:** N/A
5. **Additional comments:** N/A

Idaho

Idaho did not respond to our survey; all information about Idaho's statutes was compiled by CTC.

1. **Contact:** N/A
2. **Airspace/height limitation zoning:** Neither authorized nor required
   Land use zoning: Neither authorized nor required
   Comments: Idaho's Airport Zoning Act authorizes the Idaho Transportation Department to adopt and enforce airport zoning regulations.
3. **Statute citation:** Idaho Code, Title 21, Chapter 5, Airport Zoning Act:
   http://legislature.idaho.gov/idstat/Title21/T21CH5.htm
    - Section 503, subparagraph 1, Power to adopt regulations: http://legislature.idaho.gov/idstat/Title21/T21CH5SECT21-503.htm

4. **Airport land use compatibility manual or similar guidance documents:** N/A
5. **Additional comments:** N/A

Illinois

1. **Contact:** Robert Hahn, Airspace Specialist, Aeronautics Division, Illinois Department of Transportation, 217-524-1580, Robert.Hahn@illinois.gov.
2. **Airspace/height limitation zoning:** Authorized by statute
   Land use zoning: Neither authorized nor required
   Comments: For public-owned airports only. Protected surfaces start at 50' vertical and up. Include Part 77, Terminal Instrument Procedures (TERPS), and circling approach. Also, some usage such as smoke, light and other environmental discharge as realized.
3. **Statute citation:**

   Statute links:
   Illinois Compiled Statutes, Chapter 620, Section 25, Airport Zoning Act:
   http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=1807&ChapterID=48
   - Section 13. Power to adopt airport zoning regulations.

   Illinois Administrative Code, Title 92, Chapter I, Subchapter b, Part 16, Airport Hazard Zoning:
   http://www.ilga.gov/commission/jcar/admincode/092/09200016sections.html

4. **Airport land use compatibility manual or similar guidance documents:** No state land use zoning—local jurisdiction. Just follow FAA Advisory Circulars.
5. **Additional comments:** [No response.]

Indiana
Indiana did not respond to our survey; all information about Indiana's statutes was compiled by CTC.

1. **Contact:** N/A
2. **Airspace/height limitation zoning:** Authorized by statute
   Land use zoning: Authorized by statute
   Comments: Indiana's statutes provide for permitting of tall structures by Indiana DOT. Statutes also provide for the creation of a local board of aviation commissioners within any local governmental entity that has an airport within its jurisdiction. Statutes provide the board with the power to adopt airport zoning regulations. Similar powers are conferred on the boards of airport authorities.
3. **Statute citation:** Indiana Code, Title 8, Utilities and Transportation:
   http://www.in.gov/legislative/ic/2010/title8/
   - Article 21, Chapter 10, Regulation of Tall Structures:
     http://www.in.gov/legislative/ic/2010/title8/ar21/ch10.pdf
   - Section 8-22-2-9 Establishment of restricted zones; approaches to airport; zoning jurisdiction: http://www.in.gov/legislative/ic/2010/title8/ar22/ch2.pdf
   - Section 8-22-3-14 Establishment of restricted zones; eminent domain; zoning jurisdiction:
     http://www.in.gov/legislative/ic/2010/title8/ar22/ch3.pdf

4. **Airport land use compatibility manual or similar guidance documents:** N/A
5. **Additional comments:** N/A

Iowa

1. **Contact:** Kay Thede, Aviation Programs Manager, Office of Aviation, Iowa Department of Transportation, 515-239-1048, kay.thede@dot.iowa.gov.
2. **Airspace/height limitation zoning:** Authorized by statute [*We classified this as "required" based on the respondent's comments below.*]
   Land use zoning: Authorized by statute [*We classified this as "required" based on the respondent's comments below.*]
   Comments: The statute authorizes local governments. The DOT aviation grant program is administered to require zoning for state funding.
3. **Statute citation:** Iowa Code, Chapter 329, Airport Zoning, https://www.legis.iowa.gov/DOCS/ACO/IC/LINC/2013.Chapter.329.PDF
   - Section 329.3, Zoning regulations—powers granted.
4. **Airport land use compatibility manual or similar guidance documents:**
   Iowa DOT webpage, "Compatible Land Use Near Airports":
   http://www.iowadot.gov/aviation/studiesreports/compatibleland.html
   - *Iowa Airport Land Use Guidebook*:
     http://www.iowadot.gov/aviation/airports/IowaAirportLandUseGuidebook2008.htm
   - Recommended Airport Land Use Zones poster:
     http://www.iowadot.gov/aviation/airports/Land_Use_Poster.pdf
   - Brochure—Airports and Communities:
     http://www.iowadot.gov/aviation/airports/Iowa%20Brochure_Airport%20and%20Communities%20Final.pdf
   - Airport Planning and Zoning Grant Application:
     http://www.iowadot.gov/aviation/legislative/291118%20Airport%20Planning%20and%20Zoning%20Grant%20Application.doc
5. **Additional comments:** We'd like to receive a copy of your results. Thanks!

Kansas

1. **Contact:** Jesse Romo, Aviation, Kansas Department of Transportation, 785-296-2553, jromo@ksdot.org.
2. **Airspace/height limitation zoning:** Authorized by statute
   Land use zoning: Authorized by statute
3. **Statute citation:** KSA Chapter 3, Article 7.

   Statute links:
   Kansas Statutes Annotated, Chapter 3, Article 7, Zoning Regulations:
   http://www.kslegislature.org/li/b2013_14/statute/003_000_0000_chapter/003_007_0000_article/
   - Section 3-703, Power to adopt airport zoning regulations; privately owned airports:
     http://www.kslegislature.org/li/b2013_14/statute/003_000_0000_chapter/003_007_0000_article/003_007_0003_section/003_007_0003_k/

4. **Airport land use compatibility manual or similar guidance documents:** [No response.]
5. **Additional comments:** In the past, we provided planning grants from our Kansas Airport Improvement Program to help communities pass local height and hazard ordinances. We may not have published guidance, but we created an airspace awareness tool (www.ksdot.org/airspacetool) and do public speaking to local communities about airspace and even train lawyers on the matter through their required Continuing Legal Education.

Kentucky

1. **Contact:** John Houlihan, Administrator, Kentucky Airport Zoning Commission, 502-564-0310, john.houlihan@ky.gov.
2. **Airspace/height limitation zoning:** Neither authorized nor required
   Land use zoning: Neither authorized nor required
   Comments: Kentucky has laws that require structures to be permitted before being built on or around airports. Please see our webpage:
   - Kentucky Airport Zoning Resources: http://transportation.ky.gov/Aviation/Pages/KAZC-resources.aspx
3. **Statute citation:**
   Statute summary at Kentucky Airport Zoning Commission webpage:
   http://transportation.ky.gov/Aviation/Pages/Zoning-Commission.aspx

   Kentucky Revised Statutes, Chapter 183, Aviation:
   http://www.lrc.ky.gov/Statutes/chapter.aspx?id=38012
   - Sections 183.861 to 183.873, Airport Zoning
   - Section 183.990, Penalties

   Kentucky Administrative Regulations, Title 602, Transportation Cabinet Office of Aeronautics:
   http://www.lrc.state.ky.us/kar/TITLE602.HTM
   - Chapter 50, Airport Zoning Commission

4. **Airport land use compatibility manual or similar guidance documents:** [No response.]
5. **Additional comments:** [No response.]

Louisiana

1. **Contact:** Brad Brandt, Aviation Director, Aviation Division, Louisiana Department of Transportation and Development, 225-379-3040, brad.brandt@la.gov.
2. **Airspace/height limitation zoning:** Authorized by statute
   Land use zoning: Authorized by statute
3. **Statute citation:** Louisiana Revised Statutes, Title 2, Chapter 3, Airport Zoning, Sections 318 to 390.

   Statute links:
   Title 2, Aeronautics:
   http://www.legis.state.la.us/lss/lss.asp?folder=78

- Section 383, Airport zoning regulations by parishes, cities, towns, villages and other political subdivisions:
  http://www.legis.state.la.us/lss/lss.asp?doc=81913

4. **Airport land use compatibility manual or similar guidance documents:** [No response.]
5. **Additional comments:** [No response.]

Maine
Maine did not respond to our survey; all information about Maine's statutes was compiled by CTC.

1. **Contact:** N/A
2. **Airspace/height limitation zoning:** Authorized by statute
   Land use zoning: Authorized by statute
3. **Statute citation:**
   Maine Revised Statutes, Title 6, Chapter 13, Airport Zoning:
   http://www.mainelegislature.org/legis/statutes/6/title6ch13sec0.html

   - Section 241, Regulations:
     http://www.mainelegislature.org/legis/statutes/6/title6sec241.html

4. **Airport land use compatibility manual or similar guidance documents:** N/A
5. **Additional comments:** N/A

Maryland
Maryland did not respond to our survey; all information about Maryland's statutes was compiled by CTC.

1. **Contact:** N/A
2. **Airspace/height limitation zoning:** Authorized by statute
   Land use zoning: Authorized by statute
3. **Statute citation:**
   Maryland Code Annotated, Article 5, Transportation:
   http://mgaleg.maryland.gov/2014RS/Statute_Web/gtr/gtr.pdf
   - Sections 5-501 to 5-511
   - Sections 5-601 to 5-617

   Key sections:
   - Section 5-502 [Administration may adopt zoning]:
     http://mgaleg.maryland.gov/webmga/frmStatutesText.aspx?article=gtr&section=5-502&ext=html&session=2014RS&tab=subject5

   - Section 5-602 [Political subdivisions may adopt zoning]:
     http://mgaleg.maryland.gov/webmga/frmStatutesText.aspx?article=gtr&section=5-602&ext=html&session=2014RS&tab=subject5

   - Section 5-606 [Political subdivisions may restrict height and regulate land use]:
     http://mgaleg.maryland.gov/webmga/frmStatutesText.aspx?article=gtr&section=5-606&ext=html&session=2014RS&tab=subject5

4. **Airport land use compatibility manual or similar guidance documents:** N/A
5. **Additional comments:** N/A
   Related resources:
   - Maryland Aviation Administration Airport Zoning Permit webpage: http://www.marylandaviation.com/content/permitsandforms/constructionzoning/

Massachusetts
Massachusetts did not respond to our survey; all information about Massachusetts' statutes was compiled by CTC.

1. **Contact:** N/A
2. **Airspace/height limitation zoning:** Neither authorized nor required
   Land use zoning: Neither authorized nor required
3. **Statute citation:** Massachusetts General Laws, Chapter 90, Sections 35A to 35D.

   Statute links:
   Chapter 90 Table of Contents:
   https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXIV/Chapter90

   - Section 35B:
     https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXIV/Chapter90/Section35B

4. **Airport land use compatibility manual or similar guidance documents:** N/A
5. **Additional comments:** N/A

Michigan

1. **Contact:** Linn Smith, Airspace and Airport Zoning Specialist, Michigan Office of Aeronautics, 517-335-9949, smithl50@michigan.gov.
2. **Airspace/height limitation zoning:** Required by statute; authorized by statute
   Land use zoning: Required by statute; authorized by statute
3. **Statute citation:** Michigan Compiled Laws (MCL) 259.431 to 259.465 is the Airport Zoning Act, and MCL 125.3203 requires land use and height protections to be incorporated into city/village, township and county zoning ordinances for airport approach protection areas surrounding all licensed public-use airports in the state of Michigan.

   Statute links:
   - Sections 259.431 to 259.465, Airport Zoning Act: http://legislature.mi.gov/doc.aspx?mcl-Act-23-of-1950-Ex-Sess-
   - Section 125.3203: http://legislature.mi.gov/doc.aspx?mcl-125-3203

4. **Airport land use compatibility manual or similar guidance documents:** *Zoning for Public Use Airports in the State of Michigan*: http://mi.gov/documents/aero/Zoning_Overview-Approach_Plans_and_AirportZoningAct_203533_7.pdf.
5. **Additional comments:** [No response.]

Minnesota

1. **Contact:** N/A
2. **Airspace/height limitation zoning:** Required by statute
   Land use zoning: Required by statute
3. **Statute citation:** Minnesota Statutes Chapter 360, Airports and Aeronautics: https://www.revisor.mn.gov/statutes/?id=360
   - Sections 360.061 to 360.074, Airport Zoning
   - Sections 360.081 to 360.091, Regulation of Structure Heights
4. **Airport land use compatibility manual or similar guidance documents:** *Airport Land Use Compatibility Manual,* September 2006. http://www.dot.state.mn.us/aero/planning/landuse-compatibility-manual.html
5. **Additional comments:** N/A

Mississippi

Mississippi did not respond to our survey; all information about Mississippi's statutes was compiled by CTC.

1. **Contact:** N/A
2. **Airspace/height limitation zoning:** Authorized by statute
   Land use zoning: Authorized by statute
3. **Statute citation:**
   Mississippi Code:
   http://www.sos.state.ms.us/ed_pubs/mscode/
   - Mississippi Code, Title 61, Chapter 7, Airport Zoning
     - Section 61-7-7, Power to adopt airport zoning regulations
4. **Airport land use compatibility manual or similar guidance documents:** N/A
5. **Additional comments:** N/A

Missouri

Missouri did not respond to our survey; all information about Missouri's statutes was compiled by CTC.

1. **Contact:** N/A
2. **Airspace/height limitation zoning:** Authorized by statute
   Land use zoning: Authorized by statute
3. **Statute citation:**

   Missouri Revised Statutes:
   - Section 67.1203, Political subdivision may adopt and enforce airport hazard area zoning—hazard area may be divided into zones: http://www.moga.mo.gov/statutes/C000-099/0670001203.HTM
   - Section 67.1205, Airport compatible land use zoning regulation may be adopted, when—regulation of land adjacent or in vicinity of airport, requirement: http://www.moga.mo.gov/statutes/C000-099/0670001205.HTM

- Section 305.575, Airport hazards, zoning—zoning committee—regulations, variances—penalty: http://www.moga.mo.gov/statutes/C300-399/3050000575.HTM

See also:
- Missouri Revised Statutes Table of Contents: http://www.moga.mo.gov/statutes/statutes.htm

4. **Airport land use compatibility manual or similar guidance documents:** N/A
5. **Additional comments:** N/A

Montana

1. **Contact:** Tim Conway, Aeronautics, Montana Department of Transportation, 406-444-9547, tconway@mt.gov.
2. **Airspace/height limitation zoning:** [*No response. Based on our analysis of the statutes, we included Montana in the "Required" category for both types of zoning.]*
   Land use zoning: [No response.]
   Comments: NPIAS [National Plan of Integrated Airport Systems] airports are required to designate an airport affected area (zoning). State funds are not tied to the establishment of an airport affected area. Non-NPIAS airports are authorized to designate an airport affected area (zoning). State funds are not tied to the establishment of an airport affected area.
3. **Statute citation:** Montana Code Annotated, Section 67-7-201.

   Statute links:
   Montana Code Annotated, Title 67, Chapter 7, Airport Affected Areas:
   http://leg.mt.gov/bills/mca_toc/67_7.htm

   - Section 67-7-201, Designation of airport affected area—regulations required—maps and descriptions required—public hearing required—effect of designation: http://leg.mt.gov/bills/mca/67/7/67-7-201.htm

   - Section 67-7-203, Airport affected area regulations—contents: http://leg.mt.gov/bills/mca/67/7/67-7-203.htm

   See also:
   - Title 67, Aeronautics, Table of Contents: http://leg.mt.gov/bills/mca_toc/67.htm
     The Table of Contents indicates that Montana previously had an Airport Zoning Act that was repealed (Chapter 6).

4. **Airport land use compatibility manual or similar guidance documents:** None.
5. **Additional comments:** [No response.]

Nebraska

1. **Contact:** Russ Gasper, Division Manager, Nebraska Department of Aeronautics, 402-471-7700, russ.gasper@nebraska.gov.
2. **Airspace/height limitation zoning:** Required by statute
   Land use zoning: Neither authorized nor required. [*We classified this as "Authorized by statute" based on our analysis of the statute text.*]
3. **Statute citation:** Nebraska Revised Statutes, Sections 3-301 to 3-339, Airport Zoning Act.

   Statute links:
   - Section 3-303, Airport hazard; zoning regulations; modifications and exceptions: http://nebraskalegislature.gov/laws/statutes.php?statute=3-303
   - Chapter 3 Table of Contents: http://nebraskalegislature.gov/laws/browse-chapters.php?chapter=3

4. **Airport land use compatibility manual or similar guidance documents:** [No response.]
5. **Additional comments:** [No response.]

Nevada

Nevada did not respond to our survey; all information about Nevada's statutes was compiled by CTC.

1. **Contact:** N/A
2. **Airspace/height limitation zoning:** Authorized by statute
   Land use zoning: Authorized by statute
3. **Statute citation:** Nevada Revised Statutes, Title 44, Chapter 497, Zoning: http://www.leg.state.nv.us/nrs/NRS-497.html
   - Section 497.040, Authority to adopt, administer and enforce airport zoning regulations: http://www.leg.state.nv.us/nrs/NRS-497.html#NRS497Sec040
4. **Airport land use compatibility manual or similar guidance documents:**

   Related research report:

   Analysis of Land Use Around Nevada Airports: A Framework for Action, prepared by Aries Consultants Ltd., January 2009.
   https://www.nevadadot.com/uploadedFiles/NDOT/About_NDOT/NDOT_Divisions/Planning/Aviation/AP_Systemplan.pdf
   Chapter 4 provides case studies of how six other states have used planning, zoning and other approaches to achieve a desirable level of control over airport incompatible land use.

5. **Additional comments:** N/A

New Hampshire

1. **Contact:** Tricia L. Schoeneck Lambert, Administrator, Bureau of Aeronautics, New Hampshire Department of Transportation, 603-271-1674, tlambert@dot.state.nh.us.
2. **Airspace/height limitation zoning:** Authorized by statute. [*We classified this as "required" based on our analysis of the statute text.*]
   Land use zoning: Authorized by statute. [*We classified this as "required" based on our analysis of the statute text.*]
3. **Statute citation:** New Hampshire Revised Statutes, Chapter 424, Airport Zoning: http://www.gencourt.state.nh.us/rsa/html/NHTOC/NHTOC-XXXIX-424.htm
   - Section 424:5, Adoption of Airport Zoning Regulations: http://www.gencourt.state.nh.us/rsa/html/XXXIX/424/424-5.htm

   See also:
   - Section 422-B, Control of Tall Structures: http://www.gencourt.state.nh.us/rsa/html/NHTOC/NHTOC-XXXIX-422-B.htm

4. **Airport land use compatibility manual or similar guidance documents:** N/A
5. **Additional comments:** [No response.]

New Jersey

1. **Contact:** Ashwin Patel, Acting Manager, Aeronautics, New Jersey Department of Transportation, 609-723-2994, ashwin.patel@dot.state.nj.us.
2. **Airspace/height limitation zoning:** [No response.] *We classified this as "required" based on our analysis of the statute text.*]
   Land use zoning: Required by statute; authorized by statute.
3. **Statute citation:** Title 6, Aviation, Section 6:1-83, Airport safety zones, delineation.

   Statute links:
   New Jersey Statutes, Title 6, Sections 6:1-81 to 6:1-88, Air Safety and Zoning Act of 1983.
   - Sections 6:1-83, Airport safety zones, delineation;
   - Section 6:1-84, Uses within airport safety zones, standards; and
   - Section 6:1-85, Municipal ordinance to meet State standards: http://lis.njleg.state.nj.us/cgi-bin/om_isapi.dll?clientID=55805435&Depth=2&depth=2&expandheadings=on&headingswithhits=on&hitsperheading=on&infobase=statutes.nfo&record={34C3}&softpage=Doc_Frame_PG42

   New Jersey Administrative Code, Title 16, Chapter 62, Air Safety and Zoning: http://www.nj.gov/transportation/about/rules/documents/16-62AirSafetyandZoning_000.pdf

   - Subchapter 2, Section 16:62-2.1 Municipal requirements
   - Subchapter 5, Land Use Ordinance Standards

4. **Airport land use compatibility manual or similar guidance documents:** N/A
5. **Additional comments:** [No response.]

New Mexico
New Mexico did not respond to our survey; all information about New Mexico's statutes was compiled by CTC.

1. **Contact:** N/A
2. **Airspace/height limitation zoning:** Required by statute
   Land use zoning: Required by statute
3. **Statute citation:**

   New Mexico Statutes, Sections 3-39-16 to 3-39-26, Municipal Airport Zoning Law:
   - Section 3-39-20, Adoption of airport zoning regulations

   Access to statutes:
   http://public.nmcompcomm.us/nmpublic/gateway.dll/?f=templates&fn=default.htm

4. **Airport land use compatibility manual or similar guidance documents:** N/A
5. **Additional comments:** N/A

New York

1. **Contact:** Reyhan Doganaksoy, ITS 1, Aviation Bureau, New York State Department of Transportation, 518-485-7767, Reyhan.Doganaksoy@dot.state.gov.
2. **Airspace/height limitation zoning:** Authorized by statute
   Land use zoning: Authorized by statute
   Comments: New York state authorizes local governments to enact zoning ordinances. Local governments are granted authority on land use decisions within their jurisdictions. See General Municipal Law, Sections 355 and 356.
3. **Statute citation:**

   Statute links:
   New York State General Municipal Law, Article 14, Airports and Landing Fields:
   - Section 356, Protection of approaches to public airport:
     http://public.leginfo.state.ny.us/LAWSSEAF.cgi?QUERYTYPE=LAWS+&QUERYDATA=$$GMU356$$@TXGMU0356+&LIST=LAW+&BROWSER=EXPLORER+&TOKEN=40796417+&TARGET=VIEW

   See also:
   - Section 355, Acquisition of rights and property surrounding airports:
     http://public.leginfo.state.ny.us/LAWSSEAF.cgi?QUERYTYPE=LAWS+&QUERYDATA=$$GMU355$$@TXGMU0355+&LIST=LAW+&BROWSER=EXPLORER+&TOKEN=40796417+&TARGET=VIEW

   General Municipal Laws Table of Contents:
   http://public.leginfo.state.ny.us/LAWSSEAF.cgi?QUERYTYPE=LAWS+&QUERYDATA=@LLGMU+&LIST=LAW+&BROWSER=BROWSER+&TOKEN=48722826+&TARGET=VIEW

4. **Airport land use compatibility manual or similar guidance documents:** See "Digest of New York Laws Affecting Aviation," February 2000, at

https://www.dot.ny.gov/divisions/operating/opdm/aviation/repository/files/av_laws.pdf

- See Part III, Municipalities and Aviation, page 17.

Other guidance documents:
https://www.dot.ny.gov/divisions/operating/opdm/aviation/documents

5. **Additional resources:** [No response.]

North Carolina
North Carolina did not respond to our survey; all information about North Carolina's statutes was compiled by CTC.

1. **Contact:** N/A
2. **Airspace/height limitation zoning:** Authorized by statute
   Land use zoning: Authorized by statute
3. **Statute citation:**

   North Carolina General Statutes, Chapter 63, Article 4, Model Airport Zoning Act:
   http://www.ncleg.net/gascripts/statutes/statutelookup.pl?statute=63

   - Section 63-31, Adoption of airport zoning regulations.

4. **Airport land use compatibility manual or similar guidance documents:** N/A
5. **Additional comments:** N/A

North Dakota

1. **Contact:** Kyle Wanner, Airport Planner, North Dakota Aeronautics Commission, 701-425-5926, kcwanner@nd.gov.
2. **Airspace/height limitation zoning:** Authorized by statute
   Land use zoning: Authorized by statute
   Comments: The North Dakota Aeronautics Commission works with each public airport to establish local zoning and airspace/height limitation restrictions on land in the vicinity of the airport. The state does not require the establishment of a zoning ordinance.
3. **Statute citation:** North Dakota Century Code, Chapter 2-04, Airport Zoning:
   http://www.legis.nd.gov/cencode/t02c04.pdf
   - Section 2-04-03. Power to adopt airport zoning regulations.

4. **Airport land use compatibility manual or similar guidance documents:** Mr. Wanner provided the following document via email:
   - *North Dakota Airport Managers' Manual*, 1995-1996, Chapter 17: Land Use Compatibility Guidelines. See Appendix A.
5. **Additional comments:** [No response.]

Ohio

1. **Contact:** David Dennis, Office of Aviation, Ohio Department of Transportation, 614-387-2352, david.dennis@dot.state.oh.us.
2. **Airspace/height limitation zoning:** Required by statute; authorized by statute.
   Land use zoning: Authorized by statute
   Comments: Airspace zoning is required at most publicly owned airports in order to receive grants.
3. **Statute citation:** Ohio Revised Code, Chapter 4563.

   Statute links:
   Chapter 4563, Airports: http://codes.ohio.gov/orc/4563
   - Section 4563.03, Airport zoning boards: http://codes.ohio.gov/orc/4563.03
   - Section 4563.031, Zoning regulations: http://codes.ohio.gov/orc/4563.031
   - Section 4563.032, Adopting federal obstruction standards: http://codes.ohio.gov/orc/4563.032

   Chapter 4561, Aeronautics: http://codes.ohio.gov/orc/4561
   - Sections 4561.30 to 4561.99 (permitting by Ohio DOT)

4. **Airport land use compatibility manual or similar guidance documents:** Mr. Dennis provided the following document via email:
   - *Good Neighbors By Design: A Guide to Land Use Planning for Ohio Airports*, 1993, revised November 2001. See Appendix B.
5. **Additional comments:** [No response.]

Oklahoma

1. **Contact:** Grayson Ardies, Aviation Program Manager, Planning Division, Oklahoma Aeronautics Commission, 405-604-6903, gardies@oac.ok.gov.
2. **Airspace/height limitation zoning:** Authorized by statute. [*We classified this as "required" based on our analysis of the statute text.*]
   Land use zoning: Authorized by statute. [*We classified this as "required" based on our analysis of the statute text.*]
   Comments: Oklahoma has a statewide airport zoning law that is administered by the Aeronautics Commission called the Aircraft Pilot and Passenger Protection Act (APPPA). This law went into effect October 1, 2010. It protects all public-use airports, as well as military airports in the state, from obstructions to air navigation and structures that may be considered incompatible with normal airport operations. We have used FAR Part 77 imaginary surfaces, in particular the precision approach surface, the horizontal surface, conical surface, primary surface and runway protection zone, and used these as our zoning surfaces that would require permitting action. If there is a proposed structure that penetrates any of the surfaces listed in APPPA, they are required to receive a permit from the Commission prior to construction. This law does not preempt or prevent any local municipality from enacting their own zoning ordinances, it simply adds another layer of protection to FAR Part 77 and any local zoning ordinance.

   Oklahoma also has an older law in place which authorizes the creation of local zoning ordinances. This is listed in Title 3, Sections 100-116. As a precondition to receiving state grant funds, a local

sponsor is required to have in place zoning regulations that restrict the use of land in the vicinity of the airport and that protect the approaches to the airport.

3. **Statute citation:** Oklahoma Statutes, Title 3, Sections 120.1 to 120.14 and Sections 100 to 116.

   Statute links:
   Oklahoma Statutes Table of Contents: http://www.oklegislature.gov/osstatuestitle.html

   Title 3: http://webserver1.lsb.state.ok.us/OK_Statutes/CompleteTitles/os3.rtf
   - Sections 120.1 to 120.14, Aircraft Pilot & Passenger Protection Act
   - Sections 100 to 116, Airport Zoning Act
     - Section 3-103, Power to adopt airport zoning regulations—Joint boards.

4. **Airport land use compatibility manual or similar guidance documents:** No manuals or guiding documents. Will send a copy of APPPA and our permit application for you to reference.

   Mr. Ardies also wrote via email: I've attached a copy of our statewide airport zoning law called the Aircraft Pilot and Passenger Protection Act. If you have any questions regarding this law or any of the other information that I submitted in the survey, please feel free to give me a call.

   Documents:
   - Aircraft Pilot & Passenger Protection Act: See Appendix C.
   - Tall Structures Permit Application Form: See Appendix D.
   - Building for an Incompatible Purpose Permit Application Form: See Appendix E.

5. **Additional comments:** [No response.]

Oregon
Oregon did not respond to our survey; all information about Oregon's statutes was compiled by CTC.

1. **Contact:** N/A
2. **Airspace/height limitation zoning:** Required by statute
   Land use zoning: Required by statute
3. **Statute citation:**

   Oregon Revised Statutes, Chapter 836, Airports and Landing Fields
   https://www.oregonlegislature.gov/bills_laws/lawsstatutes/2011ors836.html
   - Section 836.610, Local government land use plans and regulations to accommodate airport zones and uses; funding; rules.
   - Section 836.619, State compatibility and safety standards for land uses near airports; rules.

   Oregon Administrative Rules, Section 660-012-0045:
   http://arcweb.sos.state.or.us/pages/rules/oars_600/oar_660/660_012.html
   - Subparagraph 2
4. **Airport land use compatibility manual or similar guidance documents:**
   Airport Land Use Compatibility Guidebook, 2003:
   http://www.oregon.gov/Aviation/Pages/landuseguidebook.aspx

- Chapter 5, "Federal and State Regulations Related to Airport Compatible Land Use Planning."

5. **Additional comments:** N/A

Pennsylvania

1. **Contact:** Rich McQuown, Environmental Manager, Bureau of Aviation, Pennsylvania Department of Transportation, 717-705-1251, rmcquown@pa.gov.
2. **Airspace/height limitation zoning:** Required by statute
   Land use zoning: Authorized by statute. [*We classified this as "required" based on our analysis of the statute text.*]
   Comments: Pennsylvania Act 164 requires municipalities within the Federal Aviation Regulations (FAR) 14 CFR Part 77 areas around an airport are required to have ordinances that restrict the height of objects that could interfere with airport operations. Airports accepting aviation grant funding are required to take appropriate action, to the extent reasonable, to work with their communities to adopt airport hazard zoning and promote compatible land use.
3. **Statute citation:** Pennsylvania Act 164, Chapter 59, Section 5912 outlines zoning responsibilities, requirements, and administrative processes.
   http://www.legis.state.pa.us/cfdocs/legis/LI/consCheck.cfm?txtType=HTM&ttl=74

   Statute links:
   Pennsylvania Consolidated Statutes, Title 74, Chapter 59, Subchapter B, Airport Zoning
   - Section 5912, Power to adopt airport zoning regulations: http://www.legis.state.pa.us/cfdocs/legis/LI/consCheck.cfm?txtType=HTM&ttl=74&div=0&chpt=59&sctn=12&subsctn=0

   Chapter 57, Obstructions to Airport Operation:
   http://www.legis.state.pa.us/cfdocs/legis/LI/consCheck.cfm?txtType=HTM&ttl=74&div=0&chpt=57&sctn=1&subsctn=0

4. **Airport land use compatibility manual or similar guidance documents:** *Pennsylvania Airport Land Use Compatibility Guidelines*, March 1996:
   ftp://ftp.dot.state.pa.us/public/bureaus/aviation/palanduse.pdf

5. **Additional comments:** A summary of Pennsylvania's Airport Hazard Zoning initiative may be found at
   http://www.dot.state.pa.us/Internet/Bureaus/pdBOA.nsf/AviationHomepage?openframeset
   Click "Planning and Zoning" on the left menu, then click "Airport Zoning and Compatible Land Use."

Rhode Island

1. **Contact:** Vincent Scarano, Airport Planner, Rhode Island Airport Corp., 401-691-2482, vscarano@pvdairport.com.
2. **Airspace/height limitation zoning:** Required by statute
   Land use zoning: Required by statute
   Comments: Re: "Required by statute" definition: Rhode Island owns and operates all the airports.

Municipalities do not receive state funding. State legislation requiring airspace protection for airports is noted in survey question #3.

3. **Statute citation:** Rhode Island General Laws, Title 1, Aeronautics, Chapter 1-3, Airport Zoning.

   There are also regulations that require each community to maintain a current Town Comprehensive Plan. Those plans cannot be inconsistent with the State Guide Plan (incorporates Airport Plans).

   Statute links:
   Chapter 1-3, Airport Zoning:
   http://webserver.rilin.state.ri.us/Statutes/TITLE1/1-3/INDEX.HTM

   - Section 1-3-5, Zoning powers of political subdivisions:
     http://webserver.rilin.state.ri.us/Statutes/TITLE1/1-3/1-3-5.HTM

   Table of Contents: http://webserver.rilin.state.ri.us/Statutes/

4. **Airport land use compatibility manual or similar guidance documents:** *Rhode Island Airport Land Use Compatibility Guidebook*, April 2013:
   http://www.pvdairport.com/documents/planning%20docs/_ri%20airport%20land%20use%20compatibility%20study_april%202013_complete.pdf

5. **Additional comments:** A supplemental effort to the *Guidebook* included preparation of the Airport Hazard Area versus the local zoning for each airport. This reveals potential areas of compatibility (or non-compatibility). In developing our documents, coordination was conducted with the local Town Planner where our airports were located. They were provided with a copy of the results.

South Carolina

1. **Contact:** Mihir Shah, Lead Aviation Planner, South Carolina Aeronautics Commission, 803-896-6257, mshah@aeronautics.sc.gov.

2. **Airspace/height limitation zoning:** Required by statute; authorized by statute
   Land use zoning: Required by statute; authorized by statute
   Comments: Title 55 of the South Carolina Code of laws, which covers aviation and airport matters, was significantly revised in 2012. This revision included significant changes to state airport land use laws and policy, covering both local governments and the South Carolina Aeronautics Commission (SCAC).

   In terms of local airport height, hazard, and land use zoning ordinances, the revised Title 55 requires those ordinances to conform to "pertinent regulations of (the state) Aeronautics (Commission), USDOT, and FAA" (Section 55-9-240 of Title 55). As neither the Aeronautics Commission nor the FAA have issued formal regulations requiring such zoning ordinances, at the present time, only SCAC and FAA grant assurances require local zoning/land use ordinances. Another section of Title 55, 55-9-260, *authorizes* but does not require such zoning ordinances. This allows local governments to enact such ordinances in the absence of any state/federal regulations that may require them.

   Therefore, in summary, by state law local jurisdictions are required to enact local airport zoning ordinances, but only as per any pertinent state and federal regulations. If no such regulations exist, then they still *may* adopt such ordinances.

Another important element in the revised Title 55 is the requirement for local governments to report certain land use changes around airports, in SCAC-specified zones specific to each publicly-owned airport, to SCAC for review and comment. These local jurisdictions are to wait for SCAC's comments before issuing a building permit, subdivision of property, or zoning change. This is covered in more detail in Question 5 below.

3. **Statute citation:** [*Mr. Shah provided the full text of the statutes cited; we removed this text below for consistency with other states' statute citations.*]

   South Carolina Code of Laws, Title 55, Chapter 9, South Carolina Airports Act: http://www.scstatehouse.gov/code/t55c009.php

   - Section 55-9-240, Zoning of land surrounding certain airports.
   - Section 55-9-260, Zoning regulations for airport hazard area within territory of political subdivision.
   - Section 55-9-270, Zoning regulations for airport hazard areas outside territory of political subdivision.
   - Section 300, Incorporation of airport hazard area regulations.

   Chapter 13, Protection of Airports and Airport Property: http://www.scstatehouse.gov/code/t55c013.php

   - Section 55-13-10, Authority of political subdivisions to make rules and regulations.

4. **Airport land use compatibility manual or similar guidance documents:** We currently do not have an active airport land use compatibility manual, but are in the process of preparing one. We anticipate issuing it in late 2014 to early 2015, pending the revision of the FAA Land Use advisory circular mid-2014.

   Wilbur Smith & Associates had developed *A Guide for Comprehensive Land Use Planning Around Airports in South Carolina* in 1976. We have a couple of hard copies of this document but not in electronic form. We have archived this document but do not issue it for guidance as it is outdated.

   In lieu of our own land use manual, we have been referring relevant stakeholders to *ACRP Report 27: Enhancing Airport Land Use Compatibility*, and other resources such as other states' guidance regarding avigation easements, hold harmless agreements, disclosure letters, etc.

5. **Additional comments:** The new Title 55 has a requirement that local governments report certain land use changes in SCAC-specified zones around publicly owned airports. This is to prevent lack of oversight of land use compatibility in case there are no local zoning ordinances and/or no SCAC regulations requiring such. This is outlined in Section 55-13-5, Public use airport maps; review of plans for development: http://www.scstatehouse.gov/code/t55c013.php.

   We have a draft procedure developed to implement this law, and are currently developing a web-based tool to expedite the process once the procedure is implemented using Memoranda of Agreement with local governments. After "test driving" both the interim policy and the web-based tool for about a year or so, we anticipate promulgating formal regulations, which may also include specifying required minimum standards for local airport zoning ordinances.

South Dakota

1. **Contact:** Jon Becker, Aeronautics Planning Engineer, South Dakota Department of Transportation, 605-773-4162, jon.becker@state.sd.us.
2. **Airspace/height limitation zoning:** Required by statute; authorized by statute
   Land use zoning: Required by statute; authorized by statute
   Comments: State law authorizes and requires that local governments enact zoning ordinances. However, matching state funds have never been withheld as a result of a local government not enacting a zoning ordinance. SDDOT continues to provide guidance and encourage airport sponsors to enact zoning ordinances.
3. **Statute citation:** South Dakota Codified Laws, Title 50, Chapter 10, Airport Zoning.

   Statute links:
   Chapter 50-10, Airport Zoning:
   http://legis.sd.gov/statutes/DisplayStatute.aspx?Type=Statute&Statute=50-10

   - 50-10-5, Local zoning enforcement of approach plan: http://legis.sd.gov/Statutes/Codified_Laws/DisplayStatute.aspx?Type=Statute&Statute=50-10-5

   Chapter 50-9, Air Navigation Hazards:
   http://legis.sd.gov/Statutes/Codified_Laws/DisplayStatute.aspx?Type=Statute&Statute=50-9

4. **Airport land use compatibility manual or similar guidance documents:** South Dakota does not have a manual for guidance regarding land use compatibility.
5. **Additional comments:** [No response.]

Tennessee
Tennessee did not respond to our survey; all information about Tennessee's statutes was compiled by CTC.

1. **Contact:** N/A
2. **Airspace/height limitation zoning:** Required by statute
   Land use zoning: Authorized by statute
3. **Statute citation:**

   Tennessee Code, Title 42, Chapter 6, Airport Zoning:
   http://www.lexisnexis.com/hottopics/tncode/

   - Section 42-6-103, Airport zoning regulations for airport hazard area—Adoption—Enforcement.

4. **Airport land use compatibility manual or similar guidance documents:** N/A
5. **Additional comments:** N/A

Texas

1. **Contact:** Greg Miller, Aviation Division, Texas Department of Transportation, 512-416-4525, greg.miller@txdot.gov.
2. **Airspace/height limitation zoning:** Authorized by statute. [*We classified this as "required" based on our analysis of the statute text.*]
   Land use zoning: Authorized by statute. [*We classified this as "required" based on our analysis of the statute text.*]
3. **Statute citation:**
   Local Government Code, Title 7, Subtitle C, Chapter 241, Municipal and County Zoning Authority Around Airports: http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.241.htm
   - Section 241.011, Airport Hazard Area Zoning Regulations.
   - Section 241.012, Airport Compatible Land Use Zoning Regulations.

   Texas Administrative Code, Title 43, Part 1, Chapter 30, Subchapter C, Aviation Facilities Development and Financial Assistance Rules:
   http://info.sos.state.tx.us/pls/pub/readtac$ext.ViewTAC?tac_view=5&ti=43&pt=1&ch=30&sch=C&rl=Y

   - Rule 30.215, Airport Hazard Zoning and Compatible Land Use:
     http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&ti=43&ch=30&rl=215

4. **Airport land use compatibility manual or similar guidance documents:** *Airport Compatibility Guidelines*:
   http://ftp.dot.state.tx.us/pub/txdot-info/avn/avninfo/Airport_Compatibility_Guidelines.pdf
5. **Additional comments:** [No response.]

Utah

1. **Contact:** Pat Morley, Director, Division of Aeronautics, Utah Department of Transportation, 801-715-2260, pmorley@utah.gov.
2. **Airspace/height limitation zoning:** Authorized by statute
   Land use zoning: Authorized by statute
3. **Statute citation:** Utah Code, Section 72-10-403, Airport Zoning Regulations.

   Statute links:
   Utah Code, Title 72, Chapter 10, Aeronautics Act:
   http://le.utah.gov/UtahCode/section.jsp?code=72-10
   - Sections 401 to 415
   - Section 403, Airport Zoning Regulations:
     http://www.le.utah.gov/code/TITLE72/htm/72_10_040300.htm

4. **Airport land use compatibility manual or similar guidance documents:** *Compatible Land Use Planning Guide for Utah Airports,* December 2000:
   http://www.udot.utah.gov/main/uconowner.gf?n=200411180926131
5. **Additional comments:** [No response.]

Vermont
Vermont did not respond to our survey; all information about Vermont's statutes was compiled by CTC.

1. **Contact:** N/A
2. **Airspace/height limitation zoning:** Authorized by statute
   Land use zoning: Authorized by statute
3. **Statute citation:**
   Vermont Statutes Annotated, Title 5, Chapter 17, Airport Zoning:
   http://www.leg.state.vt.us/statutes/sections.cfm?Title=05&Chapter=017

   - Section 1004, Zoning regulations generally:
     http://www.leg.state.vt.us/statutes/fullsection.cfm?Title=05&Chapter=017&Section=01004
4. **Airport land use compatibility manual or similar guidance documents:** N/A
5. **Additional comments:** N/A

Virginia

1. **Contact:** Rusty Harrington, Manager, Planning and Environmental Section, Airport Services Division, Virginia Department of Aviation, 804-236-3632, rusty.harrington@doav.virginia.gov.
2. **Airspace/height limitation zoning:** Required by statute
   Land use zoning: Authorized by statute
   Comments: Localities with airports and approach surfaces to airports shall enact height-restrictive zoning.
3. **Statute citation:** Code of Virginia Section 15.2-2294 for airport safety zoning; Code of Virginia Section 15.2 for land use. Land use zoning is authorized by code.

   Statute links:
   Code of Virginia, Title 15.2, Counties, Cities and Towns:
   http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+TOC1502000

   - Section 15.2-2294, Airport safety zoning:
     http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+15.2-2294

   Also see:

   Code of Virginia, Title 5.1, Aviation:
   http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+TOC0501000

   - 5.1-25.1, Permit required for erection of certain structures:
     http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+5.1-25.1
4. **Airport land use compatibility manual or similar guidance documents:** From the DOAV website:

   - *A Guide to Compatible Airport Land Use Planning for Virginia Communities*:
     http://www.doav.virginia.gov/land_use_planning.htm

- *Building Blocks for Airport Land Use Compatibility*: http://www.doav.virginia.gov/building_blocks_for_land-use.htm

Related documents:
The website mentions a document available upon request from the DOAV, *Airport Safety Zoning: A User's Guide for Local Government Officials*.

5. **Additional comments:** [No response.]

Washington

1. **Contact:** Carter Timmerman, Aviation Planner, Washington State Department of Transportation, 360-709-8019, timmerc@wsdot.wa.gov.
2. **Airspace/height limitation zoning:** Required by statute; authorized by statute
   Land use zoning: Required by statute; authorized by statute
   Comments: In 1996, Washington state passed land use legislation (RCW 36.70A.510, RCW 36.70.547). Under this provision of the Growth Management Act (GMA), all towns, cities and counties are required to discourage encroachment of incompatible development adjacent to public use airports through adoption of comprehensive plan policies and development regulations. GMA also identifies airports as essential public facilities. WSDOT Aviation provides a technical assistance program to help communities meet the requirements of the law.
3. **Statute citation:** Land use laws: See *WSDOT Airports and Compatible Land Use Guidebook,* Appendix G, "Learning More About: The Legal Framework for Compatibility Planning": http://www.wsdot.wa.gov/NR/rdonlyres/EC29C443-40D7-4BDC-9919-41D35A9A9051/0/AppendixG.pdf

   Statute links:
   Revised Code of Washington, Chapter 14.12, Airport Zoning:
   http://apps.leg.wa.gov/RCW/default.aspx?cite=14.12&full=true

   - Section 14.12.030, Power to adopt airport zoning regulations: http://apps.leg.wa.gov/RCW/default.aspx?cite=14.12&full=true#14.12.030

   Washington Administrative Code, Growth Management Act:
   http://apps.leg.wa.gov/WAC/default.aspx?cite=365-196

   - Section 365-196-455, Land use compatibility adjacent to general aviation airports: http://apps.leg.wa.gov/WAC/default.aspx?cite=365-196-455

   Revised Code of Washington (land use):

   - Section 36.70A.510, General aviation airports: http://apps.leg.wa.gov/RCW/default.aspx?cite=36.70A.510

   - Section 36.70.547, General aviation airports—Siting of incompatible uses: http://apps.leg.wa.gov/RCW/default.aspx?cite=36.70.547

4. **Airport land use compatibility manual or similar guidance documents:** *WSDOT Airports and Compatible Land Use Guidebook, January 2011*: http://www.wsdot.wa.gov/aviation/Planning/ACLUguide.htm
5. **Additional comments:** [No response.]

West Virginia
We received a partial survey response from West Virginia; only Question 2 was completed.

1. **Contact:** [No response.]
2. **Airspace/height limitation zoning:** Neither authorized nor required
   Land use zoning: Neither authorized nor required. [*We classified this as "authorized" based on our analysis of the statute text.*]
   Comments: West Virginia has individual county and/or city zoning ordinances. Some counties do not have any zoning ordinances.
3. **Statute citation:** [No response.]

   Statute link:
   West Virginia Annotated Code, Section 8A-7-2, Contents of zoning ordinance:
   http://www.legis.state.wv.us/wvcode/Code.cfm?chap=08a&art=7#07
   - See subsection 13 of Section 8A-7-2.

   Also see:
   - Section 29-2A-8. Establishment and operation of state airports:
     http://www.legis.state.wv.us/wvcode/ChapterEntire.cfm?chap=29&art=2A&section=8#02A

4. **Airport land use compatibility manual or similar guidance documents:** [No response.]
5. **Additional comments:** [No response.]

Wisconsin

1. **Contact:** Hal Davis, Airport Compliance Program Manager, Bureau of Aeronautics, Wisconsin Department of Transportation, 608-267-2142, howard.davis@dot.wi.gov.
2. **Airspace/height limitation zoning:** Required by statute
   Land use zoning: Authorized by statute
3. **Statute citation:**
   Wisconsin Administrative Code, Chapter Trans 55, Conditions of State Aid for Airport Improvement: http://docs.legis.wi.gov/code/admin_code/trans/55.pdf
   - Section Trans 55.06, Conditions of state aid

   Wisconsin Statutes, Chapter 114, Aeronautics and Astronautics:
   http://docs.legis.wisconsin.gov/statutes/statutes/114.pdf
   - Section 114.135, Airport and spaceport protection
   - Section 114.136, Airport and spaceport approach protection

4. **Airport land use compatibility manual or similar guidance documents:** *Wisconsin Airport Land Use Guidebook*, June 2011,
   http://www.dot.wisconsin.gov/library/publications/topic/air/airportlanduseguide2011.pdf
5. **Additional comments:** [No response.]

Wyoming

1. **Contact:** Christy Yaffa, Planning and Programming Manager, Aeronautics Division, Wyoming Department of Transportation, 307-777-3956, christy.yaffa@wyo.gov.
2. **Airspace/height limitation zoning:** Authorized by statute

   Land use zoning: Neither authorized nor required
3. **Statute citation:** Wyoming Statutes, Sections 10-5-301 and 10-5-302.

   Statute links:
   Wyoming Statutes Title 10, Chapter 5, Article 3, Zoning:
   http://legisweb.state.wy.us/statutes/statutes.aspx?file=titles/Title10/T10CH5AR3.htm
   - Section 10-5-301, Power of counties, cities and towns.

4. **Airport land use compatibility manual or similar guidance documents:** [No response.]
5. **Additional comments:** Land use protection has been incorporated into our Priority Rating Model (http://www.dot.state.wy.us/home/aeronautics/planning-grants--loans/documents.html). This allows the Division and Aeronautics Commission to "reward" airport sponsors for protecting the airport in a number of ways (zoning, land acquisition, real estate disclosure, etc.) through ranking their grant funding requests higher than requests from airport sponsors that have not protected their airport.

North Dakota

Airport Managers' Manual

Chapter 17

1995 - 1996

Aeronautics Commission
STATE OF NORTH DAKOTA

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Land Use Compatibility Guidelines

Why Is Compatible Land Use Planning Around North Dakota's Airports Important?

Incompatible land use around airports is a major concern facing aviation today. Off-airport land use incompatibility threatens the usefulness of many airports There are many benefits of an airport to the community it serves In the State of North Dakota, aviation enhances the quality of life by providing access to and from different parts of the State, the country, and the world Proximity to airports increases business opportunities within the State by permitting efficient, cost-effective travel and by providing North Dakota's business community with access to worldwide markets Airports also provide a gateway to North Dakota for out-of-state tourists and business travelers. Another benefit of airports in the State of North Dakota is that they serve as a means by which emergency and health services can be provided. This is an especially important benefit to isolated communities throughout the State.

Communities benefit economically whether they are served by an airport which provides regularly scheduled commercial flights or by a general aviation airport which serves private and business aircraft. Aviation's economic benefit extends far beyond planes and runways It extends to hotels, rental cars, manufacturing, real estate, and a wide variety of other industries whose success depends on air travel as an efficient mode of transportation

To measure the value of its airport system to State, the North Dakota Aeronautics Commission recently updated its Statewide Aviation Economic Impact Study; a similar study had been conducted by the Aeronautics Commission in 1987 The update showed that economic benefits of aviation in North Dakota are increasing In 1987, the State's airport system contributed in some way to supporting approximately 7,082 jobs statewide. By 1994, this number of jobs had increased to 8,706 Payroll associated with these jobs in 1994 was $166.5 million In 1994, airport tenants, aviation users, and air travelers to North Dakota spent an estimated $585 6 million. This figure was up from an estimated $461 1 million in Statewide spending for 1987. Clearly, North Dakota's airport system is an important economic resource which merits preservation and protection through compatible land use planning.

The promotion of compatible land uses around an airport must be accomplished at the local level, since local governments have the authority to direct land use development. These Guidelines provide different approaches that can be taken to promote compatible land use around airports Jurisdiction over the State airways system in matters of safety is vested in the North Dakota Aeronautics Commission and the Federal Aviation Administration (FAA) The Commission strongly recommends that each community with a public-use airport consider implementing actions described in these Guidelines to preserve their aviation facility and to protect their community Several states already require airport compatible land and height zoning for grant allocations

How is the Airport Sponsor Committed to Compatible Land Use Planning?

Airports are an important element in North Dakota's multimodal transportation system, and they need to be protected through the administration of effective controls on surrounding land uses The impact of aircraft noise and land use incompatibility are a serious problem facing North Dakota airports. Recent federal transportation language requires coordination between transportation modes as airport, highways and rail intersect in their functions. Solutions to those problems must be considered part of the airport planning and development process.

Congress requires an airport sponsor requesting aid under the Airport Improvement Program (AIP), as amended, to show the actions taken to restrict the use of land adjacent to, or in the immediate vicinity of the airport, to activities and purposes compatible with normal airport operations In addition, the sponsor must specify how this has been accomplished by providing information on any zoning or laws enacted restricting the use of land adjacent to or in the vicinity of the airport

The role of the airport sponsor is to interpret the activities and functions of the airport to the public and to the city or local controlling government body. It is the airport sponsor's responsibility to make sure that all applicable units of government understand its commitment and the assurances the airport makes when receiving monies for Federally or State funded projects. Each time an airport sponsor accepts Federal funding for an airport project, several commitments are made to the FAA, including

- The airport will remain open to the public for 20 years from the date of the grant
- The airport sponsor will prevent the growth or establishment of obstructions in the aerial approaches
- The airport sponsor will assure that the airport's terminal airspace is adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise mitigating existing airport hazards
- The airport sponsor will, to the extent reasonable, restrict (including the adoption of zoning laws) the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations.

Failure to fulfill these assurances results in loss of Federal funding and possible repayment of Federal funds that have been paid to the airport in the past. Airport sponsors in conjunction with other impacted entities (cities, towns, and counties within the airport environs) should consider appropriate land use controls prior to the development or the further development of land near their airport. Adequate safe guards should be incorporated to prevent incompatible land uses from occurring in proximity to the boundaries of the airport. Land use strategies discussed in these Guidelines fall into two general categories preventive and corrective. Preventive measures are steps that can be followed to stop incompatible land use before it develops and becomes a problem

for the airport Corrective measures are actions that can be considered if uses which are incompatible with airport operations have already developed in the airport environs. These Guidelines describe and define areas around the airport that should be protected from incompatible land use and both preventive measures and corrective actions that can help assure that the utility of North Dakota's airport system will not be jeopardized by land use issues.

Why Is Land Use Incompatibility A Major Problem For Many Airports?

Noise and land use problems associated with airports have emerged over many years When most airports were first built, they were located away from developed areas. Initially, most airport sites were surrounded by agricultural or undeveloped land. For many airports, however, this luxury of being unencroached by surrounding development did not last Various types of development, both compatible and incompatible, were attracted to the airport environs. Development around airports is a natural by-product of our mobile society Only when development restricts an airport's growth or its ability to operate is development in the airport environs a real problem. Federal criteria utilized by the North Dakota Aeronautics Commission for guidance in airport design has been getting more restrictive Changes in 1987 and 1994 require land acquisition farther out from runway ends

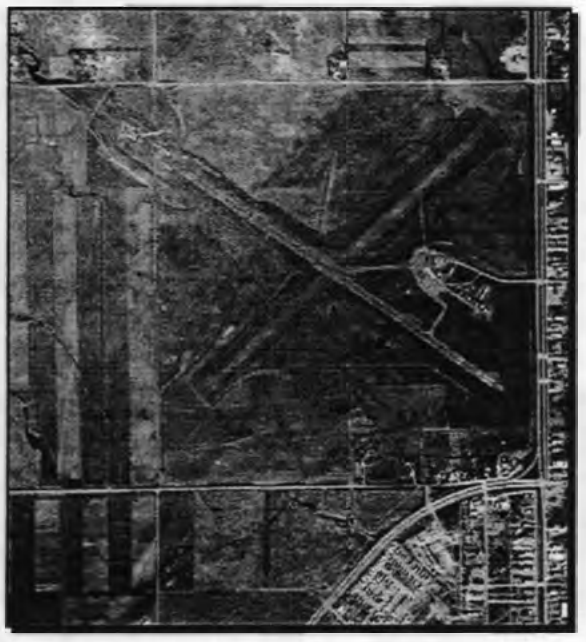
What Type Of Development Is Compatible With An Airport And Its Operations?

Development in the airport environs should not pose a safety hazard to pilots in the air or persons on the ground. Nor should development in the airport environs be noise sensitive

Determining whether a given type of development or land use is compatible with a particular airport depends on things such as the location and size of the airport and the type and volume of aircraft using the facility. Most commercial-industrial uses are compatible Motels, restaurants, warehouses, shipping agencies, aircraft related industries, as well as industries that benefit from access to an airport are usually compatible with an airport and its operations Buildings and structures on and around an airport can not obstruct aerial approaches, interfere with aircraft radio communications, or affect a pilot's vision due to glare or bright lights Motels, restaurants, and office buildings that are developed in the airport environs should be soundproofed to make them more compatible. Other uses compatible with airports are parks, conservatory areas, open spaces, forestry services, landscape services, game preserves, and golf courses.

Agriculture is another land use that is usually compatible with airport operations. While some types of animal husbandry are sensitive to aircraft noise, most agricultural uses are not adversely affected by airport operations Agricultural land also permits the owner of property near the airport to make an efficient use of the land while providing an additional benefit to the community in terms of airport protection Aerial spray activity based at many North Dakota airports may stretch the window of time that aviation flight occurs. Calm winds in the early morning and late evening can generate a 16 hour window for flights. The noise impact of aerial sprayers can be greater than other aviation operations since aerial sprayers operate at low altitudes.

How Land Use has Evolved as a Major Issue Facing North Dakota Airports



In **1974**, many areas around the Williston Airport (Sloulin Field) were relatively undeveloped.

By **1980**, residential development was increasing in the airport environs.

By **1994**, significant residential development had occurred in the areas around the Williston Airport. Further residential development is planned in proximity to the airport.

Many airports in North Dakota have municipal lagoons located on airport property These lagoons can become bird hazards Expansion of existing lagoons should occur away from airfield operations

Residential housing is the use most incompatible with aircraft operations As residential uses expand into areas around an airport, homeowners inevitably express concerns regarding safety and noise. Residential growth restricts the airport by occupying land needed for expansion and by removing the buffer between the airport and residential development This buffer is important because it diminishes the impact of aircraft noise and lessens the possibility of an airplane crashing into the residential neighborhood. With careful planning there is no reason for encroachment on the airport by this type of incompatible land use Residential neighborhoods, schools, churches, hospitals, and other similar noise sensitive land uses are the most susceptible to aircraft operations It is not in the best interest of the homeowner nor the community to locate where they will be subject to noise impacts from aircraft takeoffs and landings

The most critical locations with regard to the height of objects around an airport are beneath the airport approach surfaces Tall objects in the approach corridors may pose risks even though they do not penetrate the defined safety surfaces. Tall objects around an airport can also adversely affect minimum instrument approach altitudes. The siting of multi-story buildings, powerlines and communications towers should be carefully considered in relation to the airport.

Following sections of these guidelines will provide more specific information on the exact areas around an airport that should be protected from incompatible types of development. Generally speaking, the following factors should be considered when development in the airport environs is proposed

- Lights that shine upward around an airport are potentially hazardous since they can detract from a pilot's ability to identify an airport at night A pilot may perceive such lights from adjacent land uses as part of the airport and/or runway lights

- Reflective surfaces can also produce a blinding glare, distracting pilots Other visual difficulties can result from smoke generated by nearby business, industry, or a field burning operations Smoke can create severe visual difficulties when a pilot is either looking for an airport or preparing to takeoff or land An extensive amount of smoke can drastically curtail airport operations Reflective surfaces and smoke generating activities should be discouraged around airports.

- Land uses that generate electronic transmissions should not be permitted near airports. Such uses can interfere with aviation navigational signals and radio communications

- Land uses such as water impoundments, garbage dumps, sanitary landfills, or sewage treatment plants often attract birds Increased numbers of birds around airports escalate the possibility of collisions between birds and aircraft This is especially important in central North Dakota which is located in the North American waterfowl migratory path and bird

strikes leads to seasonal consideration of airport utilization. FAA Order 5200.5, Guidance Concerning Sanitary Landfills On or Near Airports, states that sanitary landfills, because of their bird attractive qualities, are considered to be an incompatible land use if located within specified distances as cited by the FAA As stated in FAA Order 5050 4A, Airport Environmental Handbook, the FAA advises against locating such facilities within 5,000 feet of all runways accommodating or planned to accommodate piston-type aircraft, and within 10,000 feet of all runways accommodating or planned to accommodate turbine (jet) powered aircraft.

- Land uses which promote the assembly of large groups should also be discouraged from locating in proximity to an airport.

- All land uses and activities which are generally considered to be noise sensitive (homes, schools, churches, hospitals, day -care centers, nursing homes, etc) should also be restricted from locating in the airport environs.

What Areas Should I Protect Around My Airport?

Protection of North Dakota's airports from incompatible land use encroachment is important for economic reasons Control of land use and the height of objects around airports is also mandated by grant assurances that airport sponsor sign when they accept Federal funding from the FAA. While some types of land use and certain activities are usually compatible in the airport environs, others are not It is important for each airport sponsor to know what areas they should protect around their airport and also why these areas should be protected

There are two issues that affect land use planning in the airport environs. safety and noise Both of these issues must be considered when planning for airport land use compatibility. A primary concern in achieving airport land use compatibility involves safety at and around an airport. All modes of transportation, inherently, pose some safety risk It is important to identify those safety risks associated with air transportation in order to minimize the consequences of accident potentials. Specific areas near airports are exposed to various levels of accident potential Identifying and protecting these specific areas around an airport through effective land use controls is essential to ensuring the safe and efficient operation of an airport and in protecting the public from the impacts of a potential aircraft accident. Areas around the airport also need to be free of development that could pose a hazard to pilots operating aircraft in the airport environs. Safe access to an airport can be achieved through municipal transportation plans that coordinate airport and community growth

What Areas Does The FAA and the Aeronautics Commission Recommend An Airport Should Protect?

Specific areas to be secured at and around an airport are defined by two major Federal Aviation Administration criteria: Federal Aviation Regulation (FAR) Part 77 - Objects Affecting Navigable Airspace and Safety Zones, as defined by FAA airport design standards The FAA cannot stop

construction of an airport obstacle However, some efforts by the FAA in response to the Federal Communications Commission (FCC) licensing of towers can be helpful to deter tall tower establishment near airports FAR Part 77 establishes standards for determining which structures pose potential obstructions from a height perspective to air navigation It does this through defining specific airspace areas around an airport that cannot contain any protruding objects into the airspace These airspace areas are referred to as "Imaginary Surfaces " Objects affected include existing or proposed objects of natural growth; terrain, or permanent or temporary construction, including equipment, which is permanent or temporary in character The imaginary surfaces outlined in FAR Part 77 include:

- Primary Surface
- Transitional Surface
- Horizontal Surface
- Conical Surface
- Approach Surface

While FAR Part 77 surfaces are designed to protect specific airspace areas, Safety Zones are designed to protect specific ground areas. In general, the term "surface" refers to an airspace area; the term "zone" refers to the land underlying the airspace area Safety Zones are required by the FAA to be free of all objects except objects whose locations are fixed by function. The Runway Protection Zone (RPZ) is the critical safety zone to protect when planning for compatible off-airport land use. Each active runway end has an RPZ, actual dimensions for these zones are described subsequently in this section. Most aircraft accidents occur during the landing or takeoff portion of flight. It is, therefore, important to protect the approach and departure ends of each runway The RPZ is designed to protect the approach and departure ends of a runway

Dimensions of FAR Part 77 surfaces and runway protection zones (RPZ) vary depending on the type of runway approach and type of aircraft using the runway. There are three types of runway approaches visual, nonprecision, and precision. These approaches are defined in the following paragraphs

A *visual* approach runway is one with either no instrument approach capabilities or where the existing or planned instrument approach is a circling, rather than a straight-in approach. A circling approach requires the pilot to have visual contact with the runway while aligning the aircraft with the runway for landing.

A *nonprecision* instrument runway has one or more devices capable of providing horizonal guidance to aircraft, aligning them with the runway for straight-in approaches

A *precision* instrument runway has approaches using an Instrument Landing System (ILS), a Precision Approach Radar (PAR), or a Microwave Landing System (MLS) These approach systems provide both vertical and horizontal alignment of aircraft to a particular runway. Airports with

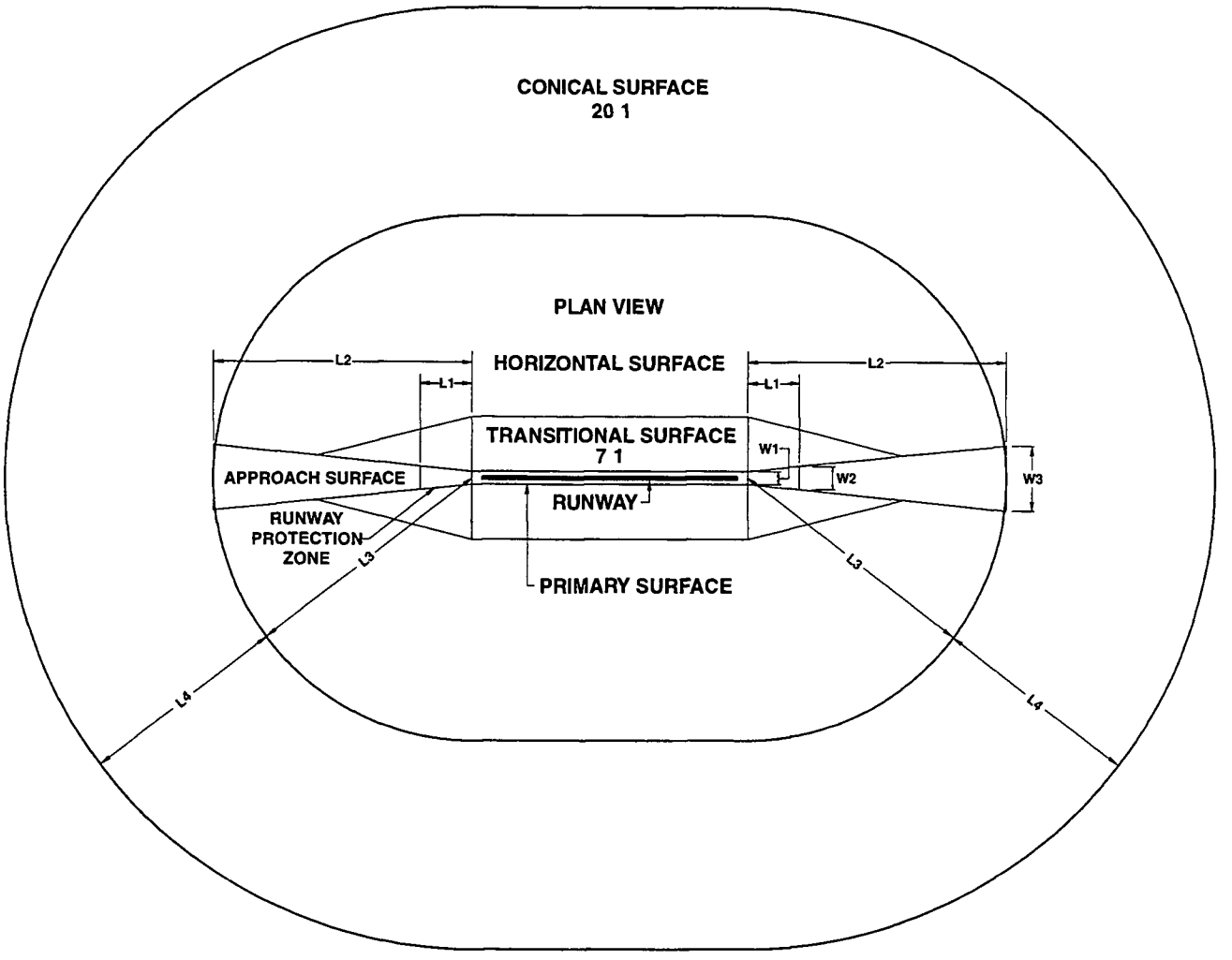
scheduled commercial passenger traffic and heavily-used general aviation airports normally have existing or planned precision approaches

Definitions for the FAR Part 77 surfaces and the FAA safety zones are as follows.

FAR PART 77 SURFACES

Primary Surface: (**Exhibit 17-1**-W1) 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. When the runway has no specially prepared hard surface, or planned hard surface, the primary surface terminates at each end of the runway The width of a primary surface ranges from 250 feet to 1,000 feet depending on the existing or planned approach and runway type (i.e , visual, nonprecision, or precision) Exhibit 17-1 depicts the dimensional requirements of the primary surface.

Transitional Surface: (see **Exhibit 17-2**) Transitional surfaces extend outward and upward at right angles to the runway centerline and the runway centerline extended at a slope of seven (7) feet horizontally for each foot vertically (7·1) from the sides of the primary and approach surfaces The transitional surfaces extend to where they intercept the horizontal surface at a height of 150 feet above the runway elevation For precision approach surfaces, which project through and beyond the limits of the conical surface, the transitional surface also extends a distance of 5,000 feet measured horizontally from the edge of the approach surface and at right angles to the runway centerline Exhibit 17-1 depicts the dimensional requirements of the transitional surface.



FAR PART 77 "IMAGINARY SURFACES" DIMENSION[1] REQUIREMENTS

Runway Type	Runway End		Conical Surface (L4)	Horizontal Surface (L3)	Approach Surface			Approach Slope	Primary Surface	Transitional Surface
	Approach	Other			Length (L2)	Inner Width (W1)	Outer Width (W3)		Width	
Small Airplanes[2]	V	V	4 000	5 000	5 000	250	1 250	20 1	250	7 1
		NP	4 000	5 000	5 000	500	1 250	20 1	500	7 1
		NP 3/4	4 000	5 000	5 000	1 000	1 250	20 1	500	7 1
		P	4 000	10 000	5 000	1 000	1 250	20 1	1 000	7 1
	NP	V	4 000	5 000	5 000	500	2 000	20 1	500	7 1
		NP	4 000	5 000	5,000	500	2 000	20 1	500	7 1
		NP 3/4	4 000	5 000	5 000	1 000	2 000	20 1	500	7 1
		P	4 000	10 000	5 000	1 000	2 000	20 1	1 000	7 1
Large Airplanes[3]	V	V	4 000	5 000	5 000	500	1 500	20 1	500	7 1
		NP	4 000	10 000	5 000	500	1 500	20 1	500	7 1
		NP 3/4	4 000	10 000	5 000	1 000	1 500	20 1	500	7 1
		P	4 000	10 000	5 000	1 000	1 500	20 1	1 000	7 1
	NP	V	4 000	10 000	10 000	500	3 500	34 1	500	7 1
		NP	4 000	10 000	10 000	500	3 500	34 1	500	7 1
		NP 3/4	4 000	10 000	10 000	1 000	3 500	34 1	500	7 1
		P	4 000	10 000	10 000	1 000	3 500	34 1	1 000	7 1
Large or Only Small Airplanes	NP 3/4	V	4 000	10 000	10 000	1 000	4 000	34 1	500	7 1
		NP	4 000	10 000	10 000	1 000	4 000	34 1	500	7 1
		NP 3/4	4 000	10 000	10 000	1 000	4 000	34 1	500	7 1
		P	4 000	10 000	10 000	1 000	4 000	34 1	1 000	7 1
	P	V	4 000	10 000	10 000/40 000	1 000	16 000	50 1/40 1	1 000	7 1
		NP	4 000	10 000	10 000/40 000	1 000	16 000	50 1/40 1	1 000	7 1
		NP 3/4	4 000	10 000	10 000/40 000	1 000	16 000	50 1/40 1	1 000	7 1
		P	4,000	10,000	10,000/40,000	1,000	16,000	50 1/40 1	1,000	7 1

1 - In Feet
2 - Less than 12 500 lbs maximum certified take-off weight
3 - Greater than 12 500 lbs maximum certified take-off weight

Note L1 is the length of the RPZ and W2 is the outer width of the RPZ as defined by approach visibility minimums

Source Federal Aviation Administration

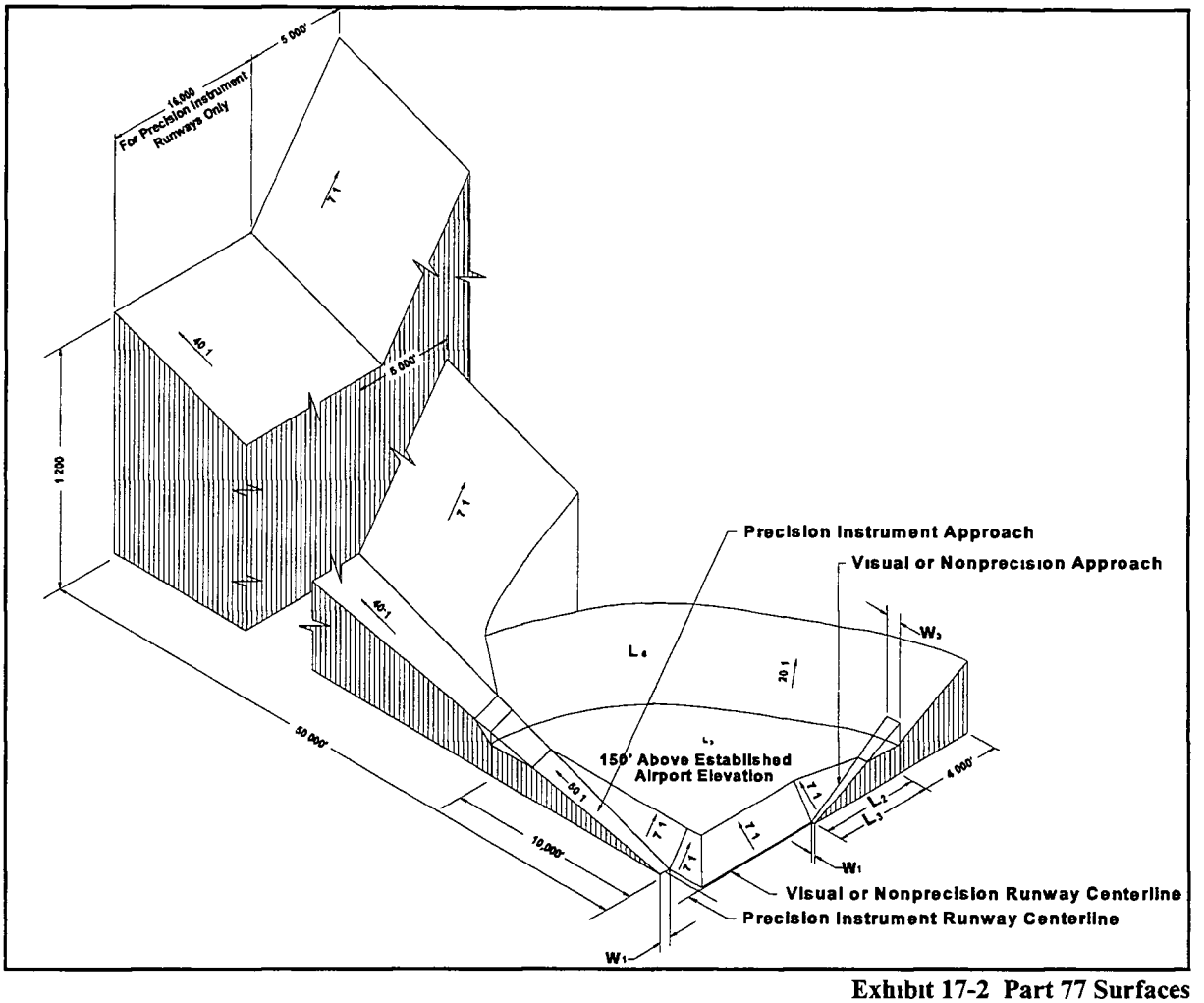


Exhibit 17-2 Part 77 Surfaces

Horizontal Surface: (Exhibit 17-1-L3) The horizontal surface is a horizontal plane located 150 feet above the established airport elevation, covering an area from the transitional surface to the conical surface. The perimeter is constructed by swinging arcs from the center of each end of the primary surface and connecting the adjacent arcs by lines tangent to those areas The radius of each arc is either 5,000 feet for all runway ends designated as utility or visual, or 10,000 feet for all other runway ends. Exhibit 17-1 depicts the dimensional requirements of the horizontal surface.

Conical Surface: (Exhibit 17-1-L4) The conical surface is a surface extending upward and outward from the periphery of the horizontal surface at a slope of one foot for every 20 feet (20.1) for a horizontal distance of 4,000 feet

Approach Surface: (Exhibit 17-1-L2, W1, and W3) Longitudinally centered on the extended runway centerline, the approach surface extends outward and upward from the end of the primary

surface An approach surface is applied to each end of each runway based upon the type of approach The approach slope of a runway is either 20 1, 34 1, or 50 1, depending on the sophistication of the approach The length of the approach surface varies, ranging from 5,000 feet to 50,000 feet. The inner edge of the approach surface is the same width as the primary surface and it expands uniformly to a width ranging from 1,250 feet to 16,000 feet depending on the type of runway and approach Exhibit 17-1 depicts the dimensional requirements of the approach surface

Exhibit 17-1 graphically illustrates the FAR Part 77 "Imaginary Surfaces" in both plan view and Exhibit 17-2 provides profile view representations, the dimensional requirements for each of the FAR Part 77 surfaces are also presented

Although the FAA can determine which structures are obstructions to air navigation, the FAA is not authorized to regulate tall structures The FAA can only study structures that it is notified about Airport owners need to help identify possible obstructions Under FAR Part 77, an aeronautical study can be undertaken by FAA to determine whether the structure in question would be a hazard to air navigation However, there is no specific authorization in any statute that permits FAA to limit structure heights or determine which structures should be lighted or marked In fact, in every aeronautical study determination, the FAA acknowledges that state or local authorities have control over the appropriate use of property beneath an airport's airspace

The **North Dakota Century Code** defines the sovereignty in space to rest in the State, except where granted to and assumed by the United States pursuant to constitutional grant from the people of North Dakota Flight of aircraft over the lands and waters of North Dakota is lawful, unless it interferes with the existing land use

The **North Dakota Century Code** permits jurisdictions to adopt zoning regulations for "airport hazard areas". Airport hazard areas are defined by the Century Code as, "any structure or tree or use of land which obstructs the airspace required for the flight of aircraft in landing or taking off at any airports or is otherwise hazardous to such landing or taking off of aircraft" These areas include the specific areas defined by FAR Part 77 and explained in this section.

FAA SAFETY ZONES

Safety Zones are defined by FAA airport design criteria standards to allow for the safe and efficient operation of an airport These Safety Zones include the Runway Protection Zone (RPZ), the Runway Safety Area (RSA), and the Runway Object Free Area (ROFA). Each of these zones is discussed in the following sections

Runway Protection Zone: Runway Protection Zones (RPZs), formerly clear zones, were originally established to define land areas underneath aircraft approach paths in which control by the airport operator was highly desirable to prevent the creation of airport hazards or the development of incompatible land use. The RPZ functions to protect people and property on the ground.

A Runway Protection Zone (RPZ) is an area that begins at a point 200 feet beyond the end of a paved runway or at the end of a runway for turf runways The length of the RPZ extends 1,000, 1,700, or 2,500 feet depending on the category of runway and type of (visual, nonprecision, or precision) approach The inner width of a RPZ is located closest to the end of the runway. Opposite this end is the outer width, which is the wider end The inner width of a RPZ varies from 250 feet to 1,000 feet The outer width of a RPZ varies from 450 feet to 1,750 feet. As with the length of the RPZ, the inner and outer widths of a RPZ are dependent on the runway category and approach type **Exhibit 17-3** depicts a schematic of the RPZ and presents its required dimensions by runway category and runway approach type.

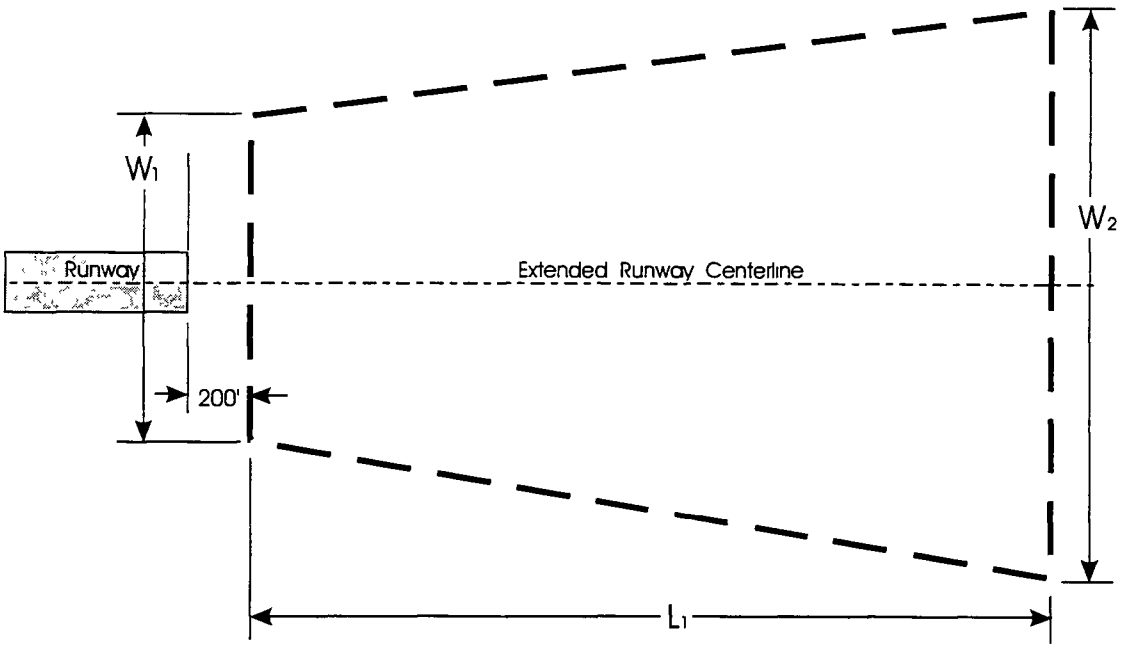
Runway Safety Area: The RSA is a critical two-dimensional safety area surrounding the runway. RSAs should be cleared and graded and free of potentially hazardous surface variations. The RSAs should be properly drained and capable of supporting snow removal, aircraft rescue and firefighting (ARFF) equipment, or an aircraft (without causing damage to the aircraft) The size of the RSA is dependent upon the runway design category and approach type (visual, nonprecision, or precision) Taxiways also have similar safety area requirements These areas should not be cultivated since a turf surface is needed to support aircraft and emergency vehicles

Runway Object Free Area: The runway OFA is a two-dimensional ground area surrounding the runway. FAA standards prohibit parked aircraft and objects from locating within the OFA. The runway OFA extends beyond the runway end at lengths that vary from 300 feet to 1,000 feet, depending on the runway design category and the approach type There are also taxiway OFAs

These safety zones (RSAs and OFAs) almost always are contained within airport property The RPZs, however, can extend beyond airport property Therefore, from an off-airport land use compatibility perspective, the critical safety zone for land use compatibility planning is the RPZ

Why Is It Important To Monitor Development in the FAA Part 77 Surfaces and Safety Zones?

Complex safety issues are major factors which affect pilots, airports, and surrounding airport land uses Part 77 surfaces and FAA safety zones provide specific standards for identifying which areas around an airport should be protected. There are several factors that determine, from a safety perspective, which areas around an airport need to be protected These factors include the phase of operation during which aircraft accidents most often occur, the cause of these accidents, and the location of these accidents relative to the airport Data were collected from the National Transportation Safety Board (NTSB) regarding these factors



RUNWAY PROTECTION ZONE DIMENSIONAL REQUIREMENTS

Approach Visibility Minimums	Facilities Expected To serve	Dimensions			
		Length (L_1) feet	Inner Width (W_1) feet	Outer Width (W_2) feet	Area (acres)
Visual or No lower than 1-mile	Small Aircraft Exclusively	1,000	250	450	8 035
	Aircraft Approach Categories A & B	1,000	500	700	13 770
	Aircraft Approach Categories C & D	1,700	500	1,010	29 465
Between 3/4 mile and 1 mile	All Aircraft	1,700	1,000	1,510	48 978
Less Than 3/4 mile	All Aircraft	2,500	1,000	1,750	78 914

1- In Feet

Source Advisory Circular 150/5300-13,CHG 4, "Design Standards," Safety Zones

The NTSB maintains extensive data on air carrier and general aviation accidents and their causes. The most current data available are from 1990 **Table 17-1** shows the number of commercial and general aviation aircraft accidents that occurred during each portion of flight in 1990. From an off-airport land use planning perspective, the characteristics of accidents near airports are of the greatest concern. The statistics presented in Table 17-1 show that, in 1990, 60 percent (28 0 and 32 0) of all commercial aircraft accidents and 64.1 percent (40.0 and 24 1) of all general aviation aircraft accidents occurred during the landing or takeoff portions of flight The conclusion that most of the risk involved with air transportation is associated with the takeoff and landing portions of flight is supported by these statistics The critical areas at an airport that need to be secured and protected from a land use compatibility standpoint include the approach paths and departure paths to the runways It is best to maintain obstruction-free airport airspace and a reasonable amount of vacant land at both ends of each runway.

Table 17-1

NUMBER OF ACCIDENTS BY PHASE OF AIRCRAFT OPERATION IN 1990

	Number of Accidents in 1990			
Phase of Operation	Commercial		General Aviation	
Approach/Descent/ Landing	7	28 0%	897	40 0%
Takeoff/Climb	8	32 0%	540	24 1%
Cruise	4	16 0%	369	16 5%
Taxi	4	16 0%	61	2 7%
Static	2	8 0%	23	1 2%
Maneuvering	0	0 0%	303	13 5%
Other/Not Reported	0	0 0%	47	2 0%
	25	100 0%	2240	100 0%

Source National Transportation Safety Board

In addition to knowing the phase of operation during which aircraft accidents are most likely to occur, the most frequent causes of aircraft accidents should be identified. **Table 17-2** identifies the causes of the aircraft accidents that occurred in 1990. In some cases, more than one factor contributed to an accident Data presented in Table 17-2 indicate that commercial aviation aircraft accidents are most often attributed to pilot error. General aviation aircraft accidents, however, are often related to the terrain and obstructions surrounding an airport. In 1990, terrain ranked as the fourth leading factor associated with general aviation aircraft accidents. Conflicts with objects, such as trees and wires, ranked as the fifth leading factor associated with general aviation accidents A pilot's preoccupation with the terrain and structures immediately surrounding an airport can contribute to accidents Structures in the approach path of a runway also contribute to aircraft accidents Clearly, for the safety of both air travelers and the general public, it is best to maintain obstruction-free airspace around an airport.

Table 17-2

CAUSE OR FACTORS ASSOCIATED WITH AIRCRAFT ACCIDENTS IN 1990

Cause/Factor	Number of Related Accidents: Commercial	Number of Related Accidents: General Aviation
Pilot	10	1800
Terrain	0	454
Weather	7	485
Propulsion System/Controls	2	486
Object (tree, wires, etc)	1	187
Other Person (not aboard)	7	176
Light Conditions	1	127
Landing Gear	1	68
Systems/Equipment/Instruments	2	83
Airframe	0	37
Flight Control System	0	43
Airport/Airways Facilities, NAVAIDs	2	14
Other Person (Aboard)	4	16

Source National Transportation Safety Board

Perhaps the most critical factor in determining which areas around an airport should be protected is knowing where aircraft accidents occur Data compiled by the NTSB indicate that the largest number of aircraft accidents occur on airport property Specific data regarding the location of general aviation aircraft accidents, relative to the airports' location, are also available from the NTSB. With regard to general aviation aircraft accidents, data from the NTSB indicate that roughly 45 percent of all aircraft accidents occurred on airport property, while 15 percent occurred within one mile of the airport, and 40 percent occurred beyond one mile of the airport Considering the general aviation aircraft accidents that occurred within one mile of the airport, 33 percent of these occurred within one-quarter mile of the airport, 29 percent occurred in the airport traffic pattern; the remaining 38 percent occurred within one-quarter mile and one mile of the airport. These data suggest that land use under the airport traffic pattern and within one-quarter mile of an airport should be considered, in addition to the land use off the approach ends to the runways, when addressing

compatible airport land use. A typical airport traffic pattern is depicted in **Exhibit 17-4**. All areas within an airport's traffic pattern should be considered for land use planning If an airport plans for compatible land use in its Part 77 and FAA Safety Zones, areas that fall under a typical traffic pattern will also be protected.

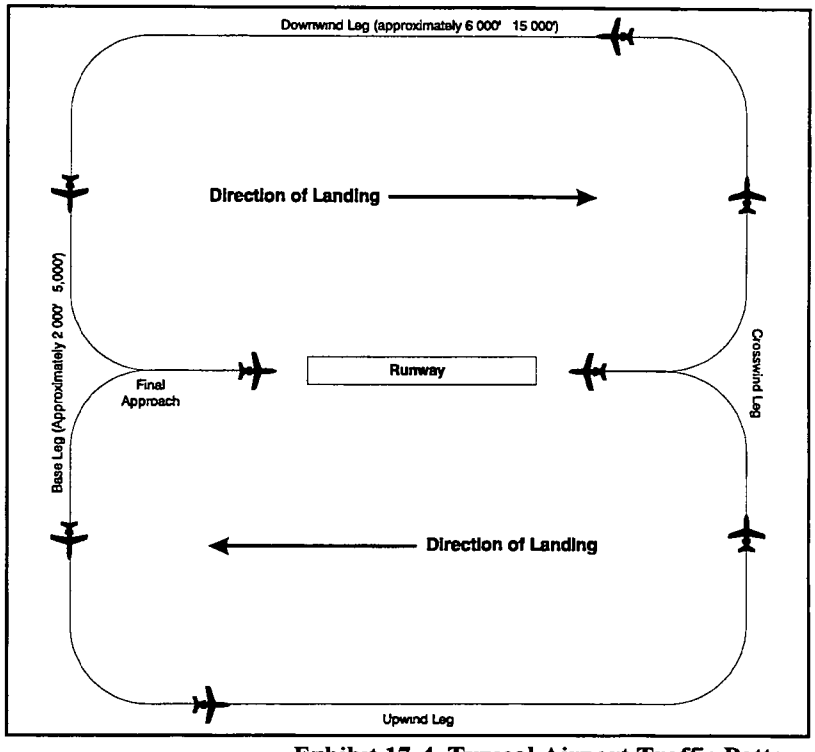


Exhibit 17-4 Typical Airport Traffic Pattern

Exhibit 17-5 identifies land uses which are generally compatible or incompatible within airport safety zones and Part 77 surfaces. There are specific types of development that are usually compatible with an airport. In general, these include agriculture, commercial, and industrial land uses. Other types of development, such as residential and places of public assembly are typically considered to be incompatible with an airport

Should I Consider Other Factors In Developing A Comprehensive Land Use Compatibility Strategy For My Airport?

To achieve airport-environs compatibility, minimizing aircraft noise impacts on areas surrounding the airport is also important Noise, very simply, is unwanted sound. Noise is defined in Webster's dictionary as "any sound that is undesired or interferes with one's hearing of something." Aircraft sounds are perceived differently by different individuals. However, concerns about aircraft noise are often reflections of the degree to which aircraft noise intrudes on existing background noise. In general, where ambient noise is low, aircraft noise is perceived as a problem. Each community must decide whether noise-related land use zoning around their airport should be limited to substantially noise-impacted areas, or if they see a need to zone for areas impacted by moderate noise levels

Historically, airports were constructed on the outskirts of communities Aircraft noise was not a problem since the airport was located at a significant distance from developed areas Through the years, development often expanded toward the airport As communities have expanded toward an airport, land uses which are sensitive to noise have developed closer to the airport Aircraft noise is determined by the type of aircraft operating at an airport, the volume of aircraft operations

LAND USES	FAR Part 77 "Imaginary Surfaces"					FAA Safety Zones
	Primary Surface	Transitional Surface	Horizontal Surface	Conical Surface	Approach Surface	Runway Protection Zone
RESIDENTIAL						
Residential - other than mobile homes, transient lodgings	NC	NC	C	C	NC	NC
Mobile home parks/mobile homes	NC	NC	C	C	NC	NC
Transient lodgings	NC	NC	C	C	NC	NC
PUBLIC USE						
Places of public assembly (nursing homes, schools, hospitals, churches, auditoriums)	NC	NC	C	C	NC	NC
Governmental Buildings	NC	NC	C	C	NC	NC
Transportation (parking, highways, bus and rail terminals, aviation terminals)	NC	C	C	C	C	*
COMMERCIAL						
Offices - business and professional	NC	C	C	C	NC	NC
Wholesale/retail - materials, hardware and farm equipment	NC	C	C	C	NC	NC
Retail trade - general	NC	C	C	C	NC	NC
Utilities	NC	C	C	C	C	*
Communications (telephone exchange stations, relay towers, transmission stations)	NC	*	C	C	NC	NC
MANUFACTURING						
Manufacturing-general	NC	*	C	C	NC	NC
Agriculture (except livestock)	NC	C	C	C	C	*
Livestock farming and breeding	NC	C	C	C	C	NC
Resource extraction (mining)	NC	NC	C	C	NC	NC
Forestry	NC	C	C	C	NC	NC
RECREATIONAL						
Outdoor sports arenas, amphitheaters	NC	NC	C	C	NC	NC
Nature exhibits, zoos	NC	NC	C	C	NC	NC
Amusement parks, resorts, camps	NC	NC	C	C	NC	NC
Golf courses	NC	C	C	C	NC	NC
Parks	NC	C	C	C	C	C

KEY

C - Generally compatible land use
NC - Incompatible land use
* - Not clearly compatible or incompatible, requires specific study

CRITERIA FOR COMPATIBILITY

1 Does not exceed height standards
2 Does not attract large concentrations of people
3 Does not create a bird attractant
4 Does not cause a distracting light/glare
5 Does not cause a source of smoke
6 Does not cause an electrical interference
7 Does meet compatible DNL sound levels

experienced at an airport, and the time of day (or night) the operations are performed. Inappropriate development approved near airports increases the perceived impact of aircraft noise.

Noise impact areas for an airport are identified by noise contours. The basic methodology employed to define aircraft noise levels involves the use of a mathematical model the Federal Aviation Administration's (FAA) Integrated Noise Model (INM) The INM contains a database which relates slant range distance and engine thrust to noise levels to each specific type of aircraft. On an irregular grid around the airport, the Model computes the associated noise exposure level for the specific aircraft and engine thrust used at that point along the flight track. The individual noise exposure levels are summed for each grid location Equal noise levels are then indicated by a series of contour lines superimposed on a map of the airport and its environs Although lines on a map tend to be viewed as definitive, it should be emphasized that the Model is only a planning tool By developing a set of noise contours for an airport, a planner can identify areas impacted by aircraft noise, and plan accordingly. Airport-specific noise contours developed by the INM can best be obtained through an airport consultant.

The Federal Aviation Administration (FAA) is the federal agency involved with providing guidance for developing local plans and zoning ordinances for areas affected by aircraft noise Federal Aviation Regulations (FARs) pertaining to aircraft noise include FAR Part 150.

FAR Part 150 contains many regulations in the "Aviation Safety and Noise Abatement Act, 1979 " Under FAR Part 150, local jurisdictions are encouraged to prepare and submit to FAA a Noise Exposure Map (NEM) for the airports environs and a Noise Compatibility Plan (NCP), if desired. This voluntary program applies to all publicly-owned, public-use airports that are included in the National Plan of Integrated Airport Systems (NPIAS) The NPIAS identifies the type and estimated costs of airport development eligible for FAA Airport Improvement Program (AIP) funds. The NPIAS is considered the planning document while the AIP is the implementing program The FAR Part 150 regulation does not apply to privately-owned airports, heliports, or military facilities Further, FAR Part 150 Noise Studies are generally only conducted for commercial service airports on the most active aviation airports that accommodate high volumes of activity or a substandard number of business jets

Noise is measured in decibels (dB). Aircraft sound levels are measured using the A-weighted decibel scale (dBA). FAR Part 150 approves the decibel (dBA) unit as the universal noise measurement tool. The A-weighted decibel unit most closely approximates the manner in which the human ear responds to sound **Exhibit 17-6** depicts common sounds and their associated noise levels; **Table 17-3** presents estimated noise levels associated with various aircraft types at maximum gross takeoff weight.

TABLE 17-3

North Dakota Aeronautics Commission
Land Use Compatibility Guidelines

ESTIMATED PART 36
A-WEIGHTED SOUND LEVELS

Manufacturer	Airplane	Estimated DBA
Boeing	B-747-200	99
Boeing	B-727-200	88
Boeing	B-737-200	87
McDonnell Douglas	DC 9-30	85
Learjet	23	84
Sabreliner	Sabre 60	84
Gulfstream	G-II	84
Boeing	B-767-300	80
Learjet	24	80
McDonnell Douglas	MD-80	78
Fokker	F-27-200	78
Dassault Brequet	Falcon 20	77
Airbus	A-300B1	76
Boeing	B-757-200	74
Cessna	207	74
Learjet	Learjet 24E	73
Fokker	Fokker 100	72
Cessna	210	71
Learjet	Learjet 35 A	71
Beech	B36TC Bonanza	71
Embraer	EMB 110-P2	71
Cessna	Citation III	70
Piper	PA-42 Cheyenne	70
Dehavilland	DHC-8	69
Fairchild	SA 226-AC Metro III	69
Beech	Super King Air 200	68
Learjet	Learjet 55	67
Gulfstream	G-IV	66
Dornier	D-228	66
Beech	65 Queen Air	65
Saab Fairchild	SF 340	65
Mooney	M 20C	65
BAe	Jetstream 31	63
Piper	PA-44-180	62
Gulfstream	GA-5A	60
Beech	A-23	58
Piper	PA-30 Twin Commache	56

Source FAA AC 36-3F, noise level estimates are provided in FAR Part 36 (estimates reflect noise levels at 6,500 meters from start of takeoff roll)

Many studies have been done to measure how much noise is generated by aircraft. Although several noise measures have been developed, the Environmental Protection Agency (EPA) and the FAA use a method called the day-night average sound level (DNL) noise contour method as the primary measure for defining noise around an airport DNL is defined as the average A-weighted sound level, measured in decibels, for a 24-hour period. This level is obtained after a 10-decibel penalty is applied to noise events occurring between the night-time hours of 10 00 p m to 7 00 a.m., local time. The 10-decibel penalty applied to noise events occurring at night represents the differences in perception of sound levels between day and night DNL is a summation metric which allows more objective analysis, it describes noise exposure comprehensively over a large area.

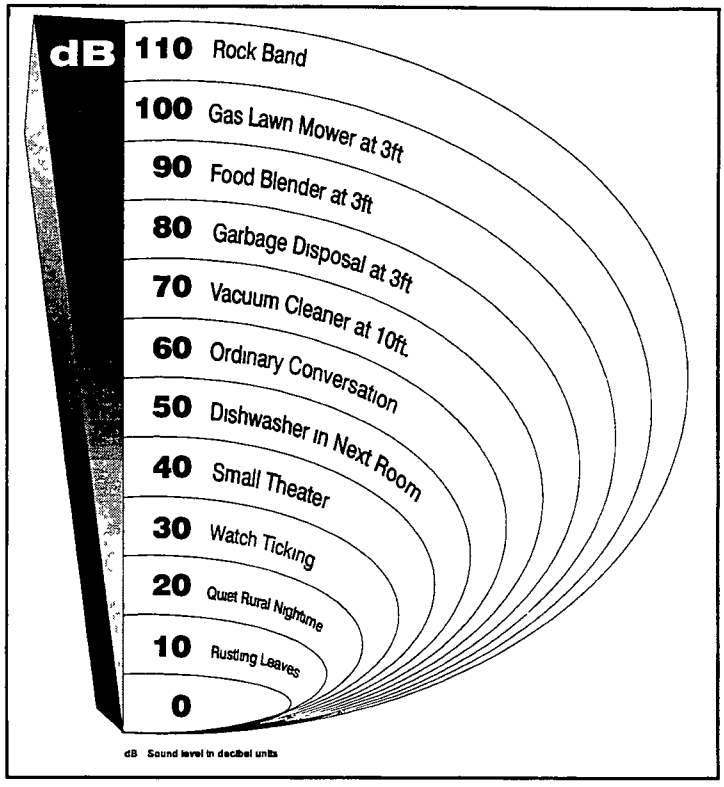


Exhibit 17-6 Common Sounds and Their Noise Levels

After DNL noise contours are developed for an airport area, three basic noise impact areas can be identified These major impact areas, referred to as noise corridor zones, can be defined as a "severe" noise impact area, a "substantial" noise impact area, or a "moderate" noise impact area The severe noise impact area includes "those areas contained within the 70 DNL contour and above." The substantial noise impact category is defined by the areas of land impacted by the 65 DNL to the 70 DNL contour. Areas impacted by the 55 DNL up to the 65 DNL contour are within the moderate noise impact category Areas exposed to 55 DNL or less are not considered to be seriously impacted from a noise perspective

FAA Part 150 describes acceptable types of land use for each DNL sound level It is desirable that areas impacted by the 70 DNL contour or greater be acquired by the airport owner. Typically this level of noise impact beyond airport property is associated with large, high activity airports. For airports with low activity, noise contours of 70 DNL and above are usually contained within airport property Often, the 65 DNL contour extends off airport property Land uses that should not be located within areas exposed to 65 DNL and above include all residential development When public institutions such as schools, hospitals, and churches are constructed within noise contours of 65 DNL or higher, measures should be taken to achieve reduced noise levels. Most land uses are compatible in areas impacted by noise levels less than 65 DNL **Exhibit 17-7** depicts FAA accepted land uses for each DNL sound level.

LAND USES	YEARLY DAY-NIGHT AVERAGE SOUND LEVEL (DNL) IN DECIBELS				
RESIDENTIAL	< - 65	65 - 70	70 - 75	75-80	80+
Residential, other than mobile homes, transient lodgings	Y	N[1]	N[1]	N	N
Mobile home parks / Mobile homes	Y	N	N	N	N
Transient lodgings (motels, hotels)	Y	N[1]	N[1]	N	N
PUBLIC USE					
Schools	Y	N[1]	N[1]	N	N
Churches, auditoriums, concert halls, hospitals, nursing homes	Y	25	30	N	N
Governmental services	Y	Y	25	30	N
Transportation/Parking	Y	Y	Y[2]	Y[3]	Y[4]
COMMERCIAL					
Offices-business and professional	Y	Y	25	30	N
Wholesale/retail-materials, hardware and farm equipment	Y	Y	Y[2]	Y[3]	Y[4]
Retail trade-general	Y	Y	25	30	N
Utilities	Y	Y	Y[2]	Y[3]	Y[4]
Communications	Y	Y	25	30	N
MANUFACTURING					
Manufacturing-general	Y	Y	Y[2]	Y[3]	Y[4]
Photographic and optical	Y	Y	25	30	N
Agriculture (except livestock) and forestry	Y	Y[6]	Y[7]	Y[8]	Y[8]
Livestock farming and breeding	Y	Y[6]	Y[7]	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y
RECREATIONAL					
Outdoor sports arenas/spectator sports	Y	Y[5]	Y[5]	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N
Nature exhibits and zoos	Y	N	N	N	N
Amusement parks, resorts, camps	Y	Y	Y	N	N
Golf courses, riding stables, water recreation	Y	Y	25	30	N

The designations contained in this table do not constitute a Federal determination that any use of land covered by the local program is acceptable under Federal, State, or local law The responsibility for determining the acceptable and permissible land uses and relationship between specific properties and specific noise contours rests with the local authorities FAA determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses SEE NEXT PAGE FOR NOTES AND A KEY TO THE TABLE

KEY

Y (Yes)	Land use and related structures compatible without restrictions
N (No)	Land use and related structures are not compatible and should be prohibited
NLR	Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure
DNL	Average Day-Night Sound Level
25, 30, 35	Land use and related structures generally compatible; measures to achieve NLR of 25, 30, 35 dB must be incorporated into design and construction of structure

NOTES

1. Where the community determines that residential or school uses must be allowed, measures to achieve an outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals Normal residential construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as 5, 10, or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round The use of NLR criteria will not, however, eliminate outdoor noise problems

2. Measures to achieve NLR of 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low

3. Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low

4. Measures to achieve NLR of 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low

5. Land use compatible provided special sound reinforcement systems are installed.

6. Residential buildings require an NLR of 25 dB

7. Residential buildings require an NLR of 30 dB

8. Residential buildings not permitted

Source F A R Part 150, Appendix A, Table 1

Compatible off-airport land use planning that is truly comprehensive in nature should address FAA Part 77 surfaces, FAA Safety Zones, and each airport's specific noise contours. The FAA considers the 65 DNL as the level of noise exposure for defining incompatible land use In general, areas which fall outside the 65 DNL contour are suitable for most types of development, at least from a noise perspective. Noise sensitive land uses should definitely be discouraged in areas subject to noise impacts of 65 DNL or higher For most airports in North Dakota, the 65 DNL contour falls on property controlled by the airport Only at the State's largest and busiest airports does the 65 DNL noise contour extend beyond airport property. From a planning perspective, if airport owners and operators take steps to establish compatible land use controls in the FAA Safe Zones, areas within the airport's noise contour will also be covered Larger airports in the State should, however, periodically have their own noise contours generated by the most recent version of the INM **Table 17-4** depicts typical reactions to various levels of noise impact

What Can I Do To Stop the Spread of Incompatible Land Use Around My Airport and What Alternatives Do I Have If Land Use Around My Airport Has Already Become a Problem?

For those concerned with compatible land use in the airport environs, it is best to take steps to protect an airport before incompatible land use occurs which results in either safety or noise related problems Planners have a number of "preventative measures" which they can consider adopting or implementing to prevent encroachment of incompatible activities into areas around airports which should be protected to ensure safety and noise compatibility If incompatible land use or activities already exist in the airport environs, "corrective actions" can be taken.

Preventative Measures

It is always best to take actions that will prevent incompatible land use, as opposed to taking action to correct such activities after the fact. Planners have at their disposal a number of approaches that can be considered to prevent the development of activities or land use in the airport environs which would be incompatible from a safety or noise standpoint Preventative measures can generally be divided into three categories Planning, Ordinances, and Acquisition. These preventative measures are discussed in the following sections.

Planning

1 Comprehensive Plans

The State of North Dakota does not require its political subdivisions to prepare or adopt a comprehensive plan Such plans, however, are useful in establishing land use policies for

TABLE 4

North Dakota Aeronautics Commission
Land Use Compatibility Guidelines

EFFECTS OF NOISE ON PEOPLE

Day-Night Average Sound Level in Decibels	Hearing Loss	Speech Interference		Annoyance	Average Community Reaction
		Indoor	Outdoor		
	Qualitative Description	% Sentence Intelligibility	Distance in Meters for 95% Sentence Intelligibility	% of Population Highly Annoyed	
75 and above	May begin to occur	98%	0 5	37%	Very severe
70	Not likely to occur	99%	0 9	25%	Severe
65	Will not occur	100%	1 5	15%	Significant
60	Will not occur	100%	2 0	9%	Moderate to slight
55 and below	Will not occur	100%	3 5	4%	Moderate to slight

Source U S Department of Transportation, Federal Interagency Committee on Urban Noise, Guidelines for Considering Noise in Land Use Planning and Control, 1980

the development and improvement of a community It is an especially useful tool to support the efficient operation of an airport and compatible land uses in the airport environs Comprehensive plans can also be used to develop criteria for reviewing future development proposals to ensure that overall goals and policies of the plans are maintained, while allowing flexibility to respond to changing circumstances

2 Adoption of an Airport Land Use Plan and Map

One strategy that can be used to assure airport land use compatibility is to adopt and implement an airport land use plan and map. Although it is usually part of an airport master plan, an airport land use plan and map may be done independently. An airport land use plan should address existing conditions, existing and future land use compatibility, actions to be taken, and the jurisdiction responsible for implementing the recommended actions.

To implement this strategy, the airport land use plan must be incorporated into the local comprehensive plan or zoning ordinances if they exist This can be done through references

in the comprehensive plan goals or policies and by integrating the necessary considerations of airport conditions into the comprehensive land use plan

3 Coordination between jurisdictions of land uses in the vicinity of an airport

When establishing or preserving compatible land use in the vicinity of an airport, coordination is often necessary because the impacts of airports may extend across the jurisdictional boundaries of two or more jurisdictions It is important that cooperation exists between two or more jurisdictions when coordination of planning and zoning occurs The **North Dakota Century Code**, Chapter 2-04 Airport Zoning (Appendix A, page 17-42) establishes procedures for zoning regulations between two jurisdictions. These procedures include the creation of a joint airport zoning board to enforce airport zoning regulations applicable to the airport hazard area in question

In accordance with the Century Code, each joint airport zoning board has as members, two representatives appointed by every jurisdiction to be affected by the zoning regulations for the airport hazard area. If the jurisdiction that owns or controls the airport feels that the other jurisdiction(s) is being uncooperative in establishing a joint airport zoning board or adopting airport zoning, the airport zoning regulations of the jurisdiction that controls or owns the airport shall prevail.

Ordinances

Planners have at their disposal ordinances which can be adopted to control both the height of development in the airport environs (necessary to comply with FAR Part 77) and also land use that is permitted within the Airport's zone of influence. By adopting both height and land use related control ordinances before development occurs in the airport environs is the best approach to insure long-term land use compatibility

1 Zoning

Zoning is the most commonly used form of land use control. The purpose of zoning is to designate those areas of the community most suitable for particular land uses. The desired distribution of land uses in a comprehensive plan can become the basis for a zoning scheme. Land use zones, called districts, are shown on a map which is a required part of the zoning ordinance The uses permitted in each district must be stated in the ordinance. Some permitted uses may be conditional, requiring a special permit

A zoning ordinance can be adopted without a community comprehensive plan, but as discussed previously, the comprehensive plan strengthens the zoning plan's validity The primary advantage of zoning is that it can promote compatibility while leaving the land in question in private ownership, on the tax rolls, and in a mode to produce economically. At the same time, zoning is subject to change and must be periodically evaluated if it is to

remain a viable land use compatibility tool Used within its limitations, zoning is the preferred method for controlling land use to achieve airport-environs compatibility.

Zoning controls need careful tailoring in order to satisfy both the characteristics of the airport and the special conditions affecting the community. It is important for on-airport property and off-airport property to be appropriately zoned, so that required airport development can occur. There are generally three types of zoning that can be used in the airport environs to support compatible land use strategies. These are airport impact zoning, airport overlay zoning, and airport development zoning

- *Airport Impact Zoning*

An Airport Impact Zone is a separate zone used to place restrictions on land impacted by airport operations An Airport Impact Zone establishes a new zoning designation which replaces an existing zoning designation, conditions, and permitted uses. This type of zoning can be used to limit development in areas subjected to moderate to severe noise impacts and in areas beneath airport approach surfaces. An example of each type of impact zoning is included in Appendix B, **Example 1** (page 17-53).

- *Airport Development Zoning*

Like the Airport Impact Zone, the Airport Development Zone establishes a new zoning designation This type of zoning for airports often replaces "Industrial" or "Public Facility" classifications or other designations currently given to the airport and its immediate environs. Property that is reasonably confined to the airport area; areas needed for anticipated facility growth and airport-related industry, and areas within the boundaries of RPZs should be encompassed within the Airport Development Zone (Appendix B, **Example 2**, page 17-57)

- *Airport Overlay Zoning*

An Airport Overlay Zone maintains the existing zoning designation, but places additional conditions on the activities and uses that can occur in the area beneath the overlay zone An Airport Overlay Zone can be used to limit the height of objects surrounding an airport, restrict uses that produce hazardous conditions that could distract a pilot during critical phases of flight, such as smoke and distracting lights; and limit uses for areas subjected to significant noise levels or within designated safety zones. **Example 3** of Appendix B (page 17-60) provides a model Airport Overlay Zoning Ordinance that combines height, noise, and compatibility conditions that can be modified for specific airport use

2 Height Restrictions

According to FAR Part 77 - Objects Affecting Navigable Airspace, any object or structure which penetrates any of the "Imaginary Surfaces" is considered by the FAA to be an

obstruction to air navigation The purpose of height restrictions is to protect navigable airspace in the airport environs for traffic patterns and approaches As an example, an industrial use permitted in an industrial zone near an airport would be prevented from erecting a water tower, if the tower height exceeded the zoning restrictions. A similar industrial use elsewhere in the community (not within the height limitation zone) would be permitted A map is adopted as part of a height limitation zoning ordinance showing specific height limitations for specific areas Details on specific height restrictions are included in the development of zoning regulations, height restrictions set forth by the Federal Aviation Administration in FAR Part 77 should form the basis for height restricted zoning Height restrictions serve to maintain compliance with recommendations in FAR Part 77 - Objects Affecting Navigable Airspace. Such restrictions are necessary to ensure that objects will not impair flight safety or decrease the operational capability of the airport

FAA Advisory Circular 150/5190-4A, 1987, A Model Zoning Ordinance to Limit Height of Objects Around Airports, provides a model zoning ordinance that can be used by the local jurisdictions as a guide to control the height of objects around their airport Copies of this document may be obtained from The FAA Airport District Office (ADO) in Bismarck

Acquisition

Acquisition strategies for land use control are most effective if they are used in the preventative mode As a preventative strategy, acquisition techniques are generally less controversial and costly to implement It is important to note, however, that acquisition strategies can also be employed as "corrective" actions when incompatibilities already exist related to various Federal and State safety or noise requirements Those responsible for land use control in the environs of each North Dakota airport should consider acquisition strategies described in this section in both the preventative measures and the corrective actions categories

1 Land Purchase

Land purchase in fee simple by an airport is the most positive of all forms of land use control, but it is usually also the most expensive It is recommended by the FAA that airport proprietors own the property under the runway approach and departure areas, at least to the limits of their RPZs. Purchase of land within severely noise impacted areas and RPZs is eligible for funding through the FAA if the airport is included in the National Plan of Integrated Airport Systems (NPIAS) or State matching grant option. It is preferable that local officials try to protect other land in the airport environs through comprehensive planning and zoning first, before outright purchasing, since the positive control method is less costly. On the other hand, variations of this method include land purchase with either resale for compatible use (land banking with restrictive covenants) or use for a compatible public purpose. Under this scenario, costs may be effectively reduced

2 *Easements*

An easement is a right of another to part of the total benefits of ownership of real property Easements may be used as an effective and permanent form of land use control. Easements are permanent, with title held by the purchaser until sold or released, and work equally well inside or outside zoning jurisdictions. Short of purchasing fee simple easements, property can be acquired by negotiation or condemnation. Easements permit the purchaser the use of another's property and property rights for the special purposes stated in the easement agreement

Avigation and hazard easements are those which grant

- the right of flight over the land in question
- the right to remove existing obstructions
- a restriction against the establishment of future obstruction
- compensation to the owner for the side effects of aircraft operations over the owner's property This compensation can be used for home insulation, air conditioning, trees, and plants to help reduce overflight impacts.

The FAA defines three basic degrees of avigation and hazard easements. **Table 17-5** describes the rights acquired under each type of avigation and hazard easement One major advantage of easements is that they can be permanent, whereas zoning can be changed Additionally, easements often may be acquired for a fraction of the total value associated with the simple purchase of the land, and are thus less expensive.

Easements can be an effective strategy for assuring compatible development around airports. In the context of airport compatibility planning, easements may take several forms, such as a positive easement which allows the right of avigation and the right to make noise over someone's property, or a negative easement which prevents the creation or continuation of incompatible land uses on the property

Acquisition of easements does not by and of itself change incompatible land use to compatible use or reduce the impact that airport operations have on the property, but the easement acquisition price can and should be dedicated to making the necessary change in use or providing soundproofing measures to achieve compatibility with the airport Easements can be obtained in a number of ways including purchase, condemnation, and dedication (either voluntary or required at time of subdivision).

Table 17-5

BASIC TYPES OF AVIGATION AND HAZARD EASEMENTS

Type of Avigation/Hazard Easement		Rights Acquired
Model Avigation and Hazard Easement	1	Right-of-flight at any altitude above the approach surface
	2	Prevents any obstruction above approach surface
	3	Right to cause noise, vibrations, fumes, dust, and fuel particles
	4	Prohibits creation of electrical interference or unusual lighting
	5	Grants right-of-entry to remove trees, buildings, etc , above approach surface
Limited Avigation Easement	1	Right-of-flight above approach slope surface (20 1, 34 1, 50 1)
	2	Prohibits any obstruction above approach slope surface
	3	Right-of-entry to remove any structure or growth above approach slope surface
Clearance Easement	1	Prohibits any structures, growths or obstructions above approach slope surface (20 1, 34 1, or 50 1)
	2	Right-of-entry to remove, mark, or light any structures or growths above approach slope surface

Source Federal Aviation Administration

A noise easement grants the airport the right to make noise over another person's property **Exhibit 17-8** exemplifies the area that is impacted by noise generated from an aircraft in flight. Appendix B, **Example 4**, page 17-71 contains an example Noise Easement Ordinance.

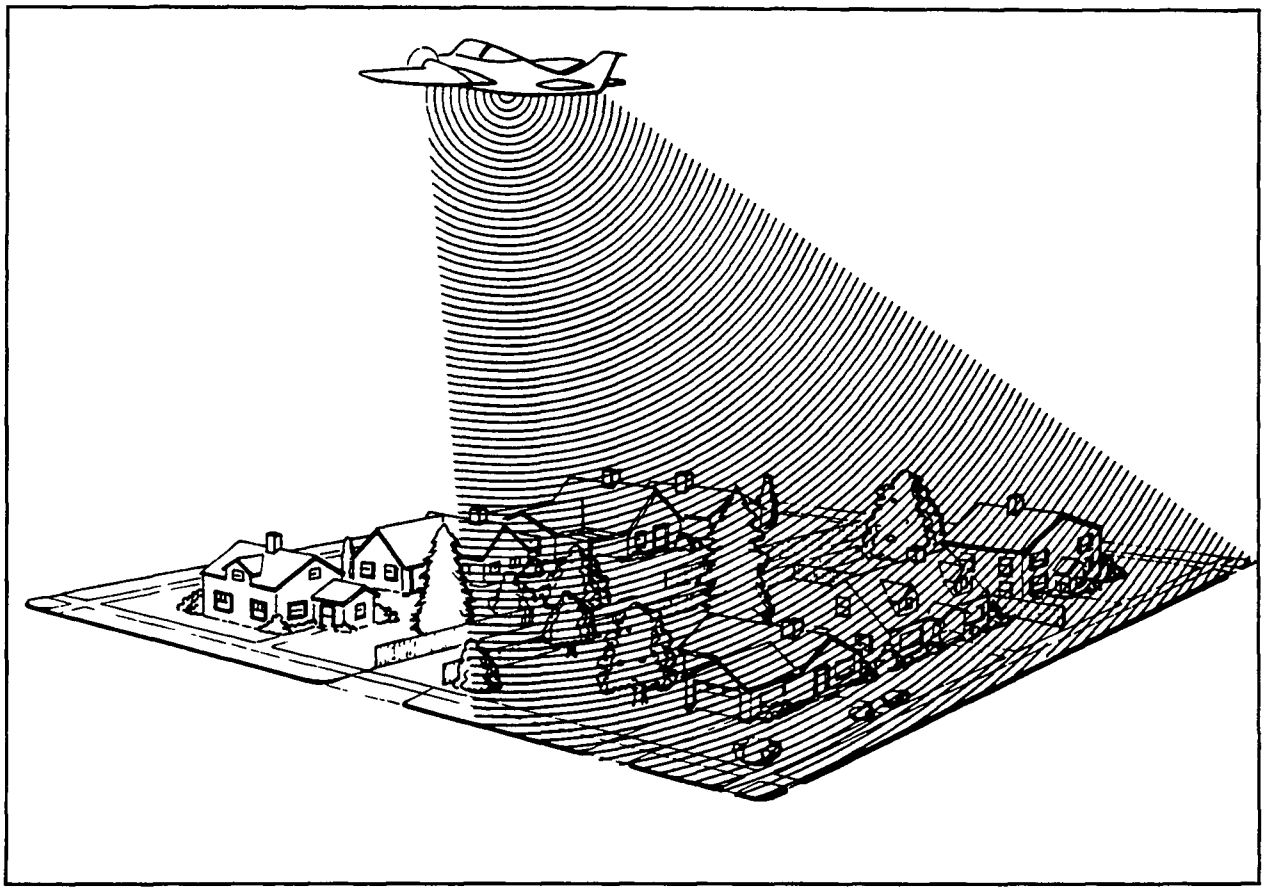


Exhibit 17-8 Area Impacted by Aircraft Noise

An avigation or hazard easement can be used to prohibit the creation of electrical interference or unusual lighting; prevent any obstruction from protruding into the approach surface; and provide the right-of-way to remove obstructions, such as trees, from above the approach surface. An avigation or hazard easement exists within a defined airspace area. **Exhibit 17-9** exemplifies the area controlled under an avigation easement. Appendix B, **Example 5**, page 17-72 contains an example Avigation and Hazard Easement Ordinance.

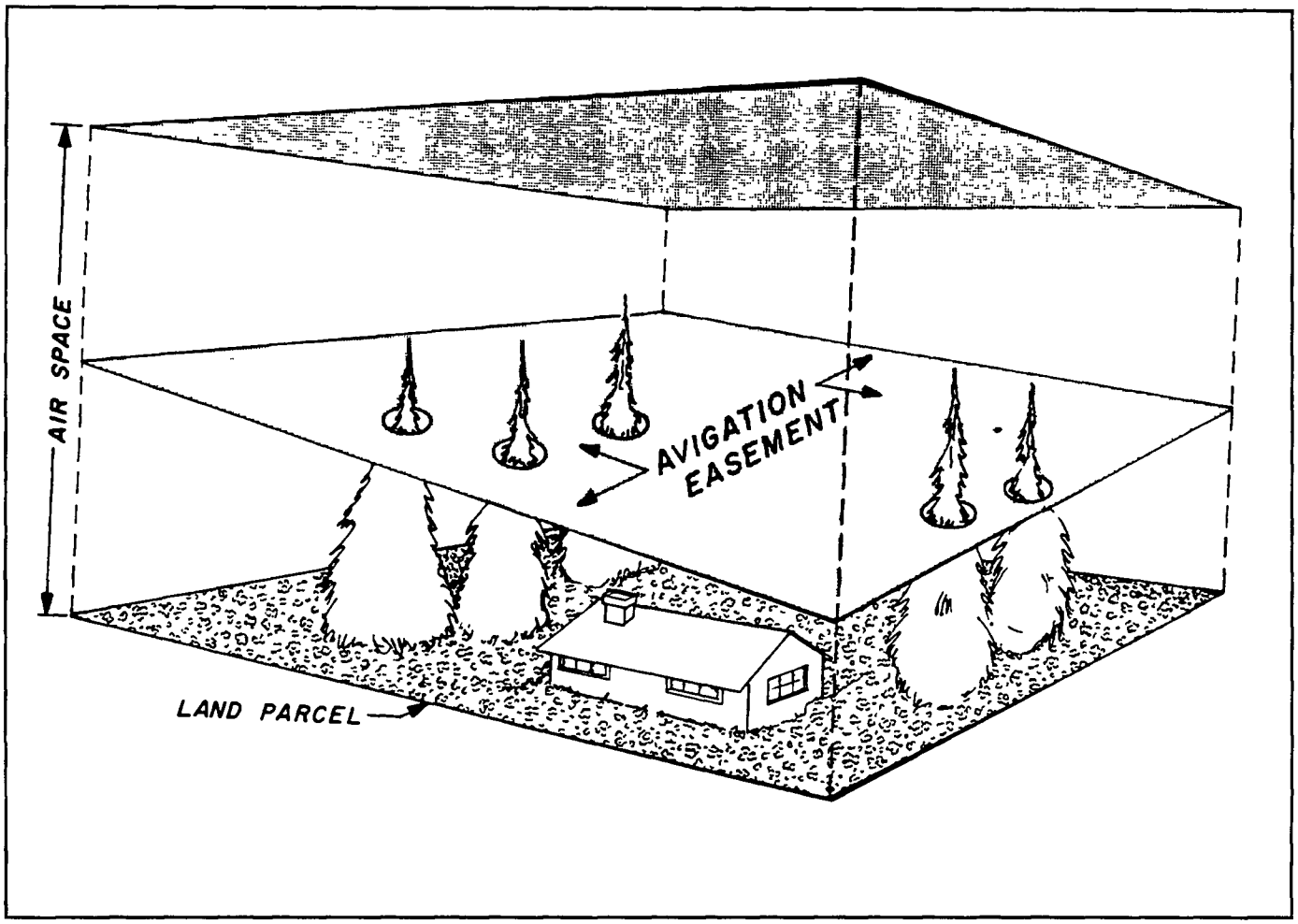


Exhibit 17-9 Area Controlled Under Avigation Easement

But What Happens If A Problem Already Exists?

As noted, it is best to take preventative measures described so that incompatible land use does not become an issue in the airport environs If, however, development has already occurred, there are corrective actions which can be taken by planners to resolve or at lease mitigate the impacts of incompatible land use on the airport's long-term operational efficiency Corrective actions that can be considered fall into three general categories Noise Mitigation, Operational Procedures, and Agreements It is important to note that **land acquisition** and **easement strategies** discussed under the preventative measures section can also be considered as **corrective actions** in applicable situations.

Noise Mitigation

Minimizing aircraft noise impacts on area around an airport once it has become developed is one corrective action that can be considered to achieve airport-environs compatibility Noise mitigation strategies include.

- *Noise Barriers*
- *Soundproofing*

1 Noise Barriers

Noise barriers, or shielding, can reduce ground-level generated aircraft noise Ground level noise sources at an airport include aircraft engine run-up areas, aircraft maintenance areas, and taxiways The impact of ground level generated noise is confined to those areas immediately adjacent to the source Noise barriers can be constructed through the strategic placement of new hangars, terminal structures, buildings, or planted landforms (tree and vegetative screens)

2 Soundproofing

Soundproofing is another control used to lessen noise within an airport's noise impact area Although it is not an "exact science," eliminating noise through use of soundproofing can reduce interior noise between 10 and 30 decibels Soundproofing and insulation techniques may include double-glazed windows, acoustical doors, gasketing of enclosure doors, staggering of structural members ("isolated double membrane" building construction), and ceiling and wall insulation. Although soundproofing does not completely eliminate exterior noise effects within the home, it does reduce it to a more tolerable range

While soundproofing is both a feasible and practical means of alleviating the impact of airport operations, particularly aircraft noise impacts, the analysis of its usefulness (benefits vs costs) should be made on a case-by-case basis giving careful consideration of the condition and age of the existing structure

Operational Procedures

If development has already occurred in the airport environs, restricting aircraft operational procedures is another action that can be considered to minimize noise exposure patterns around an airport. Examples of possible operational procedures targeted to effect noise control may include, but are not limited to, the following:

- Restrictions on ground movement of aircraft
- Preferential runway end selection during calm winds

- Restrictions on engine runups or use of ground equipment (identifying times of day and limiting locations)
- Raise glide slope angle or intercept on PAPI or VASIs
- Power and flap management through pilot signage
- Limited use of reverse thrust
- Changing traffic pattern altitudes or existing traffic legs in AFO materials

All of the above items are considered feasible methods for implementation at large airports that serve business jets and air carrier aircraft However, due to the limited size and types of aircraft operating at smaller general aviation airports in North Dakota, several of the strategies mentioned above are considered impractical for implementation The first two items are considered feasible aircraft operational restrictions for implementation at small general aviation airports The last item can be used at both smaller general aviation airports and larger commercial airports It should be noted that while changing traffic patterns can decrease or eliminate noise impacts on one area, an increase in noise impacts may be experienced in another The use of this noise control works effectively if the traffic pattern is changed to an airspace area over a compatible land use Regarding all noise control options, it should be noted that altering standard airport/aircraft operational procedures can compromise safety Any modifications or restrictions in standard operational procedures should only be considered after careful consideration of all other potentially feasible alternatives and after thorough consultation with affected parties (airport users) and the FAA

Agreements

When incompatible land use already exists or is proposed as part of a development package that cannot be stopped, agreements can be considered as a corrective action to limit adverse impacts. An airport sponsor can be held liable for noise generated from airport usage In order to protect the airport sponsor from this liability, a Hold Harmless Agreement can be used. A Hold Harmless Agreement is recorded in the deed as a condition of approval for any regulatory land use decision As part of the deed, the Hold Harmless Agreement appears in a future title search which would forewarn a prospective buyer that the subject property is affected by noise generated by aircraft or airport activity

A Hold Harmless Agreement is often used to protect the airport sponsor from liability for noise and other impacts of airport operation where an incompatible development is either existing or proposed Appendix B, **Example 6**, page 17-74 includes an example of a Hold Harmless Agreement Under some circumstances, a local city or county can require this type of agreement and have it recorded in the deed as a condition of approval for any regulatory land use decision (i.e., subdivision request, zoning change, etc.). In this way, a future title search would forewarn a prospective buyer that the subject land is affected by aviation noise.

Another method that can be used to notify potential buyers of property near airports that they may be exposed to certain levels of aircraft noise is through fair disclosure statements These

statements in no way abrogate an individual's right to take later action against the airport, but fair disclosure statements at least give buyers a fair warning. The major benefit of a fair disclosure statement is that buyers find out about the presence of the airport and its associated noise before they purchase property that is likely to be impacted by airport noise. The adoption of rules requiring fair disclosure statements requires the cooperation and education of realtors and lenders because of the complexity involved in understanding aircraft noise and land use compatibility Because of this complexity, realtors and lenders are often fearful that they may become more exposed to malpractice suits and other litigation because of their failure to properly follow the fair disclosure statement rules. This situation can be alleviated with a good education program and coordination with real estate groups

Fair disclosure statements do not decrease noise exposure. However, they do serve to advise potential purchasers of property near airports of the potential impact from aircraft noise *before* the decision to purchase is finalized. A sample Fair Disclosure Statement is provided in Appendix B, **Example 7**, page 17-75

This section has provided examples of steps that can be considered to both prevent and to correct incompatible land use in the airport environs Appendix B provides examples of specific ordinances and agreements that can be modified for local conditions and use **Table 17-6** provides a summary of the various land use compatibility strategies contained in this section.

What Are The Next Steps?

Airport owners in conjunction with the airport and other impacted entities should consider appropriate land use/zoning controls prior to the development of land near their airport. Adequate safeguards should be incorporated early to prevent incompatible land uses from occurring in proximity to the boundaries of the airport. Adequate land use controls can also provide space for future airport expansion.

Specific efforts that airport sponsors can undertake to control and monitor land use compatibility around their airport are described below

- Ensure land use restrictions for all surrounding jurisdictions are in place and reflect current operational levels by aircraft type

- Assist surrounding jurisdictions in understanding how the airport operates, the airport's flight patterns and the type of aircraft operating at the airport. Also assist surrounding jurisdictions in understanding how the airport benefits the local economy and community's health, welfare, and safety.

- Stay involved because land use is fluid and subject to a public process that is constantly changing By staying involved, the airport manager/sponsor can influence the compatibility of land use surrounding the airport

TABLE 17-6

North Dakota Aeronautics Commissioin
Land Use Compatibility Guidelines

SUMMARY OF LAND USE STRATEGIES

	DESCRIPTION	ADVANTAGE	DISADVANTAGE	WHEN TO USE
Preventive Measures				
Comprehensive Planning	Describes all future land use for the community	Low cost and minimal controversy if airport is not in a developed area	Not effective when existing incompatible development has encroached on the airport, only effective when supported by zoning	Each time a comprehensive plan is developed or updated steps should be taken to include compatible land use in the airport environs
Coordination Agreements	Agreement between two or more jurisdictions that are impacted by an airport	Most applicable when airport is located outside the physical boundaries of the public sponsor in another jurisdiction	Ineffective unless all parties have similar land use planning goals and objectives for areas in the airport environs	When comprehensive plans are updated
Height Restrictions	Safety mandated for NPIAS airports by FAA	Prevents the location of objects which pose violations to FAR Part 77 surface	Only effective in preventing not currently existing height obstructions, not effective when terrain or trees are obstructions	Should be adopted as part of zoning to support land use identified in comprehensive plan
Zoning: **Airport Impact Zone**	Establishes a new zone which replaces an existing zoning designation	Leaves land in private ownership on tax roles	Subject to frequent change	If existing zoning is incompatible with airport

TABLE 17-6

North Dakota Aeronautics Commissioin
Land Use Compatibility Guidelines

SUMMARY OF LAND USE STRATEGIES

	DESCRIPTION	ADVANTAGE	DISADVANTAGE	WHEN TO USE
Airport Overlay Zone	Places additional conditions on affected land, existing zoning remains unchanged	Easier to implement, while still reducing hazards and limiting incompatible land use	If land use is incompatible in underlying zone, this incompatibility will continue	Can be used to limit the height of objects or to restrict activities which produce smoke, glare, birds, or distractive lighting Can be used in noise impacted area to enforce Hold Harmless Agreements or Fair Disclosure Statements
Airport Development Zone	Distinguishes separate zoning descriptions for airport, airports often zoned "Public Facility" or "Industrial"	Creates a more distinct area of influence for the airport, does not blend in with other surrounding uses Gives the airport better opportunity to expand	Not usually appropriate in areas that are already planned and zoned	Most applicable to new airports
Preventative Measures and Corrective Actions				
Fee Simple Acquisition	Purchase of land and all land use rights	Allow complete control over future and pre-existing land use, not reversible	Often very costly with possible legal opposition, takes land off tax roles	Should be considered to protect critical safety zones and areas subject to high levels of noise impact Most effective method for resolving existing problems may be eligible for FAA grant

TABLE 17-6

North Dakota Aeronautics Commissioin
Land Use Compatibility Guidelines

SUMMARY OF LAND USE STRATEGIES

	DESCRIPTION	ADVANTAGE	DISADVANTAGE	WHEN TO USE
Easements	Transfer of money to obtain the rights to use or restrict use in a specified manner	Can provide more positive control than zoning, less expensive than acquisitions, land may remain on active tax roles	Does not alter existing incompatible use	Can be used to compensate owner for substantial noise impacts, can be used to gain right to remove obstructions (i e , trim trees)
Corrective Actions				
Change Operational Procedures	Changing normal operating patterns to reduce noise can include preferential runway end use, non-standard turns on departures, non-approach and departure altitudes	Can help to reduce noise impacts on areas of incompatible development	Does not change incompatible land use, may be only temporary fix if continued development of incompatible use occurs or airport grows	Consider as part of Master Plan, Part 150 or Environmental Assessment for airport, must be fully coordinated with airport owner, users, and FAA
Noise Mitigation	Sound barriers or sound proofing can be used to mitigate existing noise impacts	Can help to reduce noise impacts in noise sensitive land use that has occurred in the airport environs	Very costly to implement, is not a long-term solution but a temporary fix	Can be investigated as part of an airport planning or noise study, only applicable for larger airports
Hold Harmless and Deed Notifications	Method for notifying purchaser and developer that property is in noise impacted area	Can be effective for mitigating noise complaints against the airport even when development has already occurred	Does not prevent legal action against airport	Part of Part 150 process, only applicable to largest airports

- Be aware of land use actions proposed by the local county or municipality and all adjacent jurisdictions in the airport environs.

- Stay apprised of the existing zoning or land use, how it is being enforced, and changing airport operations and associated needs and impacts on areas adjacent to the airport.

- Assist local jurisdictions in understanding Federal Aviation Regulations Part 77 notification requirements and the special needs for protecting the safety and efficiency of aircraft operations. The Guidelines contain specific information which can be drawn upon to fulfill this requirement.

- Provide copies of the Airport Layout Plan (ALP) to the local planning commission

- Attend planning meetings on land use decisions in the vicinity of the airport

- Be sensitive to operations at the airport and the impact they have on neighboring land uses

- Invite local government officials and planners to be part of airport advisory committee to keep them informed of the airport's plans and needs

These Guidelines offer the airport sponsor an opportunity to establish or strengthen their relationship with their local community officials, to show them the issues associated with airport land use compatibility and to explain how the airport and the community can most rationally be protected By staying involved in local land use issues and the formulation and updating of their local growth management plan, airport managers and sponsors can ensure that their airport's needs are brought to the attention of the local government who can help control the surrounding land use designations through zoning or other appropriate controls.

How Do We Get Started?

There are several questions that communities should answer when they consider how to address land use planning for the airport within their jurisdiction. These questions include:

- Does your jurisdiction have existing height zoning regulations for the areas surrounding the airport?

- If you have a comprehensive plan, does it have a transportation element that includes the airport?

- Is an airport representative involved in the local planning process, especially when concerns arise regarding air transportation?

- Is your agency involved in planning processes that takes place at the airport such as master planning and environmental analyses?

- Does your agency have land use controls in place to prevent development of incompatible uses in the airport's area of influence?

- Is your agency working to resolve existing compatibility problems in the airport's environs?

- Is your jurisdiction coordinating with adjacent jurisdictions affected by the airport?

By answering these questions, communities can determine their needs as they relate to land use in the airport environs **Exhibit 17-10** provides an overview of the process to follow to initiate and to revise compatible land use planning in the airport environs

In those instances where land use incompatibilities currently exist and actions have not been taken to resolve these incompatibilities, a "troubleshooting" matrix has been developed. This matrix cites specific "problem" areas and identifies example actions that can be considered to address land use issues. As shown in **Exhibit 17-11**, specific land use situations are identified that represent possible conflicts with either safety or noise-related guidelines Depending on whether the potential impact relates to noise or safety, different actions are available to address the incompatibility. This exhibit also references the page number in the Guidelines where more detail on specific actions or guidelines are available. A page number which corresponds to the appendix which contains sample ordinances that are applicable to addressing the particular concerns is also provided

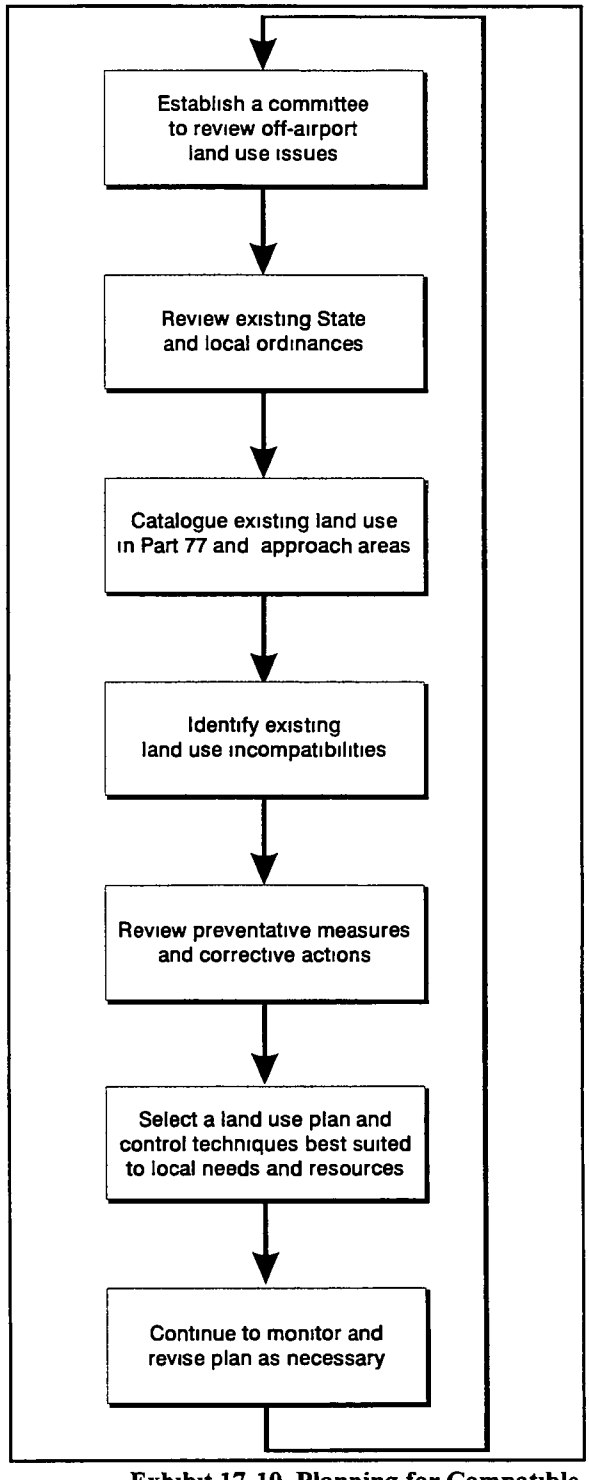


Exhibit 17-10 Planning for Compatible Land Use Around Airports

LAND USE ISSUES	Potential Impact	Example Actions Available	Guideline Reference	Appendix A Reference
Existing Residential Development	Noise Concern	Soundproofing	17-32	N/A
		Noise Easement	17-28	17-71
	Safety Concern	Fee Simple Aquisition	17-27	N/A
Proposed Residential Development	Noise Concern	Hold Harmless Agreement	17-33	17-74
		Fair Disclosure Statement	17-34	17-75
	Safety Concern	Comprehensive Plan	17-16	N/A
Proposed Landfill	Safety Concern	Airport Overlay Zoning	17-12 17-26	17-60
School, Hospital, and Church Development	Noise Concern	Soundproofing	17-32	N/A
		Noise Easement	17-28	17-71
Proposed School, Hospital, and Church Development	Safety Concern	Airport Overlay Zoning	17-12 17-26	17-60
Radio / Television Tower	Safety Concern	Avigation & Hazard Easement	17-26	17-72
		Height Limitation Ordinance	17-12 17-28	N/A
Factory Smoke	Safety Concern	Avigation & Hazard Easement	17-28	17-72
		Airport Overlay Zoning	17-12 17-26	17-60
Golf Course Lights	Safety Concern	Avigation & Hazard Easement	17-12 17-28	17-72
		Airport Overlay Zoning	17-12 17-26	17-60
Auditoriums / Outdoor Theaters	Safety Concern	Airport Overlay Zoning	17-26	17-60
Powerlines	Safety Concern	Avigation & Hazard Easement	17-28	17-72
		Height Limitation Ordinance	17-12 17-27	N/A

These Guidelines provide a logical sequence of activities for each community to examine their airport's compatibility with its environs It is up to the local community to actually determine and identify where existing incompatible land uses have developed in the airport environs. Within the context of the Guidelines, each community which has zoning or land use planning responsibilities for an airport should use this information to resolve existing incompatible land uses within the airport's area of influence and to implement actions which will prevent future incompatible development from occurring.

With the assistance of a private consultant, airport legal counsel, and community, county, regional or metropolitan planning organizations, a task force team can be established to create and implement land use compatibility guidelines for your airport By review of the guidelines discussed in this document, land use planning can be implemented which will preserve the airport's infrastructure investment and safety for the traveling public in the future

Appendix A

North Dakota Century Code

CHAPTER 2-04
AIRPORT ZONING

2-04-01. Definitions. As used in this chapter, unless the context otherwise requires

1. "Airport" means any area of land or water designed and set aside for the landing and taking off of aircraft and utilized or to be utilized in the interests of the public for such purposes

2. "Airport hazard" means any structure or tree or use of land which obstructs the airspace required for the flight of aircraft in landing or taking off at any airport or is otherwise hazardous to such landing or taking off of aircraft.

3 "Airport hazard area" means any structure or tree or use of land which obstructs the airspace required for the flight of aircraft in landing or taking off at any airport or is otherwise hazardous to such landing or taking off of aircraft

4. "Person" means any individual, firm, copartnership, corporation, company, association, joint stock association, the state of North Dakota or any political subdivision thereof, and includes any trustee, receiver, assignee, or other similar representative thereof

5. "Political subdivision" means any county, city, park district, or township

6. "Structure" means any object constructed or installed by man, including, but without limitation, buildings, towers, smokestacks, and overhead transmission lines.

7. "Tree" means any object of natural growth

2-04-02. Airport hazards contrary to public interest. It is hereby found that an airport hazard endangers the lives and property of users of the airport and of occupants of land in its vicinity, and also, if of the obstruction type, in effect reduces the size of the area available for the landing, taking off, and maneuvering of aircraft, thus tending to destroy or impair the utility of the airport and the public investment therein. Accordingly, it is hereby declared. (a) that the creation or establishment of an airport hazard is a public nuisance and an injury to the community served by the airport in question, (b) that it is therefore necessary in the interest of the public health, public safety, and general welfare that the creation or establishment of airport hazards be prevented; and (c) that this should be accomplished, to the extent legally possible, by exercise of the police power, without compensation. It is further declared that both the prevention of the creation or establishment of airport hazards and the elimination, removal, alteration, mitigation, or marking and lighting of existing airport hazards are public purposes for which political subdivisions may raise and expend public funds and acquire land or property interests therein

2--04-03. Power to adopt airport zoning regulations.

1 In order to prevent the creation or establishment of airport hazards, every political subdivision having an airport hazard area within its territorial limits may adopt, administer, and enforce, under the police power and in the manner and upon the conditions hereinafter prescribed, airport zoning regulations may divide such area into zones, and, within such zones, specify the land uses permitted and regulate and restrict the height to which structures and trees may be erected or allowed to grow

2. Where an airport is owned or controlled by a political subdivision and any airport hazard area appertaining to such airport is located outside the territorial limits of said political subdivision, the political subdivision owning or controlling the airport and the political subdivision within which the airport hazard area is located may, by ordinance or resolution duly adopted, create a joint airport zoning board, which board has the same power to adopt, administer, and force airport zoning regulations applicable to the airport hazard area in question as that vested by subsection 1 in the political subdivision within which such area is located. Each such joint board shall have as members two representatives appointed by each political subdivision participating in its creation and in addition a chairman elected by a majority of the members so appointed.

3. If in the judgement of a political subdivision owning or controlling an airport, the political subdivision within which is located an airport hazard area appertaining to that airport, has failed to adopt or enforce reasonable adequate airport zoning regulations for such area under subsection 1 and if that political subdivision has refused to join in creating a joint airport zoning board as authorized in subsection 2, the political subdivision owning or controlling the airport may itself adopt, administer, and enforce airport zoning regulations for the airport hazard area in question. In the event of conflict between such regulations and any airport zoning regulations adopted by the political subdivision owning or controlling the airport govern and prevail.

2-04-04. Relation to comprehensive zoning regulations.

1. Incorporation In the event that a political subdivision has adopted, or hereafter adopts, a comprehensive zoning ordinance regulating, among other things, the height of buildings, any airport zoning regulations applicable to the same area or portion thereof, may be incorporated in and made a part of such comprehensive zoning regulations, and be administered and enforced in connection therewith

2. Conflict. In the event of conflict between any airport zoning regulations adopted under this chapter and any other regulations applicable to the same area, whether the

conflict be with respect to the height of structures or trees, the use of land, or any other matter, and whether such other regulations were adopted by the political subdivision which adopted the airport zoning regulations or by some other political subdivision, the more stringent limitation or requirement governs and prevails

2-04-05. Procedure for adoption of zoning regulations.

1 No airport zoning regulations shall be adopted, amended, or changed under this chapter except by action of the legislative body of the political subdivision in question, or the joint board provided for in subsection 2 of section 2-04-03 after a public hearing in relation thereto, at which parties in interest and citizens shall have an opportunity to be heard. At least fifteen days notice of the hearing shall be published in an official newspaper, or a newspaper of general circulation, in the political subdivision or subdivisions in which is located the airport hazard area to be zoned

2. Prior to the initial zoning of any airport hazard area under this chapter, the political subdivision or joint airport zoning board which is to adopt the regulations shall appoint a commission, to be known as the airport zoning commission, to recommend the boundaries of the various zones to be established and the regulations to adopted therefor The commission shall make a preliminary report and hold public hearings thereon before submitting its final report, and the legislative body of the political subdivision or the joint airport zoning board shall not hold its public hearing or take other action until it has received the final report of such commission Where a city planning commission or zoning commission already exists, it may be appointed as the airport zoning commission.

2-04-06. Airport zoning requirements.

1. Reasonableness. All airport zoning regulations adopted under this chapter must be reasonable and none may impose any requirement or restriction which is not reasonably necessary to effectuate the purposes of this chapter. In determining what regulations it may adopt, each political subdivision and joint airport zoning board shall consider, among other things, the character of the flying operations expected to be conducted at the airport, the nature of the terrain within the airport hazard area, the character of the neighborhood, and the uses to which the property to be zoned is put and adaptable

2. Nonconforming uses. No airport zoning regulations adopted under this chapter may require the removal, lowering, or other change or alteration of any structure or tree not conforming to the regulations when adopted or amended, or otherwise interfere with the continuance of any nonconforming use, except as provided in subsection 3 of section 2-04-07.

2-04-07. Permits and variances.

1 Permits. Any airport zoning regulations adopted under this chapter may require that a permit be obtained before any new structure or use may be constructed or established and before any existing use or structure may be substantially changed or substantially altered or repaired. In any event, however, all such regulations must provide that before any non conforming structure or tree be replaced, substantially altered or repaired, rebuilt, allowed to grow any higher, or replanted, a permit must be secured form the administrative agency authorized to administer and enforce the regulations, authorizing such replacement, change, or repair No permit may be granted that would allow the establishment or creation of an airport hazard or permit a nonconforming structure or tree or nonconforming use to made or become higher or become a greater hazard to air navigation than it was when applicable regulation was adopted or than it is when the application for a permit is made. Except as provided herein, all applications for permits must be granted

2 Variances. Any person desiring to erect any structure, or increase the height of any structure, or permit the growth of any tree, or otherwise use his property in violation of airport zoning regulations adopted under this chapter may apply to the board of adjustment for a variance from the zoning regulations in question Such variances must be allowed where a literal application or enforcement of the regulations would result in practical difficulty or unnecessary hardship and the relief granted would not be contrary to the public interest but do substantial justice and be in accordance with the spirit of the regulations and this chapter, provided, that any variance may be allowed subject to any reasonable conditions that the board of adjustment may deem necessary to effectuate the purposes of this chapter

3 Hazard marking and lighting In granting any permit or variance under this section, the administrative agency or board of adjustment may, if it deems such action advisable to effectuate the purposes of this chapter and reasonable in the circumstances, so condition such permit or variance the political subdivision, at its own expense, to install, operate, and maintain thereon such markers and lights as may be necessary to indicate to flyers the presence of an airport hazard.

2-04-08. Appeals.

1 Any person aggrieved, or taxpayer affected, by any decision of an administrative agency made in its administration of airport zoning regulations adopted under this chapter, or any governing body of a political subdivision, or any joint airport zoning board, which is of the opinion that a decision of such administrative agency is an improper application of airport zoning regulations of concern to such governing body or board of adjustment authorized to hear and decide appeals from the decisions of such administrative agency

2 All appeals taken under this section must be taken within a reasonable time, as provided by the rules of the board, a notice of appeal specifying the grounds thereof. The agency from which the appeal is taken shall forthwith transmit to the board all the papers constituting the record upon which the action appealed from was taken.

3 An appeal stays all proceedings in furtherance of the action appealed from, unless the agency from which the appeal is taken certifies to the board, after the notice of appeal has been filed with it, that by reason of the facts stated in the certificate as stay would, in its opinion, cause imminent peril to life or property. In such cases proceedings may not be stayed otherwise than by order of the board on notice to the agency form which the appeal is taken and on due cause shown.

4. The board shall fix a reasonable time for the hearing of appeals, give public notice and due notice to the parties in interest, and decide the same within a reasonable time Upon the hearing any party may appear in person or by attorney

5 The board may in conformity with the provisions of this chapter, reverse or affirm wholly or partly, or modify, the order, requirement, decision, or determination appealed from and may make such order, requirement, decision, or determination as ought to be made, and to that end has all the powers of the administrative agency from which the appeal is taken

2-04-09. Administration of airport zoning regulations.

All airport zoning regulations adopted under this chapter must provide for the administration and enforcement of such regulations by an administrative agency which may be an agency created by such regulations or any official, board, or other existing agency of the political subdivision adopting the regulations or of one of the political subdivisions which participated in the creation of the joint airport zoning board adopting the regulations, if satisfactory to that political subdivision, but in no case may such administrative agency be or include any member of the board of adjustment The duties of any administrative agency designated pursuant to this chapter include that of hearing and deciding all permits under subsection 1 of section 2-04-07, but such agency shall not have or exercise any of the powers herein delegated to the board of adjustment

2-04-10. Board of adjustment.

1. All airport zoning regulations adopted under this chapter must provide for a board of adjustment to have and exercise the following powers:

   a To hear and decide appeals from any order, requirement, decision, or determination made by the administrative agency in the enforcement of the airport zoning regulations, as provided in section 2-04-08

b To hear and decide any special exceptions to the terms of the airport zoning regulations upon which such board may be required to pass under such regulations.

c To hear and decide specific variances under subsection 2 of section 2-04-07

2. Where a zoning board of appeals or adjustment already exists, it may be appointed as the board of adjustment Otherwise, the board of adjustment shall consist of five members, each to be appointed for a term of three years by the authority adopting the regulations and to be removable by the appointing authority for cause, upon written charges and after public hearing.

3. The concurring vote of a majority of the members of the board of adjustment is sufficient to reverse any order, requirement, decision, or determination of the administrative agency, or to decide in favor of the applicant on any matter upon which it is required to pass under the airport zoning regulations, or to effect any variation in such regulations

4. The board shall adopt rules in accordance with the provisions of the ordinance or resolution by which it was created Meetings of the board shall be held at the call of the chairman and at such other times as the board may determine The chairman, or in his absence the acting chairman, may administer oaths and compel the attendance of witnesses. All hearings of the board must be public. The board shall keep minutes of its proceedings, showing the vote of each member upon each question, or, if absent, or failing to vote, indicating such fact, and shall keep records of its examinations and other official actions, all of which must immediately be filed in the office of the board and shall be a public record

2-04-11. Judicial review.

1. Any person aggrieved, or taxpayer affected, by any decision of a board of adjustment, or any governing body of a political subdivision or any joint airport zoning board which is of the opinion that a decision of a board of adjustment is illegal, may present to the district court a verified petition setting forth that the decision is illegal, in whole or in part, and specifying the grounds of the illegality Such petition must be presented to the court within fifteen days after the decision is filed in the office of the board

2. Upon presentation of such petition the court may allow a writ of certiorari directed to the board of adjustment to review such a decision of the board. The allowance of the writ does not stay proceedings upon the decision appealed from, but the court may, on application, on notice to the board and on due cause shown, grant a restraining order

3. The board of adjustment is not required to return the original papers acted upon by it, but it is sufficient to return certified or sworn copies thereof or of such portions thereof as may be called for by the writ The return must concisely set forth such other facts as may be pertinent and material to show the grounds of the decision appealed and must be verified.

4 The court has exclusive jurisdiction to affirm, modify, or set aside the decision brought up for review, in whole or in part, and if need be, to order further proceedings by the board of adjustment. The findings of fact of the board, if supported by substantial evidence, must be accepted by the court as conclusive, and no objection to a decision of the board may be considered by the court unless such objection has been urged before the board, or, if it was not so urged, unless there were reasonable grounds for failure to do so

5 Costs may not be allowed against the board of adjustment unless it appears to the court that it acted with gross negligence, in bad faith, or with malice, in making the decision appealed from

6. In any case in which airport zoning regulations adopted under this chapter, although generally reasonable, are held by a court to interfere with the use or enjoyment of a particular structure or parcel of land to such an extent, or to be so onerous in their application to such a structure or parcel of land, as to constitute a taking or deprivation of that property in violation of the Constitution of North Dakota or the Constitution of the United States, such holding does not affect the application of such regulations to other structures and parcels of land

2-04-12. Enforcement and remedies. Each violation of this chapter or of any regulations, orders, or rulings promulgated or made pursuant to this chapter constitutes a Class B misdemeanor In addition, the political subdivision or agency adopting zoning regulations under this chapter may institute in any court of competent jurisdiction, an action to prevent, restrain, correct, or abate any violation of this chapter, or of airport zoning regulations adopted under this chapter, or of any order or ruling made in connection with their administration or enforcement, and the court shall adjudge to the plaintiff such relief, by way of injunction (which may be mandatory) or otherwise, as may be proper under all the facts and circumstances of the case, in order fully to effectuate the purposes of this chapter and of the regulations adopted and orders and rulings made pursuant thereto.

2-04-13. Acquisition of air rights. In any case in which:

1 It is desired to remove, lower, or otherwise terminate a nonconforming structure or use;

2. The approach protection necessary cannot, because of constitutional limitations, be provided by airport zoning regulations under this chapter; or

3 It appears advisable that the necessary approach protection be provided by acquisition of property rights rather than by airport zoning regulations,

the political subdivision within which the property or nonconforming use is located or the political subdivision owning the airport or served by it may acquire, by purchase, grant, or condemnation in the manner provided by the law under which political subdivisions are authorized to acquire real property for public purposes, such air right, navigation easement, or other estate or interest in the property or nonconforming structure or use in question as may be necessary to effectuate the purposes of this chapter

2-04-14. Short title. This chapter must be known and may be cited as the "Airport Zoning Act"

Appendix B

Example Ordinances

Examples provided in this section need to be reviewed by each community and adjusted specifically to meet their particular needs

EXAMPLE ORDINANCES

1 Airport Noise Impact Zone

2 Airport Development Zone

3 Airport Overlay Zone

4. Noise Easement

5 Avigation and Hazard Easement

6 Hold Harmless Agreement

7 Fair Disclosure Statement

EXAMPLE 1

AIRPORT NOISE IMPACT ZONE

An ordinance amending Title _____, Planning and Zoning, of the Code of the City of _____, North Dakota, by adding a new Chapter _____, "N" Noise Impact, amending the index of Chapters, Chapter _____ Definitions, and Section _____ Zones Enumerated

The City of _____ ordains

Section I The Council finds

1 The lands surrounding the _____ are subject to noise impact from the flight of aircraft to, from, and in the vicinity of the Airport which results in a condition warranting concern for the health and welfare of the public.

2 These health concerns are caused by the annual average level of noise generated by the flight of aircraft and the proximity of residences, work places and other places of human habitation to the source of sources of that noise

3 The City of _____ can mitigate the impacts of noise by providing a zoning mechanism which restricts noise sensitive land use near the Airport

4 The need to address noise impact in the area of the Airport was recognized by Ordinance No _____ requiring soundproofing of residential, hotel, and motel uses west of the Airport

5 In order to provide protection from noise impact, identify specifically the area of impact and to address federal and state guidelines for the control of noise sensitive uses in noise impact areas, it is appropriate and in the public interest to protect the health, safety, and welfare of the City that the following amendments to _____ be enacted

NOW, THEREFORE, the Council directs

a That Title _____, Planning and Zoning, of the Code of the City of _____, North Dakota, is amended by the addition of a new Chapter _____[1], "N" Noise Impact, to be numbered, titled, and read as follows

Chapter _____

"N" NOISE IMPACT

Sections

_____ Purpose
_____ Procedure
_____ Regulations
_____ Newly Annexed Areas

---

[1] Chapter and Section number

_____ Zone Boundaries
_____ Appeal Procedure
_____ Review and Modification
_____ Disclosure

_____ Purpose The purpose of this zone is to restrict the development of noise sensitive uses in areas with unique noise impacts The zone is generally defined as the area within the significant noise impact area around _____ Airport The Noise Impact Zone Map establishes and defines the boundary of the zone and is made part of this Code, and is established to promote sound land use planning in noise impact areas through the consideration of federal guidelines, Comprehensive Plan objectives, and past City actions affecting land use near the Airport

_____ Procedure "N" Zones shall be established in combination with all other zones which lie within the boundaries of the Noise Impact Zone, as established by the Map referenced in _____ The boundaries of the Noise Impact Zone are, in part, determined by the location of noise contours Where a specific noise contour is referenced as a determinant of the Noise Impact Zone and/or the regulations pertaining thereto, said noise contour will be identified by the year in which the measurements and computations deriving said noise contour were made If no date is associated with a noise contour, the reference is to the most recently derived noise contour of the given value

(1) The development of all new residential uses, including single-family houses, mobile homes, rowhouses, duplexes, apartments, condominiums, residential care centers, and houseboats, shall be prohibited within the area encompassed by the 19____ 65 DNL or higher noise contour or the most recently derived 65 DNL noise contour where a reduction of noise has occurred, except where such uses are located in any currently zoned area of R10, R20, FF or County Residential When the current zoning is superseded by Comprehensive Plan designations, the exception will apply to Plan designations of R10, R20, FF or County Residential The intent of this exception statement is to recognize those properties within the 19___ 65 DNL noise contour which were zoned for residential use prior to the adoption of the Noise Impact Zone

(2) All new residential uses, as identified in _____, within the Noise Impact Zone boundaries, shall be constructed with sound insulation to achieve a day/night average interior noise level of 45 dBA as a maximum Additionally prior to construction, all new residential uses, lying within the area of the 19___ 65 DNL noise contour and within the most recent 65 DNL noise contour with no greater extent that the 19___ 65 DNL noise contour, shall dedicate a noise easement to the _____[2], authorizing aircraft noise impact over the grantor's property at levels established by the latest review of this Ordinance, but not to exceed those levels identified in the Noise Impact Zone Map, as adopted by Council

(3) The development of new schools, libraries, churches, day care centers, museums, hospitals, auditoriums, concert halls, music halls, and resort and group camps, as defined by the underlying zone, shall be permitted within the 65 DNL noise contour, provided that they be constructed with sound insulation to achieve a day/night average interior noise level of 45 dBA as a maximum

(4) All new and reconstructed buildings for the following uses Hotels, motels, office buildings, movie theaters, restaurants, sports arenas, and manufacturing uses which are noise-sensitive within the 65 DNL or higher noise contour, are required to be constructed with sound insulation to achieve a day/night average interior noise level of 45 dBA as a maximum For the purpose of this Section,

[2] Airport Authority

"reconstructed" is defined as construction having a cost exceeding 75 percent of the prereconstruction value of the building

_____ Newly Annexed Areas The Noise Impact Zone shall be applied to areas within the Noise Impact Zone boundary as defined on the Noise Impact Zone Map which is made a part of this Code, when and if such properties become annexed to the City

_____ Zone Boundaries

(1) The Noise Impact Zone Map establishes the boundaries of the "N" Noise Impact Zone The boundaries may be amended from time to time as determined by the City Council consistent with Section _____

(2) The _____ will be responsible for determining whether property is within the zone boundary and is either

(a) Outside the 65 DNL noise contour, or
(b) Within the 65 DNL noise contour, or
(c) Partially within the 65 DNL noise contour

Large-scale maps of the most recent noise contours for the area will be maintained in the _____ and will be the reference map for such determinations

(3) For those lots or parcels partially within the 65 DNL noise contour, the building site shall be determined by scale from the large-scale Noise Impact Maps If a residential building site remains outside the 65 DNL noise contour, including required side and rear yards, a residential building permit may be issued on the property outside the 65 DNL noise contour

_____ Appeal Procedure

(1) Any property owner or owners, affected by the 65 DNL noise contour line, may appeal the validity of the location of the noise contour line as it applies to their property, to the City Planning Commission The burden is on the appellant to prove that the 65 DNL noise contour line displayed on the Noise Impact Zone Map has changed, using established measurement standards and procedures, or their equivalent If such proof is made, the Planning Commission shall so inform the _____, and a residential building permit may be issued

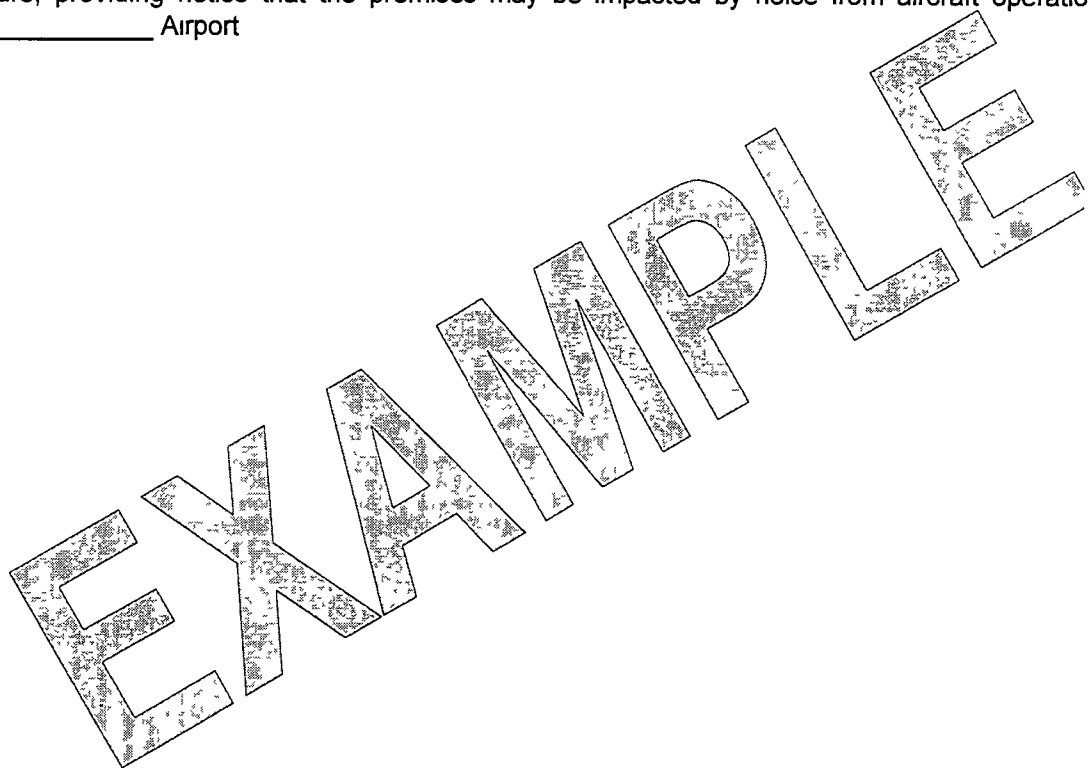
(2) A determination of the Planning Commission may be appealed to the City Council Such appeal will be heard in accordance with _____

_____ Review and modification

(1) There shall be a review and heanng by the City Planning Commission of the location of the "N" Noise Impact Zone based on examination of the 65 DNL noise contour provided by the _____ at least every five (5) years The 65 DNL noise contour shall be modified to reflect the findings of these reviews Failure to initiate the review process by _____ of the review year shall void this chapter The first such review shall be initiated not later than _____, 19____

(2) There shall be notification to all affected property owners in the event of establishment, alternation, or abolishment of an "N" Noise Impact Zone, or any portion of said zone

_____ Disclosure The owner of any residential structure located inside the 65 DNL or higher noise contour shall provide a disclosure statement to all prospective purchasers or tenants of such residential structure, providing notice that the premises may be impacted by noise from aircraft operations from _____ Airport



EXAMPLE 2

AIRPORT DEVELOPMENT ZONE

Section _____ - Purpose and Intent

The purpose of this area is to protect airport facilities from incompatible uses, to provide for future airport expansion, and to preserve lands adjacent to airports for future commercial and light industrial uses which will be directly dependent on air transportation

Section _____ - Uses Permitted

The following uses are permitted subject to issuance of a land use permit

1 Accepted Farming Practices

2 Air cargo terminals

3 Aircraft sales, repair, service, storage, and schools related to aircraft operations, and facilities on the airport property essential for the operation of airports, such as fuel storage, hangar use, F.B.O. offices, etc

4 Air passenger terminals

5 Public and semi-public buildings, structures, and uses essential to the welfare of an area, such as fire stations, pump stations, and water storage

6 Taxi and bus terminals

7 Snack shop for airport clientele with a total floor area of no larger than _____ square feet

8 Other uses where the ongoing operations and the use must be directly dependent upon and directly associated with the Airport

Section _____ - Uses Subject to a Conditional Use Permit

The following conditional uses will be permitted by the_____

1 Light industrial, as permitted in the _____ zone

2 Truck terminals

Section _____ - Conditional Use Criteria

The _____ may grant a Conditional Use Permit for uses described in Section _____ if each of the below criteria is met, as determined by the _____

1 The ongoing operations or the use must be directly dependent upon and directly associated with the airport

2 The use shall not discharge smoke, fumes, noise, sewage, or other nuisances beyond the property on which it is located

3 The use shall not conflict with any present or planned operations of the airport

4 Height Restriction standards will be met

Section _____ - Limitations of Use

In an Airport Development Zone, the following conditions shall apply.

A Liquid and Solid Wastes

Storage of animal, vegetable, or other wastes which attract insects, rodents, or birds or otherwise create a health hazard shall be prohibited.

B Discharge Standards

There shall be no emission of smoke, fly-ash, dust, vapor, gases, or other forms of air pollution that may cause nuisance or injury to human, plant, or animal life, or to property, or that may conflict with any present or planned operations of the airport

C Lighting

1 Sign lighting and exterior lighting shall not project directly into an adjoining residential zone

2 Unless necessary for safe and convenient air travel, sign lighting and exterior lighting shall not project directly into the runway, taxiway, or approach zone

D Landscaping

1 Site plan submitted with an application for a land use permit must include a landscaping plan which shows the location and type of plant materials

2 New uses which abut a residential zone shall provide and maintain a dense evergreen landscape buffer, sight obscuring fence, or landscaped berm which attains a (mature) height of at least six (6) feet

3 All unused property shall be maintained in native or existing vegetative ground cover or planted grass, shrub, and barkdust, or other suitable ground cover in an uncluttered manner

4 Responsibility for establishment and maintenance of landscaping rests with the property owner

E Parking

1 Site plan(s) submitted with an application for a land use permit must include a parking plan which shows the location and number of parking spaces, circulation patterns, and ingress and egress provisions

2 All industrial uses within an Airport Development Zone shall provide at least two parking spaces for every three employees on the major shift during normal season

3 All Commercial Uses shall follow the Zoning Ordinance for the required number of parking spaces

4 All parking lots shall have an all weather surface

5 Adequate provisions for safe and convenient circulation, ingress, and egress shall be provided

F Glare and Electro-magnetic Interference

1 Building materials shall not produce glare which may conflict with any present or planned operations of the airport

2 No use may produce electro-magnetic interference which may conflict with any present or planned operations of the airport

EXAMPLE 3

AIRPORT OVERLAY ZONE

SECTION _____ Purpose In order to carry out the provisions of these overlay zones, there are hereby created and established certain zones which include all of the land lying beneath the Airport Imaginary Surfaces as they apply to _____ (airport/currently existing or future public use airport) in the City of _____, _____ County Such zones are shown on the current Airport Airspace and Runway Protection Zone drawings, prepared by _____ and dated _____

Further, these overlay zones are intended to prevent the establishment of airspace obstructions in airport approaches and surrounding areas through height restrictions and other land use controls as deemed essential to protect the health, safety, and welfare of the people of the (City/Cities) of _____ and _____ County

SECTION _____ Special Definitions.

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

2 Visual Runway A runway that is intended solely for the operation of aircraft using visual approach procedures with no instrument approach procedures has been approved, or planned, or indicated on an FAA or state planning document or military service airport planning document

3 Nonprecision Instrument Runway A runway having an existing instrument approach procedure utilizing air navigation facilities with only horizontal guidance, or area type navigation equipment, for which a straight-in nonprecision instrument approach procedure has been approved, or planned, or indicated on an FAA or state planning document or military service airport planning document

4 Precision Instrument Runway A runway having an existing instrument approach procedure utilizing an Instrument Landing System (ILS), Microwave Landing System (MLS), or a Precision Approach Radar (PAR) It also means a runway for which a precision approach system is planned and is not indicated by an FAA approved airport layout plan, any other FAA or state planning document, or military service airport planning document

5 Airport Imaginary Surfaces Those imaginary areas in space which are defined by the Approach Surface, Transitional Surface, Horizontal Surface, and Conical Surface and in which any object extending above these imaginary surfaces is an obstruction

6 Airport Hazard Any structure, tree, or use of land which exceeds height limits established by the Airport Imaginary Surfaces

7 Approach Surface A surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the Primary Surface The inner edge of the approach surface is the same width as the Primary Surface and extends to a width of 1,250 feet for utility runway having only visual approaches, 1,500 feet for a runway other than a utility runway having only visual approaches, 2,000 feet for a utility runway having a nonprecision instrument approach, 3,500 feet for a nonprecision instrument runway other than utility, having visibility minimums greater than three-fourths of a statute mile, 4,000 feet for a nonprecision instrument runway having visibility minimums

as low as three-fourths statute mile, and 16,000 feet for precision instrument runways The Approach Surface extends for a horizonal distance of 5,000 feet at a slope of 20 feet outward to each foot upward (20 1) for all utility and visual runways, 10,000 feet at a slope of 34 feet outward for each foot upward (24 10 for all nonprecision instrument runways other than utility, and for all precision instrument runways extends for a horizonal distance of 10,000 feet at a slope of 50 feet outward for each foot upward (50 1), thence slopes upward 40 feet outward for each foot upward (40 1) an additional distance of 40,000 feet

8 Primary Surface A surface longitudinally centered on a runway When the runway has a specially prepared hard surface, the Primary Surface extends 200 feet beyond each end of that runway When the runway has no specially prepared hard surface, or planned hard surface, the Primary Surface ends at each end of that runway The width of the primary Surface is 250 feet for utility runways having only visual approaches, 500 feet for utility runways having nonprecision instrument approaches, 500 feet for other than utility runways having only visual approaches or nonprecision instrument approaches with visibility minimums greater than three-fourths of a mile and 1,000 feet for nonprecision instrument runways with visibility minimums of three-fourths of a mile or less and for precision instrument runways.

9 Transitional Surface Extend seven feet outward for each one foot upward (7 1) beginning on each side of the Primary Surface which point is the same elevation as the runway surface, and form the sides of the approach surfaces thence extending upward to a height of 150 feet above the airport elevation (Horizontal Surface).

10 Horizonal Surface A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of 5,000 feet from the center of each end of the Primary Surface of each visual or utility runway and 10,000 feet form the center of each end of the Primary Surface of all other runways and connecting the adjacent arcs by lines tangent to those arcs

11 Conical Surface Extends 20 feet outward for each one foot upward (20 1) for 4,000 feet beginning at the edge of the horizontal surface (5,000 feet from the center of each end of the Primary Surface of each visual and utility runway or 10,000 feet for all nonprecision instrument runways other than utility at 150 feet above and airport elevation) and upward extending to a height of 350 feet above the airport elevation

12 Runway Protection Zone (RPZ) An area off the runway end (formerly the clear zone) used to enhance the protection of people and property on the ground The RPZ is trapezoidal in shape and centered about the extended runway centerline It begins 200 feet (60 m) beyond the end of the arcs usable for takeoff or landing The RPZ dimensions are functions of the type of aircraft and operations to be conducted on the runway

13 Airport Approach Safety Zone The land that underlies the approach surface, excluding the RPZ

14 Noise Sensitive Areas Within 1,500 feet of an airport or within established noise contour boundaries exceeding 65 DNL

15 Place of Public Assembly Structure of place which the public may enter for such purposes as deliberation, education, worship, shopping, entertainment, amusement, awaiting transportation, or similar activity

SECTION _____ No Development Area (ND)

1 Purpose and Intent

The purpose of this zone is to protect airport facilities from incompatible uses, to provide for future airport expansion, and to preserve lands adjacent to airports for future commercial and light industrial uses which will be directly dependent on air transportation

2 Uses Permitted

The following uses are permitted subject to issuance of a land use permit

A Accepted Farming Practices

B Air cargo terminals

C Aircraft sales, repair, service, storage, and schools related to aircraft operations, and facilities on the airport property essential for the operation of airports, such as fuel storage, hangar use, F.B.O. offices, etc

D Air passenger terminals

E Public and semi-public buildings, structures, and uses essential to the welfare of an area, such as fire stations, pump stations, and water storage

F Taxi and bus terminals

G Snack shop for airport clientele with a total floor area of no larger than _____ square feet

H Other uses where the ongoing operations and the use must be directly dependent upon and directly associated with the Airport

3 Uses Subject to a Conditional Use Permit

The following conditional uses will be permitted by the _____, provided they meet all the criteria outlines in Section _____ and meet the requirements of Article _____

A Light industrial, as permitted in the _____ zone

B Truck terminals

4 Conditional Use Criteria

The _____ may grant a Conditional Use Permit for uses described in Section _____ if each of the below criteria is met, as determined by the _____

A The ongoing operations or the use must be directly dependent upon and directly associated with the airport

B The use shall not discharge smoke, fumes, noise, sewage, or other nuisances beyond the property on which it is located

C The use shall not conflict with any present or planned operations of the airport

D Height Restriction standards will be met

5 Limitations of Use

In an Airport Development Zone area, the following conditions shall apply

A Liquid and Solid Wastes

Storage of animal, vegetable, or other wastes which attract insects, rodents, or birds or otherwise create a health hazard shall be prohibited.

B Discharge Standards

There shall be no emission of smoke, fly ash, dust, vapor, gases, or other forms of air pollution that may cause nuisance or injury to human, plant, or animal life, or to property, or that may conflict with any present or planned operations of the airport

C Lighting

1 Sign lighting and exterior lighting shall not project directly into an adjoining residential zone

2 Unless necessary for safe and convenient air travel, sign lighting and exterior lighting shall not project directly into the runway, taxiway, or approach zone

D Landscaping

1 Site plan submitted with an application for a land use permit must include a landscaping plan which shows the location and type of plant materials

2 New uses which abut a residential zone shall provide and maintain a dense evergreen landscape buffer, sight obscuring fence, or landscaped berm which attains a (mature) height of at least six (6) feet

3 All unused property shall be maintained in native or existing vegetative ground cover or planted grass, shrub, and barkdust, or other suitable ground cover in an uncluttered manner

4 Responsibility for establishment and maintenance of landscaping rests with the property owner

E Parking

1 Site plan(s) submitted with an application for a land use permit must include a parking plan which shows the location and number of parking spaces, circulation patterns, and ingress and egress provisions

2 All industrial uses within a No Development Area shall provide at least two parking spaces for every three employees on the major shift during normal season

3 All Commercial Uses shall follow the Zoning Ordinance for the required number of parking spaces

4 All parking lots shall have an all weather surface

5 Adequate provisions for safe and convenient circulation, ingress, and egress shall be provided

F Glare and Electro-magnetic Interference

1 Building materials shall not produce glare which may conflict with any present or planned operations of the airport

2 No use may produce electro-magnetic interference which may conflict with any present or planned operations of the airport

SECTION _____ Limited Development Area (LD). In an LD Area, the following regulations shall apply

1 Uses Permitted Outright In an LD Area, the following uses and their accessory uses are permitted outright

A. Airport

B. Farm use, excluding livestock feed or sales yard and excepting those uses set forth in subsection (2) of this section

2 Conditional Uses In an LD Area, the following uses and their accessory uses are permitted when authorized in accordance with the requirements of this section and Article _____ of this ordinance

A Farm accessory buildings and uses

B Mining, quarrying, or other extraction activity, including the processing or refining of ore or other raw materials

C Utility facility necessary of public service

D Golf course

E Water supply and treatment facility

F Manufacturing and warehousing

G Retail and wholesale trade facilities

3 Use Limitations In an LD Area, the following limitations and standards shall apply to all uses permitted

A The height of any structure or part of a structure such as chimneys, towers, antennas, etc shall be limited according to requirements established by the County or any governmental agency relative to uses in the vicinity of an airport, but in no case shall any building or structure exceed 35 feet

B In approach zones beyond the Runway Protection Zones, no meeting place for public or private purposes which is designed to accommodate more than 25 persons at any one time shall be permitted, nor shall any residential use be permitted

C All parking demand created by any use permitted by this section shall be accommodated on the subject premises entirely off-street

D No use permitted by this section shall require the backing of traffic onto a public or private street or road right-of-way to accommodate ingress or egress to any use or the premises thereof

E There shall not be more than one ingress and one egress from properties accommodating uses permitted by this section per each 800 feet of frontage on an arterial or per each 300 feet of frontage on a collector If necessary to meet this requirement, permitted uses shall provide for shared ingress and egress

F No use permitted under the provisions of this section that generates more than 30 truck-trailer or other heavy equipment trips per day to and from the subject property shall be permitted to locate on a lot adjacent to or across from a residential use or lot in a duly platted subdivision, nor shall a residential use or lot be permitted adjacent to or across the street from an existing or planned use that is expected to generate such traffic

G No use permitted under the provisions of this section that generates more than 20 auto-truck trips during the busiest hour of the day to and from the premises shall be permitted unless served directly by an arterial or collector, or other improved street or road designed to serve such types of uses, and in no case shall such traffic be permitted to utilize a street or road which passes trough a residential use area

H Any use permitted under the provisions of this section that is determined to be incompatible with an existing or planned use adjacent thereto or across the street from shall be screened from such incompatible uses by densely planted trees and shrubs or sight-obscuring fencing

I Mining or quarry operation permitted by subsection (2) (B) of this section may not be permitted if such use will allow or cause ponding which is likely to attract birds

J No use permitted by subsection (2)(C) of this section shall permit any power lines to be located in clear zones and any power line located within an approach zone shall be in conformance with designated approach slope ratios

K No use permitted by this section shall be allowed if such use is likely to attract an unusual quantity of birds, particularly birds which are normally considered high flight

4 Design and Use Criteria In the consideration of an application for a proposed use in an LD Area, the Commission shall take into account the impact of the proposed use on nearby residential and commercial uses, on resource carrying capacities, on the capacity of transportation and other public facilities and services, and on the appearance of the proposal In approving a proposed use the Commission shall find that

A Proposal is in compliance with the Airport Master Plan, and more specifically, the Land Use Element thereof

B Proposal is in compliance with the Comprehensive Plan

C Proposal is in compliance with the intent and provisions of this ordinance and more particularly with this section

D That economic and environmental considerations are in balance

E That any social, economical, physical, or environmental impacts are minimized

F Any application for a proposed use in an LD Area may be denied if, in the opinion of the Planning Commission, the proposed use is not related to the present land use patterns in the area

G An application for a proposed use in an LD Area may be denied if the applicant fails to demonstrate that the proposed use is essential to the public interest and to the full development of the area

H In approving a proposed use in an LD Area, the Commission shall be satisfied that the applicant is fully appraised of the County's policy relative to development in the area in relation to the existing airport and accessory uses thereof.

I The Planning Commission may require establishment and maintenance of screenings, the use of glare resistant material in construction and landscaping, or may attach other similar conditions or limitations that will serve to reduce hazards to airport operations

5 Additional Requirements As a condition of approval of any use proposed within an LD Area, the _____ may require

A An increase in required setbacks

B Additional off-street parking and loading facilities and building standards

C Limitations on signs or lighting, time of operations, points of ingress and egress, and building heights

D Additional landscaping, screening, and other improvement

E Any other conditions considered necessary to achieve compliance with the intent and purpose of this ordinance and policies of the Comprehensive Plan

SECTION _____ Height Restricted Development Area (HR)

1 Height Limitations

Except as otherwise provided in this Ordinance, no structure shall be erected, altered, or maintained, and no tree shall be allowed to grow in any zone created by this Section to a height in excess of the applicable height limit herein established for such zone Such applicable height limitations are hereby established for each of the zones in question as follows

A Utility Runway Visual Approach Zone - Slopes twenty (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 horizonal distance of 5,000 feet along the extended runway centerline

B Utility Runway Nonprecision Instrument Approach Zone - Slopes twenty (20) feet outward for each foot upward beginning at the end of and at the same elevation as the primary surface and extending to a horizontal distance of 5,000 feet along the extended runway centerline

C Runway Larger Than Utility Visual Approach Zone - Slopes twenty (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

D Runway Larger Than Utility With A Visibility Minimum Greater Than 3/4 Mile Nonprecision Instrument Approach Zone - Slopes thirty-four (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

E Runway Larger Than Utility With A Visibility Minimum As Low As 3/4 Mile Nonprecision Instrument Approach Zone - Slopes thirty-four (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

F Precision Instrument Runway Approach Zone - Slopes fifty (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 of 10,000 feet along the extended runway centerline, thence slopes upward forty (40) feet horizontally for each foot vertically to an additional horizontal distance of 40,000 feet along the extended runway centerline

G Transitional Zones - Slope seven (7) feet outward for each foot upward beginning at the sides of and at the same elevation as the primary surface and the approach surface, and extending to a height of 150 feet above the airport elevation which is 100 feet above mean sea level In addition to the foregoing, there are established height limits sloping seven (7) feet outward for each one (1) foot upward beginning at the sides of and at the same elevation as the approach surface, and extending to where they intersect the conical surface

H Horizontal Zone - The horizontal zone is established for visual approach airports by swinging arcs of 5,000 feet radii from the center of each end of the primary surface of each runway and connecting the adjacent arcs by drawing lines tangent to those arcs The horizonal zone does not include the approach and transitional zones

I 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 outward to a distance of 4,000 feet and to a height of 350 feet above the airport elevation

J Excepted Height Limitations - Nothing in this Section shall be construed as prohibiting the construction or maintenance of any structures, or growth of any tree to a height of up to ____[3] feet above the surface of the land

[3] The adoption of height limits should be reasonable and based on land use considerations in the vicinity of the airport and the nature of the area to be zoned The adoption of height limits should not be so low as to constitute a taking of private property without due process of law

2 Use Restrictions

Notwithstanding any other provisions 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 create electrical interference with navigational signals or radio communication between the airport and aircraft, make it difficult for pilots to distinguish between airport lights and other, result in glare in the eyes of pilots using the airport, impair visibility in the vicinity of the airport, create bird strike hazards, or otherwise in any way endanger or interfere with the landing, takeoff, or maneuvering of aircraft intending to use the airport

3 Nonconforming Uses

A Regulations Not Retroactive - The regulations prescribed by this Section shall not be construed to require the removal, lowering, or other change or alternation of any structure or tree not conforming to the regulations as of the effective date of this Section, or otherwise interfere with the continuance of a nonconforming use. Nothing contained herein shall require any change in the construction, alternation, or intended use of any structure, the construction or alternation of which was begun prior to the effective date of this Section, and is diligently prosecuted

B Marking and Lighting - Notwithstanding the preceding provision of this Section, the owner of any existing nonconforming structure or tree is hereby required to permit the installation, operation, and maintenance thereon of such markets and lights as shall be deemed necessary by the _____[4] 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 _____[5]

4 Permits

A Future Uses - Except as specifically provided in a, b, and c hereunder, 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 therefor shall have been applied for and granted Each application for a permit shall indicate the purpose for which the permit is desired, with sufficient particularity to permit it to be determined whether the resulting use, structure, or tree would conform to the regulations herein prescribed If such determination is in the affirmative, the permit shall be granted No permit for a use inconsistent with the provisions of this Ordinance shall be granted unless a variance has been approved in accordance with Section _____

1 In the area lying within the limits of the horizontal zone and conical zone, no permit shall be required for any tree or structure less than seventy-five feet of vertical height above the ground, except when, because of terrain, land contour, or topographic features, such tree or structure would extend above the height limits prescribed for such zones

2 In areas lying within the limits of the approach zones, but at a horizonal distance of not less than 4,200 feet from each end of the runway, no permit shall be required for any tree or

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[4] Insert the title of the appropriate official who has been charged with the responsibility for determining the necessity for marking and lighting

[5] Insert name of the appropriate political body of subdivision

structure less than seventy-five feet of vertical height above the ground, except when such tree or structure would extend above the height limit prescribed for such approach zones

3 In the areas lying within the limits of the transition zones beyond the perimeter of the horizontal zone, no permit shall be required for any tree or structure less than seventy-five feet of vertical height above the ground, except when such tree or structure, because of terrain, land contour, or topographic features, would extend above, the height limit prescribed for such transition 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 height limits established by this Ordinance except as set forth in Section _____

B 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 the effective date of this Ordinance or any amendments thereto or than it is when the application for a permit is made. Except as indicated, all applications for such a permit shall be granted.

C. Nonconforming Uses Abandoned or Destroyed - Whenever the _____[6] determines that a nonconforming tree or structure has been abandoned or more than 80 percent torn down, physically deteriorated, or decayed, no permit shall be granted that would allow such structure or tree to exceed the applicable height limit or otherwise deviate from the zoning regulations

D Variances - Any person desiring to erect or increase the height of any structure, or permit the growth of any tree, or use property, 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 variance shall be accompanied by a determination from the Federal Aviation Administration as to the effect of the proposal on the operation of air navigation facilities and the safe, efficient use of navigable airspace Such variances shall be allowed where it is duly found that a literal application or enforcement of the regulations will result in unnecessary hardship and relief granted, will not be contrary to the public interest, will not create a hazard to air navigation, will do substantial justice, and will be in accordance with the spirit of this Section Additionally, no application for variance to the requirements of this Section may be considered by the Board of Adjustment unless a copy of the application has been furnished to the _____[7] for advice as to the aeronautical effects of the variance If the _____[7] does not respond to the application within 15 days after receipt, the Board of Adjustment may act on its own to grant or deny said application

E Obstruction Marking and Lighting - Any permit or variance granted may, if such action is deemed advisable to effectuate the purpose of this Section and be reasonable in the circumstances, be so conditioned as to require the owner of the structure or tree in question to install, operate, and maintain, at the owner's expense, such markings and lights as may be necessary If deemed proper by the Board of Adjustment, this condition may be modified to require the owner to permit

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6 Insert here the title of the appropriate official charged with making this determination

7 Insert here the official or body responsible for operation and maintenance of the airport to be zoned, e g , Airport Manager

the _____[7], at its own expense, to install, operate, and maintain the necessary markings and lights

SECTION _____ Procedures An applicant seeking a conditional use under Section _____ above, shall provide the following information

1 Property boundary lines as they relate to the Airport Imaginary Surfaces

2 Location and height of all existing and proposed buildings, structures, utility lines, and roads

In accordance with _____, _____ Planning Authority shall notify the owner of the airport and North Dakota Aeronautics Commission on land use permits or zone changes within 5,000 feet of a visual and 10,000 feet of instrument airport so as to provide North Dakota Aeronautics Commission an opportunity to review and comment

SECTION _____ Limitations

1 To meet the standards established in FAA Regulations, Part 77 and _____, no structure shall penetrate into the Airport Imaginary Surfaces as defined above under Section _____

2 No place of public assembly shall be permitted in the Airport Development Zone or RPZ

3 No structure or building shall be allowed within the RPZ

4 Whenever there is a conflict in height limitations prescribed by this overlay zone and the primary zoning district, the lowest height limitation fixed shall govern, provided, however, that the height limitations here imposed shall not apply to such structures customarily employed for aeronautical purposes

5 No glare producing materials shall be used on the exterior of any structure located within the Limited Development Zone

6 In noise sensitive areas (within 1,500 feet of an airport or within established noise contour boundanes of 65 DNL and above for identified airports) where noise levels are a concern, a declaration of anticipated noise levels shall be attached to any building permit, land division appeal , deed, and mortgage records In areas where the noise level is anticipated to be 65 DNL and above, prior to issuance of a building permit for construction of noise sensitive land use (real property normally used for sleeping or normally used as schools, churches, hospitals, or public libranes) the permit applicant shall be required to demonstrate that a noise abatement strategy will be incorporated into the building design which will achieve an indoor noise level equal to or less than 65 DNL The planning and building department will review building permits or noise sensitive developments

7 No development that attracts or sustains hazardous bird movements from feeding, watering, or roosting across the runways and/or approach and departure patterns of aircraft Planning authority shall notify North Dakota Aeronautics Commission of such development (e g , waste disposal sites and wetland enhancements) within the airport overlay zone so as to provide North Dakota Aeronautics Commission an opportunity to review and comment on the site in accordance with FAA AC 150/5200-33

EXAMPLE 4

NOISE EASEMENT

THIS AGREEMENT, made this _____ day of _____, 19 ___, between the (Airport Authority), a municipal corporation of the State of North Dakota, hereinafter referred to as "Grantee",

The Grantor does hereby grant, in consideration for the right to develop the subject property for residential use, pursuant to City Planning and Zoning Code, Chapter (no.), to the Grantee, its successors and assigns, to have and to hold an easement for aircraft noise impact until _____ Airport shall be abandoned or shall cease to be used for public airport purposes, over the following described parcel of land situated in the County of _____, State of North Dakota, as follows

(Legal description and street address of Grantor's parcel of land)

Said Easement shall encompass the right, in the airspace above the surface of the Grantor's property having the same boundaries as the above described property and extending from the surface upwards to the limits of the atmosphere of the earth, to cause in said airspace a maximum of such noise as reflected by the Noise Impact Zone Map adopted by City Ordinance No _____ This easement is only applicable to airport noise caused from runway alignments existing in (year) More specifically, the noise created by aircraft now known or hereafter used for navigation of or flight in air, shall not exceed the permitted annual average DNL level obtained by using established measurement standards and procedures The permitted annual average DNL level shall not be greater than the annual average DNL level established in (year) or the most recent annual average DNL established, pursuant to Section (no), prior to the date of said Easement, whichever is the lesser If the permitted annual average DNL level can be shown to have been exceeded, as provided for by Section (no), said Easement shall be void

The granting of said Easement shall establish the Grantor's right to develop the above described parcel of land for residential use The Grantor's execution and offering of said Easement is sufficient to fulfill the requirements for the issuing of a building permit if all other zoning requirements have been met

It is understood and agreed that these covenants and agreements shall run with the land, that notice shall be made to and shall be binding upon heirs, administrators, executors, successors, and assigns of the Grantor

IN WITNESS WHEREOF, the Grantor has hereunto set his hand and seal this _____ day of _____, 19____

_____
Grantor

EXAMPLE 5

AVIGATION AND HAZARD EASEMENT

WHEREAS, (full name of property owner(s)) hereinafter called the Grantors, are the owners in fee of that certain parcel of land situated in the City of _____, County of _____, State of _____, more particularly described as follows

(full description of property to be covered by easement)

hereinafter called "Grantors' property," and outlined on the attached map (Figure 1),

NOW, THEREFORE, in consideration of the sum of _____ dollars ($_____) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Grantors, for themselves, their heirs, administrators, executors, successors, and assigns, do hereby grant, bargain, sell, and convey unto (owner and operator of airport, i.e., City of _____) hereinafter called the Grantee, its successors and assigns, for the use and benefit of the public, as easement and right of way, appurtenant to (full name of airport) or the unobstructed passage of all aircraft, ("aircraft" being defined for the purpose of this instrument of any contrivance now known or hereafter invented, used, or designed for navigation of or flight in the air) by whomsoever owned and operated

in the airspace above Grantors' property above an imaginary plane rising and extending in a general (i e , Easterly) direction over Grantors' property, said imaginary plane running from approximately (i e , 25) feet Mean Sea level above Point A on Figure 1 at the rate of one foot vertically for each (i e , 50) feet horizontally to approximately (i e , 55) feet Mean Sea level above Point B on Figure 1, to an infinite height above said imaginary plane, [1]

(OR USE THE FOLLOWING)

in the air space above Grantors' property above a Mean Sea level of (i e , 150) feet, to an infinite height above said Mean Sea level of (i e , 150) feet, [1]

(OR USE FOLLOWING)

in all air space above the surface of Grantors' property, to an infinite height above said Grantor's property,[1]

together with the right to cause in all air space above the surface of Grantors' property such noise, vibrations, fumes, dust, fuel particles, and all other effects that may be caused or may have been caused by the operation of aircraft landing at, or taking off from, or operating at or on said (full name of airport)

The easement and right of way hereby granted includes the continuing right in the Grantee to prevent the erection or growth upon Grantors' property of any building, structure, tree, or other object,

extending into the air space above the aforesaid imaginary plane,[1]

(OR USE THE FOLLOWING)

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[1] Alternative language depending upon desired coverage of easement

extending into the air space above the said Mean Sea level of (i e , 150) feet,[1]

(OR USE THE FOLLOWING)

extending into the air space above the surface of Grantors' property,[1]

and to remove from said air space, or at the sole option of the Grantee, as an alternative, to mark and light as obstructions to air navigation, any such building, structure, tree or other objects now upon, or which in the future may be upon Grantors' property, together with the right of ingress to, egress from, and passage over Grantors' property for the above purposes

TO HAVE AND TO HOLD said easement and right of way, and all rights appertaining thereto unto the Grantee, its successors, and assigns, until said (full name of airport) shall be abandoned and shall cease to be used for public airport purposes

AND for the consideration hereinabove set forth, the Grantors, for themselves, their heirs, administrators, executors, successors, and assigns, do hereby agree that for and during the life of said easement and right of way, they will not hereafter erect, permit the erection or growth of, or permit or suffer to remain upon Grantors' property any building, structure, tree, or other object extending into the aforesaid prohibited air space, and that they shall not hereafter use or permit or suffer the use of Grantors' property in such a manner as to create electrical interference with radio communication between any installation upon said airport and aircraft, or as to make it difficult for flyers to distinguish between airport lights and others, or as to impair visibility in the vicinity of the airport or as otherwise to endanger the landing, taking off, or maneuvering of aircraft, it being understood and agreed that the aforesaid covenants and agreements shall run with the land

In consideration of the premises and to assure Grantee of the continued benefits accorded it under this Easement, (name of mortgagee), owner and holder of a mortgage dated _____ and recorded _____ covering the premises above described, does hereby covenant and agree that said mortgage shall be subject to and subordinate to this Easement and the recording of this Easement shall have preference and precedence and shall be superior and prior in lien to said mortgage irrespective of the date of the making or recording of said mortgage instrument [2]

IN WITNESS WHEREOF, the Grantors have hereunto set their hands and seals this _____ day of _____, 19 _____

Signed, sealed, and delivered in the presence of

_____ _____(SEAL)

_____ _____(SEAL)

(Notarial Acknowledgement)

[2] Local recordation and subordination practices must also be met If subordination is necessary, in which case the mortgagee must join in the agreement, the above language is suggested

EXAMPLE 6

HOLD HARMLESS AGREEMENT

KNOW ALL MEN BY THESE PRESENTS, that the undersigned, hereinafter referred to as Grantees (whether singular or plural), hereby covenant and agree that they shall not, by reason of their ownership or occupation of the following described real property, protest or bring suit or action against the _____ Airport or the City (County) of _____ for aviation related noise, property damage or personal injuries resulting from activities at or connected with the _____ Airport when such activities conform to the then existing rules and regulations of said airport and the applicable federal air regulations and no negligence on the part of said airport is involves The real property of Grantees subject to this covenant and agreement is situated in the County of _____, State of North Dakota, and described as follows

(Insert Legal Description and Appropriate Map)

This covenant and agreement is made and executed by the Grantees in consideration of the City (County) of _____ granting a conditional use permit for Grantees use and development of the above described real property, which real property is located in the airport approach zone of the _____ Airport. The execution of this covenant and agreement by Grantees is required by the City (County) of _____ as a pre-requisite to the granting of the above said conditional use permit to Grantees This agreement is executed for the protection and benefit of the _____ Airport and the City (County) of _____ interest in said airport and to prevent development in adjacent lands to said airport which will interfere with the continued operation existent and development of said airport This covenant and agreement is intended to be binding upon the Grantees, their heirs, assigns, and successors and inure to the benefit of the City (County) of _____ and the Airport, their successors and assigns

DATED this _____ day of _____, 19____

STATE OF NORTH DAKOTA)
)
) ss
)
City/County of _____)

GRANTEES

_____

_____

EXAMPLE 7

FAIR DISCLOSURE STATEMENT

A disclosure statement, adhering to the form of the statement below, shall be provided to and signed by each potential purchaser of property within the Airport Influence Area as shown on the approved Airport Land Use Drawing The signed statement will then be affixed by the Seller to the agreement of the sale

The tract of land situated at _____
in _____, consisting of approximately _____ acres
(County and State)
which is being conveyed from _____ to _____ lies within _____ miles of (airport name) may be subjected to varying noise levels, as the same is shown and depicted on the official Zoning Maps

CERTIFICATION

The undersigned purchaser(s) of said tract of land certify(ies) that (he) (they) (has) (have) read the above disclosure statement and acknowledge(s) the pre-existence of the airport named above and the noise exposure due to the operation of said airport

_____
(SIGNED)

GOOD NEIGHBORS BY DESIGN

A Guide to Land Use Planning for Ohio Airports

"GOOD NEIGHBORS BY DESIGN"
GUIDE TO LAND USE PLANNING AROUND OHIO AIRPORTS

Ohio Department of Transportation

Office of Aviation

Bob Taft, Governor
State of Ohio

Gordon Proctor, Director
Ohio Department of Transportation

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Office of Aviation

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Compiled by:
Douglas E. Hammon,
Aviation Planner

1993
Revised November, 2001

These guidelines provide tools which local communities can use to develop zoning legislation to protect their airport. They are by no means the final authority or documentation on the subject, which lies entirely with local elected officials. Much of the background information was obtained from similar documents developed by the States of Florida, New Jersey, Texas, and Wisconsin. We wish to thank these states for the permission to review their material, and hope our work leads other states to further the protection of airports across the country.

TABLE OF CONTENTS

INTRODUCTION

INTRODUCTION

Changes in urban living patterns and transportation preferences have generated a new interest in the use of land around airports. Land use patterns inconsistent with an airport environment may constrain the growth of airport facilities necessary to support increased demand. Aircraft engine noise may interfere with the normal daily activities of residents located in the areas of airport operations, and safety concerns may arise from communities located in the approach and departure paths of aircraft. The issues pertaining to land use on and around airports are more prevalent today than at any other time, and they will remain at the forefront of community agendas if appropriate action is not taken.

Aviation will continue to play an essential role in our transportation system. Business and pleasure travelers alike have access to an efficient system of air transportation, new jobs are created in the communities served by an airport, and the economic benefits created by the aviation industry influence the surrounding communities as well. Even small airports provide communities with access to the national transportation system and the associated economic benefits. Communities can safeguard the economic benefits provided by the airport by actively addressing the land use issues associated with incompatible development and aircraft noise. Communities should be proactive in addressing land use issues involving encroachment. This includes any physical development adjacent to airport property, uses which impact upon airport safety, and noise-sensitive structures and activities. Communities that choose to overlook the issue of urban encroachment set up a lose-lose situation. The community may be left with a landlocked airport facility unable to operate to its optimum potential due to the proliferation of incompatible land uses.

Local authorities have the power to regulate land use around publicly owned airports to minimize existing conflicts and prevent future conflicts. This document establishes the guidelines for local authorities to more effectively plan the land use around an airport located within its jurisdiction. Additionally, this document outlines the various laws enacted by the State of Ohio that allow land use controls, the various parties responsible for such controls, and the measures available for the regulation of land use around airports.

AIRPORTS AND LAND USE

AIRPORTS AND LAND USE

The land uses most compatible with a particular airport primarily depend on the location and size of the airport, in addition to the type of aircraft and volume of aircraft traffic using the facility.

LAND USE CONFLICTS

When first built, most airports were located away from developed areas where a large, flat piece of land provided a suitable landing field, surrounded primarily by agricultural or undeveloped land. However, this desirable and compatible environment did not last.

Urban and suburban growth have combined to create conflicts in land use which did not previously exist. Even sites originally criticized for being too far from the city are now surrounded by residential, industrial, office, and commercial business development. These mixed uses raise noise, safety, and quality of life issues for the communities located in the vicinity of the airport.

The aviation industry has taken measures to reduce such conflicts through quieter aircraft engines, upgraded landing aids, the acquisition of avigation easements and extended clear zones, and noise-abating take off and landing procedures. Land use management alternatives should also be adopted at the local level to mitigate the impacts on existing non-compatible land uses, and policies should be established to prevent or reduce future impacts.

These incompatible land uses, predominantly residential development, threaten the future vitality of many airports to the communities they serve. A limitation of service, or ultimately, the closure of an airport facility, represents a waste of community investment and lost economic and social opportunities.

AIRPORT IMPACTS ON LAND USE

The impact of an airport on surrounding land uses is dependent on the type, size, and location of the facility.

General aviation (GA) airports produce a small footprint due to short runways, small terminal buildings, and few hangars. The FAA recommended size of a GA airport, roughly 300 to 400 acres, is governed by its operations, which are genrally limited to private pilots and corporate flight departments. Constraints on growth and safety are the major concerns at GA airports. With the increasing number of jet aircraft in corporate flight activities, noise is also emerging as an important consideration when developing GA airports.

Primary airports (airports that enplane over 10,000 passengers per year) are faced with different land use issues than their general aviation counterparts. In addition to having a larger footprint, the number of private, corporate, and airline operations are greatly increased. The type and number of operations at primary airports create concerns with safety, noise, constrained growth, and off airport impacts. The predominate use of jet aircraft at primary airports creates a much larger noise contour map and extended noise impacts along the arrival and departure tracks. Large numbers of operations increases the number of people accessing the airport, leading to other off airport noise and congestion issues.

Although smaller airports do not create the same impacts as larger airports, they are equally as important to the communities in which they are located and require the same land use profile to alleviate noise problems, ensure safety, and avoid constraints on airport development.

EMERGING PROBLEMS

Despite the effectiveness of today's aviation system and the far-reaching benefits it brings to residents of Ohio, the optimum use of this system is under constant threat. In addition to the high cost of construction, incompatible land use issues are of great concern. Such issues have made it difficult for existing airports to gain approval for needed expansion, have seriously delayed new airport development, and in some instances have resulted in legal action to curtail and even eliminate aircraft operations. However, these land use issues need not compromise the growth of the aviation system if the future of the system is carefully planned.

Ironically, at a time when aviation activities are expanding at all levels, many airports are faced with the threat of closure. Airport land is frequently prime property for development. The preservation of airport lands, even when publicly owned, can be difficult, especially when incompatible land uses and encroachment into the airspace have already been permitted. In the case of private airstrips, the problem is compounded by heavy tax burdens on the airport owner which at any time could precipitate a conversion of airport land to more profitable uses. Once an airport in a populated area is closed, it is extremely difficult to find another equally accessible location.

Airports will continue to be an important part of the community infrastructure, and they need to be protected through legislation and the administration of effective controls on surrounding land uses. The impact of aircraft noise and land use incompatibility are some of the most serious problems facing our airports.

COMPATIBLE LAND USES

Land uses most compatible with airports are those which have low sensitivity to noise, require minimal human interaction with the surrounding environment, and have a complementary relationship with the airport's facilities.

Most commercial-industrial uses, especially those associated with the airport, are good neighbors. Land uses for which the airport creates the demand, such as motels, restaurants, warehouses, shipping agencies, aircraft related industries, and other industries that benefit from access to an airport are also compatible land uses. At airport locations where there is not currently a demand for these uses, communities may find it desirable to promote the use of this land for commercial or industrial use through a program of marketing and incentives.

Care must be taken to ensure that buildings and structures for these uses do not obstruct the aerial approaches to the airport, interfere with aircraft radio communications, or affect a pilot's vision due to glare or bright lights. Motels, restaurants, and office buildings should also be soundproofed to make them more comfortable and attractive to clientele and employees.

Other uses compatible with airports are conservatory areas and other open spaces. These land uses are created for public purposes and provide opportunities for local governing bodies to provide a compatible land use. Forestry services, landscape services, game preserves, golf courses, and some extractive industries such as mining and excavation are also land uses compatible with airports.

Agriculture is another land use that is compatible with airport operations, as long as care is taken to avoid crops and activities attractive to birds. While some types of animal husbandry are sensitive to noise, most agricultural uses are not adversely affected by airport operations.

Table 1:
COMPATIBLE LAND USES

AVIATION INDUSTRIES:	OTHER USES:
Air freight terminals	Storage facilities
Air Cargo Forwarders	Warehouses
Aircraft and parts manufacturers	Wholesale distribution centers
Aircraft repair shops	Shopping centers
Aerial survey companies	Office buildings
Aviation schools	Banking Services
Aviation research and testing	Factories
AIRPORT RELATED USES:	**OPEN SPACES:**
Trucking terminals	Golf courses
Taxi and bus terminals	Picnic areas
Parking facilities and auto storage	Forests
Car rental agencies	Game preserves
Gas stations	Landscape nursries
Motels and hotels	Arboretum
Restaurants	Farming
Convention centers	Mining and excavation
Night clubs	Cemeteries

INCOMPATIBLE LAND USES

Residential housing is the most predominant urban land use. However, it is also the use most incompatible with aircraft operations. During periods of rapid growth, residential uses have often developed too close to airports. As residential development fills the vacant or former agricultural land between the urban center and the airport, the possibility of potential airport restrictions increase. Residential growth restricts the airport by acquiring the land needed for expansion and by removing the buffer between the airport and residential neighborhoods. This buffer is important because it diminishes the impact of aircraft noise and increases the safety of residents during the take-off and landing phases of flight. As residential uses expand into the area around airports, homeowners inevitably express concerns regarding safety and noise.

Obviously, residential neighborhoods, schools, churches, and other similar land uses are the most susceptible to the effects of aircraft operations. It is in the interest of neither the homeowner nor the community to locate these uses where they will be subject to the greatest impact of aircraft takeoffs and landings.

Wildlife attractants on and near airports also create hazards to air navigation, which can be prevented through proper land use planning. Airports have or acquire wildlife hazard problems because 1) the airport has been built in an historical wildlife area, 2) design and construction of the airport has created an attractant, 3) an attractant has been created near the airport because of changes in land use, or 4) urban encroachment has limited available habitat and concentrated wildlife on the airport. A number of land uses contribute to bird and other wildlife hazard problems, and are considered incompatible if located within 10,000 feet of an airport. These include sanitary and other waste facilities, agricultural practices which attract birds, and wildlife sanctuaries, refuges, and production areas.

It is clearly in the public interest that action be taken to prevent such land use conflicts.

Table 2:
INCOMPATIBLE LAND USES

Residential

INSTITUTIONAL:	SANITARY:	WILDLIFE:
School	Landfill	Water Reservoir
Church	Transfer Station	Feed Lot
Hospital	Sewage Pond	Slaughter House
Nursing Home	Sludge Disposal	Waterfowl Production
		Wildlife Refuge/ Sanctuary
		Fish Processing
		Lake/Pond

AIRCRAFT NOISE

A number of factors underlie the need for controlling land uses around airports, including safety, airport growth constraints, traffic, and environmental concerns, but the most prominent issue is that of aircraft noise. Before 1960, there was little concern about aircraft noise, but noise impacts became more evident with the introduction of the jet engine.

Noise is defined as excessive or unwanted sound. Sound is produced by vibrations in air, which produces rapid small-scale variations in the normal atmospheric pressure. Noise is characterized by its sound level, its frequency spectrum, and its variation over time. "Sound level" refers to a physical measure that corresponds to the hearer's subjective conception of loudness.

There are a number of measures that can be employed to lessen the undesirable effects of noise in the vicinity of airports. These measures can be grouped into four classes:

1. Land use in the airport vicinity
2. Airport planning and design
3. Aircraft operation and use
4. Aircraft design or modification

The aviation industry is taking the lead in developing methods to alleviate noise by aircraft operations through updating design standards for both aircraft and airports.

The Aviation Safety and Noise Abatement Act of 1979 was enacted, ". . . to provide and carry out noise compatibility programs, (and) to provide assistance to assure continued safety in aviation. . ." This legislation requires the establishment of a single system for measuring aircraft noise, determining noise exposure, and identifying land uses which are normally compatible with various noise exposure levels. Federal Aviation Regulation (FAR) Part 150 sets requirements for airport operators who choose to undertake an airport noise compatibility study.

FAR Part 150 provides a defined study process, voluntarily undertaken by airport sponsors, to develop noise exposure map and a noise compatibility program. The noise exposure maps document existing and future noise impacts based on the existing and future operations and runway utilization at an airport. The noise contours are generated through computer modeling using a Federal Aviation Administration (FAA) approved program entitled, Integrated Noise Model Version 3.10. These noise contours depict the noise levels for an average annual day to the 65, 70, and 75 Day-Night Average Sound Level (Ldn). The noise contours are then plotted on an existing land use map and a future land use map to show the areas of incompatible land use. The noise compatibility program includes provisions for the abatement of aircraft noise through the modification of aircraft operating procedures, air traffic control procedures, airport regulations, and/or airport facility modifications. Noise mitigation strategies such as land acquisition, sound insulation, and modifications to zoning legislation and local land use plans are also recommended in the noise compatibility program.

A number of controls on aircraft operations can be imposed to minimize the noise effects. The most dramatic of these measures has been the FAA's decision to prohibit civilian aircraft from flying at supersonic speeds over the United States. At facilities where multiple runways are available, aircraft may be assigned to depart or approach on runways that will take the aircraft over sparsely populated areas. Similarly, pilots may be required to utilize a certain power level, or achieve a specified altitude, to decrease the noise levels over heavily populated areas.

Federal Aviation Regulation Part 36 places limitations on the noise created by the new subsonic turbojet and transport category aircraft, as part of the aircraft certification process. Manufacturers have made significant advances in recent years to design quieter aircraft, primarily through quieter engines and improved aerodynamics.

OHIO LAND USE REGULATION

OHIO LAND USE REGULATION

The State of Ohio and its subdivisions have two sources at their disposal for regulating land uses around airports. The *Ohio Revised Code*, Chapter 4563 deals with the appointment of local airport zoning boards, zoning regulations, and the regulatory process for developing zoning legislation in the vicinity of airports. *Ohio Revised Code*, Chapter 4561 regulates the penetration of objects into navigable airspace, and gives the Office of Aviation the authority to control the height of objects around all public use airports within the state. This chapter of the guidelines outlines the legislation behind airport zoning in Ohio. Copies of O.R.C. 4563 and 4561 are included in Appendix A and Appendix B of this guide, respectively.

OHIO REVISED CODE, CHAPTER 4563

Chapter 4563 of the *Ohio Revised Code* enables land use zoning to be established around publicly owned airports to ensure compatibility between land uses. An airport zoning board may adopt, administer, and enforce zoning regulations for any area of land adjacent to an airport and within an **airport hazard area**, in order to minimize injury, loss of life, and hazards to the safety of persons or to the security of property within such zones. Chapter 4563 allows zoning regulation for both height and land use around airports, and specifically allows the regulation of population density.

The airport hazard area is based on the obstruction standards set forth in Federal Aviation Regulation, Part 77. This area may include the land under all surfaces, or the land under specific surfaces selected by the local authority based on their current situation. The surfaces governing these regulations include:

- **Primary Surface**—A surface longitudinally centered on a runway, extending 200 feet beyond each end of the runway, and with a width governed by the type of approach available. The elevation is the same as the nearest point on the runway centerline.
- **Horizontal Surface**—A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of specified radii from each runway end, depending on the approach available.
- **Conical Surface**—A surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.
- **Approach Surface**—A surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. The surface dimensions are based on the type of approach available.
- **Transitional Surface**—Surfaces extending outward and upward at right angles to the runway centerline and the runway centerline extended at a slope of 7 to 1 from the sides of the primary surface and from the sides of the approach surfaces.

These surfaces are depicted in Figures 1 and 2.

The local governing body (city council, township trustees, etc.) of the political subdivision in which the airport is located constitutes the airport zoning board. If the airport hazard area lies in more than one political subdivision, the board of county commissioners of each county in which the airport area exists shall constitute the airport zoning board.

This law empowers the local governing body, acting as an airport zoning board, to establish airport zoning overlay regulations. These regulations supersede those of the affected jurisdictions within the overlay zoning boundary. The statute also provides that in the case of conflicts between the airport zoning regulation and any other zoning regulation, the regulation best calculated to ensure safety shall govern.

OHIO REVISED CODE, CHAPTER 4561 "THE OHIO AIRPORT PROTECTION ACT"

Limiting the height of objects around airports is a primary factor in executing safe navigation during the take-off and landing phases of flight. Two separate methods are available through which the heights of objects can be limited.

The first method, described in the preceding section on *Ohio Revised Code*, Chapter 4563, is a variation of standard zoning, legislated and enforced at the county or municipal level. Since the inception of the County Airport Program, Ohio has allowed, and the Office of Aviation continues to encourage, local height limitation zoning.

The second method for limiting the height of objects around airports is through "The Ohio Airport Protection Act," which gives the Office of Aviation direct control over the height of objects near airports separate from and in addtion to any locally administred airport hegith zoning. The act states that "No person shall commence to install any structure or object of natural growth in this state, any part of which will penetrate or is reasonably expected to penetrate into **navigable airspace**, without obtaining a permit from the Department of Transportation."

As with the land use zoning regulations set forth in *Ohio Revised Code*, Chapter 4563, navigable airspace under *Ohio Revised Code*, Chapter 4561 is defined by Federal Aviation Regulations, Part 77 "Imaginary Surfaces," outlined in the preceding section of these guidelines.

LAND USE CONTROL MEASURES

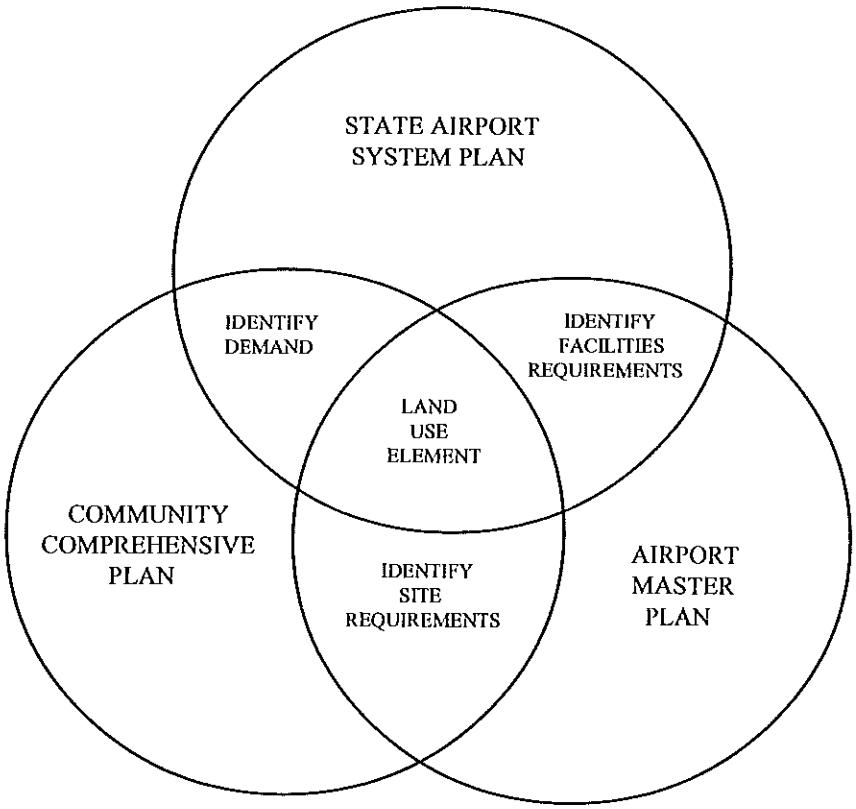
POLICY MEASURES:

One approach to land use management involves the use of existing policies and development guidelines available through a number of different planning processes. For airports, these occur at several levels. The various levels of planning include airport system planning, regional and community comprehensive planning, airport master planning, integrated multi-modal planning, and capital improvement programs. Solutions to the land use issues that arise in communities surrounding airports must be incorporated into the airport and community planning and development process. The local community can work closely with the appropriate state agencies to insure optimal airport layout and conformity with various laws and regulations.

Integrating airport planning at the three different levels can aid in the process of developing a compatible land use plan. The airport system plan, regional and community comprehensive plans, and airport master plan can proceed independently, but the value of each is increased when one provides input into the other. This correlation is depicted in figure 3.

THE OHIO AVIATION SYSTEM PLAN

Figure 3:
PLAN INTEGRATION



Responding to the growth in aviation, the federal government enacted the **Airport and Airways Development Act of 1970** to assist state and local authorities in the planning and development of airports of national interest. The general intent of the act was that each state should have a plan for the systematic development of such airports, with the federal government participating financially in the preparation of the plan as well as in subsequent facility development.

The **Ohio Aviation System Plan (OASP)** has been prepared and is updated every five to seven years to guide decision making at the state and local levels. System planning considers the local airport as part of a network of airports which provides air transportation activities for a large area such as a nation, state, or a region. The important factor in system planning is the determination of the general location and function of airports to provide safe and efficient service into the future.

In addition, the OASP provides data on Ohio airports to the FAA for use in evaluating possible inclusion in the **National Plan of Integrated Airport Systems (NPIAS)**. Inclusion in the NPIAS makes the state's airports eligible for federal development assistance.

Complimentary to the statewide system plan, reliever studies have been carried out to develop more specific system plans for a number of the major urban areas in Ohio.

The Ohio Airport System consists of 110 public use airports, including eight proposed new airports, and two proposed new heliports, for a total of 112 facilities. These facilities are owned by various counties, municipalities, a township, and private individuals.

COMPREHENSIVE PLANNING

Regional and community comprehensive planning occur at the local level. A community's comprehensive plan establishes policies for the development and improvement of the community. Here the airport is considered not only in terms of its impact on transportation, but also in terms of its effect on the local economy, land use, and environment. The airport should be incorporated into the total transportation plan to meet the community's needs. Especially important in this respect is access to the airport by road, rail, and public transportation, where appropriate.

The primary purpose of any community comprehensive plan with respect to the local airport should be to support the efficient operation of the airport. Within the land use element of the comprehensive plan, the future plan should show the land area required for airport purposes and designate land uses for surrounding properties that are compatible with airport operations. The general location and extent of designated uses should be based on a forecast of demand for various types of development and a consideration of the likely characteristics of such development.

Communities with comprehensive plans that contain an airport component are more likely to be successful in achieving land uses compatible with the local airport. The comprehensive plan provides a legal basis for airport land uses and community consensus in support of the airport's existing and future operations.

AIRPORT MASTER PLANNING

Airport master planning is the level of planning relating directly to airport facilities. The airport master plan includes an analysis of the specific improvements necessary to provide the proper level of service for the forecast demand.

The airport master planning process should identify the impact of airport operations on land use in the vicinity and recommend actions to alleviate negative impacts. The master plan will also show the areas for which fee simple land acquisitions and easements should be obtained. In fact, Congress has required an airport sponsor requesting federal aid under the **Airport Improvement Program (AIP)** to show the actions taken to restrict the use of land adjacent to, or in the immediate vicinity of the airport, to activities and purposes compatible with normal airport operations. In addition, the sponsor must specify how this has been accomplished by providing information on any zoning laws enacted or in force restricting the use of land adjacent to, or in the vicinity of the airport.

The **Airport Layout Plan (ALP)** is the technical section of the master plan depicting the specific development of the airport's facilities. Of the seven required drawings, one solely depicts the noise contours associated with airport use and the recommended development pattern for land surrounding the airport.

The airport master plan is a very useful document to incorporate into the local comprehensive planning process and subsequent local land use policies.

CAPITAL IMPROVEMENT PROGRAMS

Capital improvement programming is an important means by which comprehensive planning is realized, and is vital in areas where large tracts of vacant land have yet to be developed.

TYPES OF FUNDING AVAILABLE:

Types of funding available to airport sponsors for capital improvement programming include:

A. United States Government
B. State of Ohio
C. Local
    1. General Obligation Bonds
    2. Revenue Bonds
    3. Private Financing
    4. Nonprofit Corporation Bonds
    5. Industrial Development Authority
    6. Retained Revenues

DETAILS OF EACH TYPE:

A. The **Federal Aviation Administration** offers funding to sponsors through Section 13 of the Airport and Airways Development Act of 1970, as amended, by using Airport Trust Fund moneys in the form of 90% participation by the FAA, and 10% non-federal participation. These grants are available to public airports included in the NPIAS. They are partially awarded based on certain formulas, including state population and size and airport activity levels, and partly at the discretion of the FAA.

Eligible items for Federal Aviation Administration grants include airside facilities, such as land; runway, apron, and taxiway construction; lighting; navigational aids; fencing; and service roads. Items not eligible for FAA grants include buildings, automobile parking, hangers, maintenance facilities, and fueling facilities.

B. The State of Ohio administers a grant program designed to provide financial assistance to the publicly owned airports in Ohio. The **Ohio Airport Grant Program** is more limited in the types of projects funded, and provides grants of up to $185,000 for pavement resurfacing, obstruction removal, new pavement construction and the purchase of navigation and communication equipment.

C. Local funding depends on local sources, which may include county, city or township funds (townships are only permitted to receive grant funding in Ohio if they are located on an island) and private donations. In some cases the FAA will credit the amount the airport sponsor previously paid for land toward the required non-federal share. Other possible sources for local financing include:

1. **General Obligation Bonds** backed by the full faith and credit of the municipality. General Obligation Bonds are the most common funding mechanism, and bear relatively low interest rates.

2. **Revenue Bonds** are backed by the revenues generated by the facility being financed. Generally, they have interest rates 1% to 1.5% higher than general obligation bonds. They can be used only where facilities generate a sufficient operating surplus.

3. **Private Financing** can be arranged for facilities such as hangers, hotels, fuel facilities, and so on. The availability of such financing depends on developing sufficient revenue to pay off the indebtedness. Usually available from banks, private financing is a typical arrangement for constructing facilities on land leased from the airport by a third party. The municipality is, in this way, relieved of the responsibility of raising capital.

4. **Nonprofit Corporation Bonds** are backed by special use taxes. In some cases, nonprofit corporations have been formed to finance improvements, with these improvements reverting to the municipality on the retirement of the bonds. Interest rates are usually lower than for revenue bonds. The method has been used for financing maintenance hangers and air cargo facilities.

5. **Industrial Development Authority Bonds** are issued and underwritten by a corporation located at the airport. The municipality is not involved in the financing.

6. **Retained Revenues** are financing that comes directly from the airports own retained earnings from revenue-generating activities.

Capital Improvement Programming is the culmination of any good planning document. Airports have unique uses that can be endangered when adjacent land uses change. Therefore, such uses should be restricted in order to ensure that they do not interfere with or otherwise endanger aircraft using the airport.

REGULATORY MEASURES:

Land use regulations exercise the state's police power whereby the government promotes and protects the public health, safety, and general welfare. Regulatory techniques are the land use and development controls established through local legislation. They are based on recommendations set forth in the various planning documents described above, and are most effective in areas which have not yet been developed.

LAND USE ZONING

Zoning is the most commonly used form of land use control. The purpose of zoning is to designate areas of a community most suited for particular land uses. The desired distribution of land uses in the comprehensive plan becomes the basis for the zoning scheme. Land use zones, called districts, are shown on a map which is a required part of the zoning legislation. The uses permitted in each district must also be stated in the legislation. Some permitted uses may be conditional, requiring a special permit.

The most common zoning technique in noise compatibility planning is to eliminate residential zoning from the noise-sensitive area, replacing it with commercial, office, industrial, agriculture, or open space uses. These types of land uses are usually considered compatible, by the FAA, for areas surrounding an area of airport operations.

Zoning regulations require that all land in the community be zoned. A problem is encountered in cumulative zoning legislation, where zoning districts are arranged in a hierarchy from most to least restrictive. The most restrictive zone typically allows very few uses and is intended as a single-family residential zone. As the districts become less restrictive, more types of land uses are permitted, until the least restrictive district is reached where all types of uses are permitted. This type of zoning hierarchy permits residential development in areas zoned for commercial or industrial uses. With cumulative zoning legislation, commercial or industrial zoning is no guarantee that only noise-compatible development will occur in the future.

Conventional zoning can also be used to promote noise compatibility by reducing the number of potential future residents in the high noise areas, rather than preventing residential development altogether. This can be achieved by reducing the permitted housing densities in the noise-impacted areas. This approach should be considered only where compatible use zoning is not feasible.

Zoning practices also permit limited variations to conventional legislation. Such variations on standard zoning practices include exclusive zoning and noise overlay zoning, which will be discussed in more detail below.

EXCLUSIVE ZONING

The imperfections of cumulative zoning legislation lead to the problems of "higher uses" permitted in "lower use" zones as described above. Under this system, with residential development permitted in lower use industrial and agricultural districts, many airports are now subject to residential development occurring on land that was

previously farmland. An answer to this problem is to change all cumulative zoning legislation to non-cumulative or exclusive zoning, which permits only specified uses in each district.

Suburban growth and highest-and-best use tax assessment policies have created the incentive to rezone agricultural land to permit residential use. As agriculture land closer to urban areas is rezoned, the assessed value of adjacent agricultural land rises. At the same time, the land becomes less desirable for farming. Unwilling to pay the increased tax, farmers may sell their land for residential subdivision development. As a result, the protection provided airports by agricultural zoning is lost.

Table 3:

EXCLUSIVE vs. CUMULATIVE ZONING

Zoning	Permitted Uses	
Districts	**Exclusive**	**Cumulative**
Residential	Residential	Residential
Agricultural	Agricultural	Residential Agricultural
Commercial	Commercial	Residential Agricultural Commercial
Industrial	Industrial	Residential Agricultural Commercial Industrial

FLOATING ZONES

Floating zones are and an unmapped zone district where all the zone requirements are contained in the legislation and the zone is fixed on the map only when the application for development is approved and certain conditions are met.

NOISE OVERLAY ZONING

Noise overlay zoning involves the creation of one or more special zoning districts intended to supplement the regulations of the general purpose zoning districts. Regulations in noise overlay zones can prohibit noise-sensitive uses, as long as the underlying zone permits enough other land uses to provide reasonable development opportunities. The regulation can also require that sound insulation measures be included in the basic construction of buildings intended for noise-sensitive areas. The boundaries of the noise overlay zone are based on the critical noise contour—often the 65 Ldn contour—determined in the FAR Part 150 Noise Compatibility Study.

HEIGHT LIMITATION ZONING

Another type of variation imposed on standard zoning legislation falls in the category of height limitation zoning. This type of zoning was discussed in detail in the *Ohio Revised Code*, Chapter 4561, "Ohio Airport Protection Act" section of these guidelines

PLAT AND SUBDIVISION REVIEW

Subdivision regulations control the platting of land by setting standards for site planning, lot layout, and the design of utilities and public improvements. They can encourage compatible development around an airport by requiring the consideration of aircraft noise during the review of the plat by public officials. This might take the form of requiring further noise attenuating design features or a decrease or shift in the density of portions of the development.

BUILDING CODES

Building codes regulate the construction of buildings, setting standards for materials and construction techniques. They can also establish noise performance requirements typically associated with the building envelope. Once aircraft noise impact areas are defined, municipal building codes may be amended to require soundproofing of new structures or structures undergoing major alterations within these areas.

MARKET INTERVENTION MEASURES:

The least desirable forms of land use management strategies are expenditure techniques, due to their focus on acquisition and other cost related practices. These measures are a last resort because they are expensive, and may be disruptive and controversial within the community.

LAND ACQUISITION

Land acquisition is an important part of implementing airport land use plans. The main reasons for buying land are to obtain control of the area for airport us or to remove or prevent the development of incompatible land uses. Acquisition is the simplest and most complete way to ensure land use compatibility around airports, and provides the airport sponsor maximum control of land use in areas critical to the airport's operations.

To purchase means to obtain the fee simple, i.e., the property and the rights of property ownership. The acquisition of fee simple can be accomplished through negotiation with the property owner, by deed or gift, or through condemnation.

A second form of land acquisition is advanced property acquisition, where the intent is to acquire land far ahead of the need for that land in order to ensure compatibility with future airport operations. Advanced property acquisition can also be used to purchase land before property values become greatly inflated. In addition, advanced property acquisition does not take large areas of land out of use or permanently off the tax rolls. Once in public ownership, the land can be leased back to the former owners to continue existing compatible uses. Also, land needed only for airport protection can be resold to the public with deed restrictions that would prohibit the development of incompatible land uses.

EASEMENTS

An easement is a right of another to part of the total benefits of the ownership of real property. Easements may be used as an effective form of land use control. Easements are permanent, with title held by the purchaser until sold or released, and work equally well inside or outside zoning jurisdictions. Short of purchasing the fee simple, easements to property can be acquired by negotiation or condemnation. Easements permit the purchaser the use and enjoyment of another's property and property rights for the special purpose stated in the easement agreement. Easements relinquishing the development rights to property require that the land be kept in its natural state and prohibit further development. This arrangement can be beneficial to all concerned: The airport does not have to purchase the property; the property remains on the community tax rolls; and the land owners continue to productively use their land.

Avigation easements are those which grant:

The right of flight over the land in question
The right to remove existing obstructions
A restriction against the establishment of future obstructions
Compensation to the owner for the side effects of aircraft operations over one's property

Easements of this type are often acquired for both developed and undeveloped properties in runway approach zones.

Clear zone easements are avigation easements that grant the right to keep the subject property free of all structures or any other use of the land that could prove hazardous to aircraft landing or departing.

SALES ASSISTANCE

Sales assistance programs are designed to assist residents in noise-impacted areas sell their homes at the fair market value. The airport guarantees the property owner that they will receive the fair market appraised value, or some increment thereof, regardless of the final sales value negotiated with the buyer. In order to prevent collusion between buyer and seller, to the detriment of the airport, the airport must approve the listing price for the home and any downward adjustments of that price. In return for participation in the program, the airport could require that property owners dedicate a noise and avigation easement to the airport.

SOUNDPROOFING

Dwellings and other noise-sensitive buildings can be sound insulated to reduce the interior noise levels. Sound insulation may involve applying weatherproofing materials, the baffling of vents and mail slots, the installation of solid-core wood doors or foam-core steel doors, the installation of windows with special noise attenuation characteristics, the installation of new interior walls along existing walls, and the installation of a ventilation system. The soundproofing of existing buildings is often expensive and time-consuming, but is appropriate where many noise-sensitive land uses are impacted by high noise levels and where it is not possible to implement a noise abatement program to effectively reduce the interior noise levels to meet the FAA requirements.

GUIDELINES FOR AIRPORT ZONING

AND

MODEL AIRPORT ZONING LEGISLATION

GUIDELINES FOR AIRPORT ZONING LEGISLATION

This chapter of the guidelines provides specific information on how to develop an airport zoning legislation under provisions of *The Ohio Revised Code*.

PROCEDURE FOR ESTABLISHING AIRPORT ZONING

A. The **Airport Zoning Board** is established, consisting of the local governing authority (City Council, Board of County Commissioners, etc.). To establish itself as the Airport Zoning Board the local governing authority passes a resolution declaring its intention to proceed with airport zoning under Sections 4563.01 et seq., *Ohio Revised Code*.

B. The Airport Zoning Board appoints an **Airport Zoning Commission**, which:

1. Recommends boundaries of various zones to be established and the regulations to be adopted for those zones.
2. Makes a preliminary report.
3. Holds a public hearing.
4. Makes a final report and submits the final report to the Airport Zoning Board.

C. The local authority, acting as the Airport Zoning Board:

1. Provides 30 days notice of a public hearing which shall be published in a newspaper of general circulation in the county.
2. Holds a public hearing.
3. Adopts a zoning resolution which:
    a. Includes the zoning regulations.
    b. Provides for the administration and enforcement of the zoning regulations.
    c. Provides for an **Airport Zoning Board of Appeals**, whose power is defined as:
        1) Hear and decide appeals from any decision made by the Airport Zoning Board
        2) Hear, allow, or refuse any variance from the airport zoning regulations.
        3) Reverse or modify any decision made by the Airport Zoning Board.

D. Amendments to airport zoning regulations, unlike regular county zoning, do not require a recommendation from the zoning commission prior to the amendment. The commissioners, acting as the airport zoning board, are required to hold a public hearing on the proposed amendment and give thirty days notice of the public hearing in a newspaper of general circulation in the county.

E. Administration and enforcement of the airport zoning regulations may require a permit be obtained before any new use be established and before any existing use be substantially changed or altered in an airport hazard area. If any non conforming use is voluntarily discontinued for two years, any future use of the premises shall be in conformity with the airport zoning regulations.

MODEL ZONING LEGISLATION

The model airport zoning legislation presented below is an ideal development pattern around public owned facilities, based on the *Ohio Model Zoning Code*, and is intended to be adoptable in whole, or in part, by local authorities interested in protecting their airport by these means.

ARTICLE ____

OVERLAY ZONING DISTRICTS

AIRPORT COMPATIBILITY ZONING

SECTIONS ____.10 TO ____.22, INCLUSIVE, SHALL APPLY TO ZONING FOR COMPATIBLE LAND USES IN THE PROXIMITY OF THE _____ AIRPORT IN ACCORDANCE WITH (THE AIRPORT COMPREHENSIVE PLAN AND) THE PROVISIONS OF CHAPTER 4563, OHIO REVISED CODE, DIVIDING THE AIRPORT HAZARD AREA INTO ZONES, THEREIN, ENCOURAGING, REGULATING, AND RESTRICTING THE LOCATION, CONSTRUCTION, RECONSTRUCTION, ALTERATION AND USE OF STRUCTURES AND LAND; PROVIDING FOR THE COMPATIBILITY OF DIFFERENT LAND USES AND THE MOST APPROPRIATE USE OF LAND; PROVIDING FOR THE REGULATION OF POPULATION DENSITY AND CONCENTRATION OF PERSONS; PROVIDING FOR THE ADMINISTRATION OF THIS LEGISLATION, DEFINING THE POWERS AND DUTIES OF THE ADMINISTRATIVE OFFICERS AS PROVIDED HEREAFTER, AND PRESCRIBING PENALTIES FOR THE VIOLATION OF THE PROVISIONS IN THIS LEGISLATION OR ANY AMENDMENT THERETO, ALL FOR THE PURPOSE OF PROTECTING THE PUBLIC HEALTH, SAFETY, COMFORT, AND GENERAL WELFARE; AND FOR THE REPEAL THEREOF.

THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF _____ COUNTY, STATE OF OHIO:

____.10 Purpose

It is the purpose of section ____.10 to ____.22, inclusive, to regulate land uses within the airport hazard area of the _____ Airport in order to minimize injury, loss of life, and hazards to the safety of persons or to the security of property within such zones, and to assist in the implementation of policies and recommendations of the city/county comprehensive plan, the airport master plan, the State of Ohio's multi-modal transportation plan, and ....

Accordingly, it is declared that:

I. the creation or establishment of noncompatible land uses which have the potential to reduce the size area available for taking off, maneuvering, and landing of aircraft, thus, tending to impair or destroy the utility of the airport, and the public investment therein, is a public nuisance and an injury to the region served by the _____ Airport,

II. certain other land uses in the vicinity of the airport also have the potential for being hazardous to normal aircraft operations or to increase the potential for personal and property damage in the event of an aircraft accident; therefore, it is necessary in the interest of the public health, public safety, and general welfare that the incompatible use of land within certain airport zones be prevented, and

III. the prevention of these incompatible land uses should be accomplished to the extent legally possible, by the exercise of the police power.

____.11 **Definitions**

The following definitions shall apply in the interpretation of this legislation:

"Airport" means any area of land designated and set aside for the landing and taking off of aircraft, including all necessary taxiways, aircraft storage and tie-down areas, hangars, and other necessary buildings, and open spaces, designated for the storage, repair, and operation of aircraft, and utilized or to be utilized in the interest of the pubic for such purposes.

"Airport Hazard" means any use of land within an airport hazard area which obstructs the air space required for flight of aircraft in landing or taking off at any airport or is otherwise hazardous to such air navigation.

"Airport Hazard Area" means any area of land adjacent to an airport which includes any of the following zones:

Primary Area — A surface longitudinally centered on a runway, extending 200 feet beyond each end of the runway, and with a width governed by the type of approach available. The elevation is the same as the nearest point on the runway centerline.

Approach Area — A surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. The surface dimensions are based on the type of approach available, and include the following three sections:

> Inner-approach — Commonly known as the Runway Protection Zone (RPZ), or a trapezoid centered about the extended runway centerline, beginning 200 feet beyond each end of the runway, with dimensions varying with the type of approach available.
>
> Middle-approach — That section of the approach area extending from the outer edge of the RPZ to the approach surface's junction with the horizontal surface.
>
> Outer-approach — That section of the approach area extending upward from the horizontal surface to the end of the approach area, the length of which is governed by the type of approach available.

Transitional Area — Surfaces extending upward and outward at right angles to the runway centerline and the runway centerline extended at a slope of 7 to 1, from the sides of the primary

surface and from the sides of the approach surfaces. This surface is divided into the following two sections:

Inner-transitional — That part of the transitional area beginning at the edge of the primary surface and extending outward and upward to a horizontal distance of 350 feet.

Outer-transitional — That part of the transitional area beginning at the outer edge of the inner-transitional area and extending outward and upward to the horizontal surface.

Horizontal Area — A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging an arc of specified radii from each runway end, depending on the approach available.

Conical Area — A surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.

"Airport Zoning Board" means the legislative authority(ies) of the political subdivision(s), inside which territorial limits the airport hazard area is located, which adopts, administers, and enforces the airport zoning regulation.

"Airport Zoning Board of Appeals" means that body appointed by the airport zoning board for the purpose of hearing and deciding appeals from any order, requirement, decision, or determination made by the airport zoning board in the enforcement of the airport zoning regulations, hearing and allowing, refusing, or allowing with modification or condition, any variance from the term of the airport zoning regulation, and affirming, reversing, or modifying any order, requirement, decision, or determination of the airport zoning board.

"Airport Zoning Commission" means that body appointed by the airport zoning board to recommend the boundaries of the various zones and the uses permitted therein.

"Low Density Residential" means less than twelve dwelling units per acre.

"Political Subdivision" means any municipal corporation, township, or county.

"Person" means any individual, firm, copartnership, corporation, company, association, joint stock association, or body politic and includes any trustee, receiver, assignee, or other similar representative thereof.

____.12 Interpretation

In their interpretation and application, the provisions of this legislation shall be held to be minimum requirements, adopted for the promotion of the public health, safety, and the general welfare. In the event of conflict between the requirements of this legislation and any other requirements of any other lawfully adopted rules, regulations, legislation, or resolutions applicable to the same area, the most restrictive limitations or requirements best calculated to insure safety, or that imposing higher standards, shall govern.

____.13 **Separability**

Should any section or provision of this legislation be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the legislation as a whole, or any part thereof other than the part so declared to be unconstitutional or invalid.

____.14 **Adoption**

The Board of County Commissioners of _____ County, State of Ohio (together with the Board of County Commissioners of _____ County, State of Ohio), acting as the Airport Zoning Board of the _____ Airport, adopt the provision set forth in this legislation, specifying permitted land uses within each zone of the Airport Hazard Area.

____.15 **Airport Zoning Districts**

The following Airport Zoning Districts are hereby established for the _____ Airport Overlay Zoning, and shall be governed by the accompanying regulations:

(A) Airport Zoning District One (AZD-1)
(1) AZD-1 encompasses land lying within the runway primary area.
(2) Permitted uses within AZD-1 include open space and permitted airport uses.

(B) Airport Zoning District Two (AZD-2)
(1) AZD-2 encompasses land underlying the inner approach, the middle approach, and the inner transitional areas.
(2) Permitted uses within AZD-2 include open space, agriculture (restricted to low growth agriculture under the inner approach), and airport related uses.
(3) All uses allowed within this zone shall grant an avigation easement right as a condition of approval.

(C) Airport Zoning District Three (AZD-3)
(1) AZD-3 encompasses land underlying the outer approach out to the inner edge of the conical surface, and the outer transitional areas.
(2) Permitted uses within AZD-3 include open space, agriculture, general commercial, general industrial, and low density residential.

(D) Airport Zoning District Four (AZD-4)
(1) AZD-4 encompasses land underlying the horizontal area, and that portion of the conical area that is contiguous with the outer approach.
(2) Permitted uses within AZD-4 include open space, agriculture, general commercial, general industrial, institutional, and all residential.
(3) Residential development occurring within AZD-4 shall include deed restrictions, stating the occupants understand the effects of living in the proximity of an airport and waive their right to oppose any continued use or growth of the airport for its current purposes.

Notwithstanding any other provision of this section, no use may be made of land within any zone established by this section in such a manner as to create electrical interference with radio communication between the airport and aircraft, to make it difficult for pilots to distinguish between airport lights and other lights, to create glare in the eyes of pilots using the airport, to inpair visibility in the vicinity of the iarport or to other wise endanger the landing, taking off, or maneuvering of aircraft.

Notwithstanding any other provision of this section, no use may be made of and no installation may be placed on land within any airport zone that will produce smoke, fumes, gases, or odors that would interfere with the safe use by aircraft of the airport.

Notwithstanding any other provision of this section, no use may be made of and no installation may be placed on land within any airport zone for rifle ranges, public or private, or private aircraft landing fields, which would interfere with the safe use hy aircraft of the airport.

____.16 Zoning Map

The districts established in Section ____.15 must be shown on official maps and aerial photographs, which, together with all data, references, explanatory material and notations thereon, are hereby officially adopted as part of this legislation and hereby incorporated by reference herein, thereby having the same force and effect as if herein fully described in writing. These maps and photographs shall remain on file in the office of the city/county clerk.

____.17 Nonconforming Uses

Where, at the time of adoption of this legislation, lawful uses of land exist which would not be permitted by the regulations imposed herein, the uses may be continued so long as they remain otherwise lawful, provided:

1. No such nonconforming uses shall be enlarged or increased, nor extended to occupy a greater area of land than was occupied at the affective date of adoption or amendment of this legislation;

2. No such nonconforming uses shall be moved in whole or in part to any portion of the lot or parcel other than that occupied by such used at the effective date of adoption or amendment of this legislation;

3. If any such nonconforming uses of land are discontinued or abandoned for more than two (2) years (except when government action impedes access to the premises), any subsequent use of such land shall conform to the regulations specified by this legislation for the district in which such land is located, and the nonconforming use may not thereafter be resumed;

4. No additional use not conforming to the requirements of this legislation shall be commenced in connection with such nonconforming use of land.

____.18 **Amendments**

The Board of County Commissioners of _____ County, State of Ohio, at the recommendation of the Airport Zoning Commission, Airport Zoning Board of Appeals, or the Division of Aviation, may amend or change the provisions of this legislation after a public hearing in relation thereto, at which all parties in interest and citizens shall have the opportunity to be heard. At least thirty (30) days notice of the hearing shall be published in a newspaper of general circulation in the political subdivision in which the Airport Hazard Area to be zoned is located.

____.19 **Appeals**

Any person desiring to use property in any manner in conflict with the provisions set forth in this legislation may apply to the Airport Zoning Board of Appeals for a variance from the zoning regulations in question. The board of appeals may subject any variance to any reasonable conditions that they deem necessary.

Any person aggrieved by any decision of an administrative agency made in its administration of the provisions set forth in this legislation may appeal to the Airport Zoning Board of Appeals authorized to hear and decide appeals from the decisions of such administrative agency, as follows:

a) All appeals shall be taken within twelve (12) days after an order is filed in the office of the administrative agency, by filing with the administrative agency from which the appeal is taken and with the Airport Zoning Board of Appeals a notice of appeal specifying the grounds of such appeal. The administrative agency form which the appeal is taken shall transmit to the Airport Zoning Board of Appeals all the papers constituting the record upon which the action appealed from was taken.

b) An appeal shall stay all proceedings in furtherance of the action appealed from unless the administrative agency from which the appeal is taken certifies to the Airport Zoning Board of Appeals that a stay would cause imminent peril to life or property.

c) The Airport Zoning Board of Appeals shall fix a reasonable time for the hearing of appeals, give public notice and due notice to the parties in interest, and decide the same within a reasonable time.

d) The Airport Zoning Board of Appeals may reverse, affirm wholly or partly, or modify, the order, requirement, decision, or determination appealed from.

Any person aggrieved, or any taxpayer, or any legislative authority, or any Airport Zoning Board affected by any order of the Airport Zoning Board of Appeals may appeal within thirty (30) days to the court of common pleas of _____ County, and upon appeal thereof a trial de novo shall be had.

____.20 Administration and Enforcement

The _____ Airport Zoning Board may institute in any court of competent jurisdiction an action to prevent, restrain, correct, or abate any violation of this legislation. The courts shall adjudge to the plaintiff such relief, by way of injunction, which may be mandatory, or otherwise, as may be proper under all the facts of and circumstances of the case, in order fully to effectuate the purposes of the regulations adopted through this legislation and orders and rulings made pursuant thereto.

____.21 Penalties

Whoever violates the provisions set forth in this legislation shall be fined not more than one hundred dollars. Each day's willful continuation of such violation is a separate offense.

____.22 Effective Date

This legislation shall become effective from and after the date of its approval and adoption, as provided by law.

____.20 **Administration and Enforcement**

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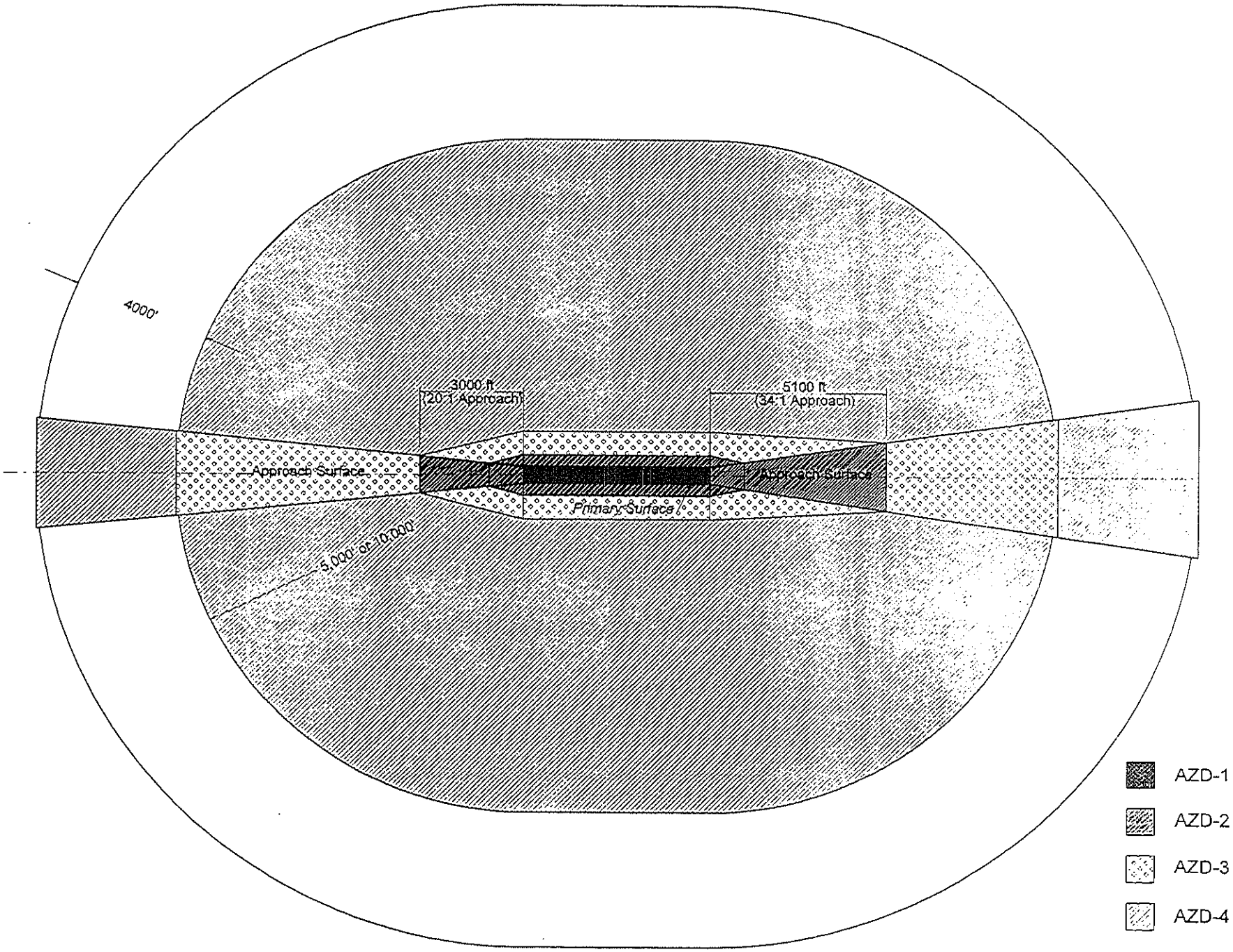
MODEL AIRPORT ZONING MAP



FAR Part 77
"Imaginary Surfaces"

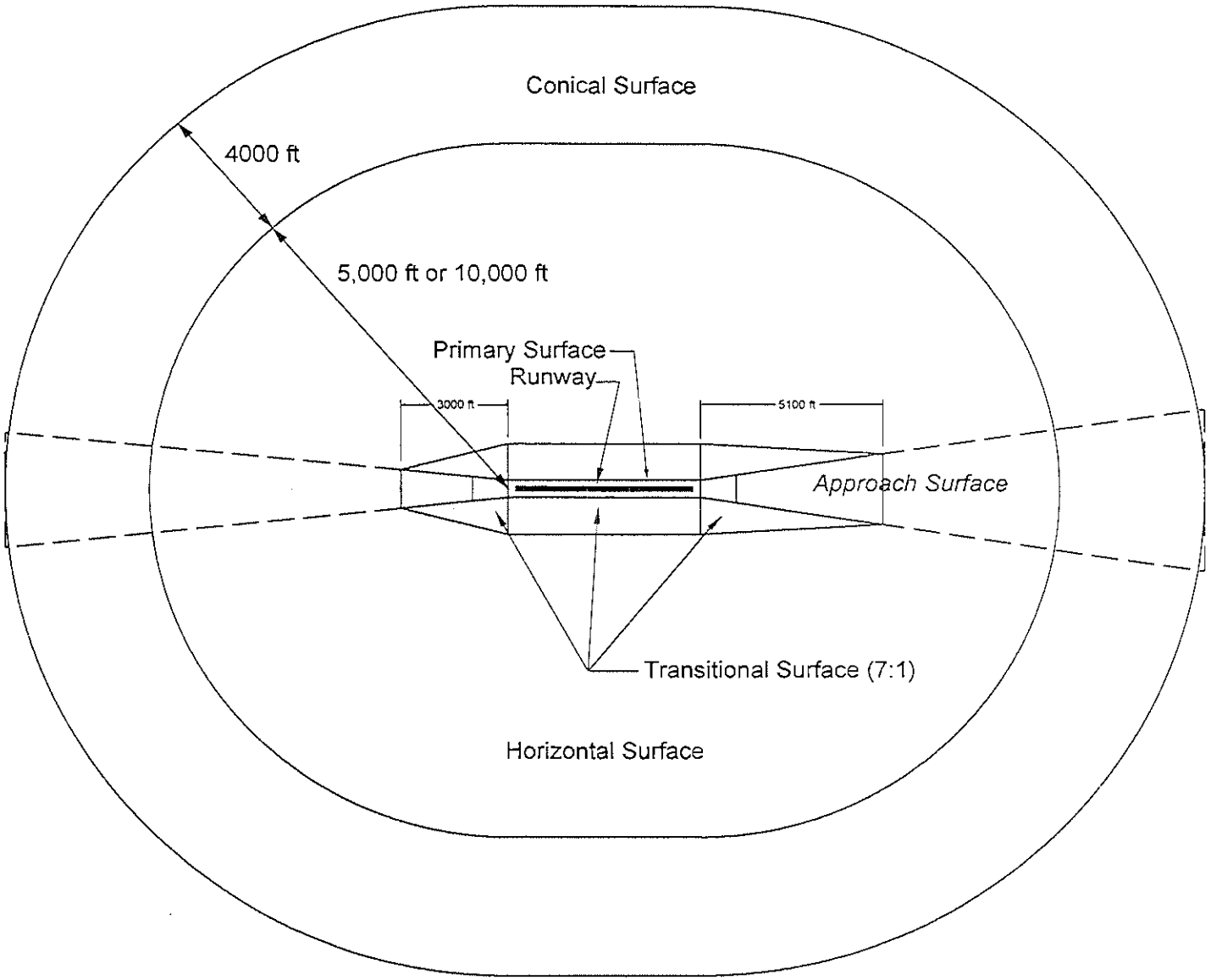


Figure 1

FAR Part 77
"Imaginary Surfaces"
Cross Section

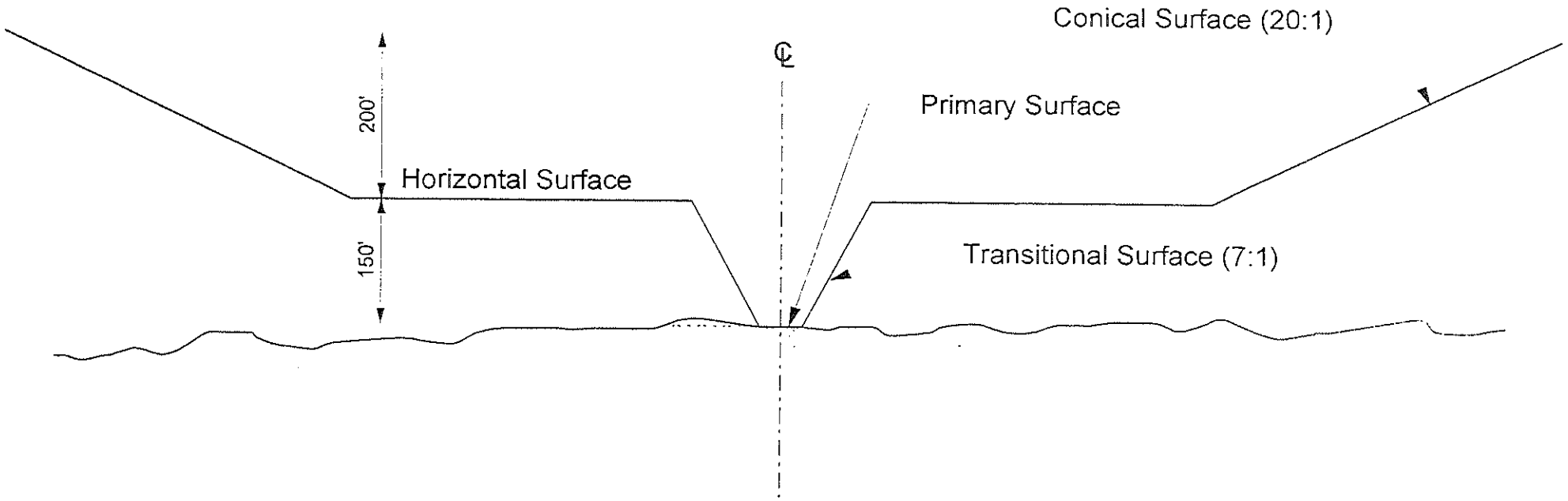


Figure 2

CONCLUSION

A phrase heard all to often in response to the construction, expansion, and development of public facilities and infrastructure, "Not-In-My-Back-Yard" has taken on a new meaning regarding the state's publicly owned airports. For years, prime development land on and around airports has led to the devastating trend of residential subdivisions sprouting up adjacent to existing runways, with many of these "new neighbors" obsessed with closing the facility. New legislation, together with renewed interest in airports as economic development tools, is setting the stage to reduce negative public outcry.

Since the enactment of the *Ohio Airport Protection Act* in October 1991, Ohio law allows for the zoning of land use in the vicinity of public owned airports. According to the legislation, local authorities (i.e., county commissioners, city council, township trustees) may zone around airports to restrict noncompatible land uses in the airport hazard area. This new provision differs from past standards which traditionally based land use development on height limitation and noise mitigation restrictions. A phrase to look for in the future will be "Not-In-The-Airport's-Back-Yard."

Airports, both large and small, have been shown to spur economic benefits in the region in which they are located. The aviation industry is moving away from one serving private pilots' pleasure flying to more corporate in nature. Many of today's corporations consider proximity to both an air carrier and a general aviation airport within their top ten criteria when locating facilities. An airport, together with other local resources, helps attract the industries so vital to community prosperity.

The local authority must now determine their community's priority. Do they assume responsibility to protect the utility of, and the public investment in the airport, or do they serve those recently residing in the airport vicinity?

The Ohio Department of Transportation, Division of Aviation has developed this set of guidelines to interpret and outline the state's new zoning criteria. Through more comprehensive planning and a closer working relationship between state and local authorities, developers, and residents, we can promote "Good Neighbors by Design."

REFERENCES

The following documents for further reference are available from the Ohio Division of Aviation:

American Association of Airport Executives, *Protecting Your Airport—Controlling Land Uses*, 1992.

Federal Aviation Administration, Advisory Circular 150/5020-1 "Noise Control and Compatibility Planning for Airports," 1983.

Federal Aviation Administration, Advisory Circular 150/5050-6, "Airport-Land Use Compatibility Program," 1977.

Federal Aviation Administration, Advisory Circular 150/5190-4A "Model Zoning Ordinance to Limit Height of Objects around Airports," 1987.

Federal Aviation Administration, Advisory Circular 150/5200-32 "Airport Wildlife Hazard Management," 1993.

Federal Aviation Regulation, Part 77 "Objects Affecting Navigable Airspace," 1975.

Federal Aviation Regulation, Part 150 "Noise Control and Compatibility Planning," 1979.

Ohio Department of Development, Office of Local Government Services, *Ohio Model Zoning Code*, 1989.

Ohio Department of Development, Office of Local Government Services, *Ohio Rural Zoning Handbook*, "Airport Zoning," 1991 p.46.

APPENDIX A:
OHIO REVISED CODE, CHAPTER 4563
"AIRPORT ZONING"

AIRPORTS

PRELIMINARY PROVISIONS

4563.01 DEFINITIONS

As used in sections 4563.01 to 4563.21, inclusive, of the Revised Code:

(A) "Airport" means any area of land designed and set aside for the landing and taking off of aircraft, and for that purpose possessing one or more hard surfaced runways of a length of not less than three thousand five hundred feet, and designed for the storing, repair, and operation of aircraft, and utilizing or to be utilized in the interest of the public for such purposes, and any area of land designed for such purposes for which designs, plans, and specifications conforming to the above requirements have been approved by the Division of Aviation and for which not less than seventy per cent of the area shown by such designs and plans to constitute the total area has been acquired. An airport is "publicly owned" if the portion thereof used for the landing and taking off of aircraft is owned, operated, leased to, or leased by the United States, any agency or department thereof, this state or any other state, or any political subdivision of this state or any other state, or any other government body, public agency, or public corporation, or any combination thereof.

(B) "Airport hazard" means any structure or object of natural growth or use of land within an airport hazard area which obstructs the air space required for the flight of aircraft in landing or taking off at any airport or is otherwise hazardous to such landing or taking off of aircraft.

(C) "Airport hazard area" means any area of land adjacent to an airport which has been declared to an "airport hazard area" by the Division of Aviation in connection with any airport approach plan recommended by such Division.

(D) "Political subdivision" means any municipal corporation, township, or county.

(E) "Person" means any individual, firm, copartnership, corporation, company, association, joint stock association, or body politic and includes any trustee, receiver, assignee, or other similar representative thereof.

(F) "Structure" means any erect object, including but without limitations to buildings, towers, smokestacks, and overhead transmission lines.

4563.03 AIRPORT ZONING BOARDS

(A)When an airport is publicly owned and all airport hazard areas appertaining to such airport are located inside the territorial limits of one political subdivision, legislative authority of the political subdivision shall constitute the airport zoning board. Such legislative authority, acting as the airport zoning board, may adopt, administer, and enforce airport zoning regulations for such airport hazard area. Airport zoning regulations may divide an airport hazard area into zones, and, within such zones, regulate and restrict land uses which by their nature constitute airport hazards, and regulate and restrict the height to which structures may be erected or objects of natural growth may be allowed to grow. An obstruction of air space in an airport hazard area rising to a height not in excess of forty feet above the established elevation of the airport, or three feet for each one hundred feet or fraction thereof its location is distant from the nearest point in the perimeter of the airport, whichever is greater, shall be prima facie reasonable.

(B) When an airport is publicly owned and any airport hazard area appertaining to such airport is located in more than one political subdivision, the board of county commissioners of each county in which such airport or such airport hazard area may exist, shall constitute the airport zoning board, which shall have the same power to adapt, administer, and enforce airport zoning regulations as provided in division (A) of this section. The board shall elect its own chairman.

4563.031 ZONING REGULATIONS

Within the approach, transitional, inner horizontal, and conical areas at a publicly owned airport, an airport zoning board constituted under section 4563.03 of the Revised Code may adopt, administer, and enforce zoning regulations, in addition to its regulations adopted under section 4563.03 of the Revised Code, in order to ensure the safety of persons occupying or using such areas and the security of property located within such areas. Airport zoning regulations may divide such approach, transitional, inner horizontal, and conical areas into zones, and within such zones, regulate and restrict land use in order to minimize injury, loss of life, and hazards to the safety of persons or to the security of property within such zones, and may include regulations governing population density and concentration of persons within such zones.

Prior to initial zoning under this section, the procedures set forth in sections 4563.05, 4563.06, and 4563.08 of the Revised Code for establishing the boundaries of the various zones and adopting the regulations therefor, shall be followed. "Approach area," "transitional area," "inner horizontal area," or "conical area," respectively, means any area of land adjacent to an airport and within an airport hazard area, which has been declared to be an "approach area," "transitional area," "inner horizontal area," or "conical area" by the Division of Aviation, based upon the approach plan for the airport. No zone established under this section may include any area outside such approach, transitional, inner horizontal, and conical areas.

4563.032 OBSTRUCTION STANDARDS

Any airport zoning board that adopts, administers, and enforces airport zoning regulations for an airport hazard area under section 4563.03 of the Revised Codes shall adopt, as regulations, the rules adopted by the department of transportation under section 4561.32 of the Revised Codes that are based in whole upon the obstruction standards set forth in 14 C.F.R. 77.21 to 77.29, as amended, to uniformly regulate the height and location of structures and objects of natural growth in any airport's clear zone surface, approach surface, or transitional surface.

4563.04 CONFLICT OF ZONING REGULATIONS

In the event of conflict between any airport zoning regulations adopted under sections 4563.01 to 4563.21, inclusive of the Revised Code, and any other zoning regulations applicable to the same area, whether the conflict be with respect to the height of structures or objects of natural growth, the use of land, or any other matter, and whether such other regulations were adopted by the political subdivision which adopted the airport zoning regulations or by some other political subdivision, the limitation or requirement best calculated to insure safety shall govern.

4563.05 APPOINTMENT OF AIRPORT ZONING COMMISSION; PUBLIC HEARINGS

Prior to initial zoning of any airport hazard area under sections 4563.01 to 4563.21, inclusive, of the Revised Code, the airport zoning board which is to adopt the regulations shall appoint a commission, to be known as the airport zoning commission, to recommend the boundaries of the various zones to be established and the regulations to be adopted therefor. Such commission shall make a preliminary report and hold public hearings thereon before submitting its final report, and the airport zoning board shall not hold its public hearings or take other action until it has received the final report of such commission. Where a city planning commission, township zoning commission, or county rural zoning commission already exists, it may be appointed as the airport zoning commission.

4563.06 ADOPTION OF AIRPORT ZONING REGULATIONS; PROCEDURE

No airport zoning regulations shall be adopted, amended, or changed under sections 4563.01 to 4563.21, inclusive, of the Revised Code, except by action of the legislative body of the political subdivision, after a public hearing in relation thereto, at which parties in interest and citizens shall have an opportunity to be heard. At least thirty days notice of the hearing shall be published in a newspaper of general circulation in the political subdivision in which the airport hazard area to be zoned is located.

4563.07 ZONING REGULATIONS SHALL BE REASONABLE

All airport zoning regulations adopted under sections 4563.01 to 4563.21, inclusive, of the revised codes shall be reasonable, and none shall impose any requirement or restriction which is not reasonably necessary to insure the safety of aircraft in landing and taking off and the safety of persons occupying or using the area and the security of property thereon. In determining what regulations are necessary, each political subdivision or airport zoning board shall consider, among other things, the character of the flying operations expected to be conducted at the airport, the per cent of slope or grade customarily used in descent or ascent of the aircraft expected to use the airport with reference to their size, speed, and type, the nature of the terrain within the airport hazard area, the character of the neighborhood, and the uses to which the property to be zoned is put or is adaptable.

4563.08 AIRPORT HAZARD AREA

In order to define and determine the airport hazard area in which airport zoning shall be applicable, the Division of Aviation, upon request of any airport zoning commission appointed pursuant to section 4563.05 of the Revised Code, shall formulate and adopt an airport approach plan for any airport within its jurisdiction. The Division of Aviation may revise such plan when necessary. Each plan shall indicate the airport hazard area, the circumstances under which structures, objects of natural growth, public highways, and certain used of land would be airport hazards, and the height limits of structures and objects of natural growth, and what other restrictions should be contained in the airport zoning regulations. In adopting or revising such plan, the Division of Aviation shall consider, among other things, the size, type, and speed of aircraft expected to use such airport, the character of the flying operations expected to be conducted at such airport, the location of public highways, the nature of the terrain, the height of existing structures and objects of natural growth above the level of the airport, and the possibility of lowering or removing existing obstructions. The Division of Aviation may obtain and consider information from and the opinion of any agency of the federal government charged with the promotion, regulation, or control of civil aeronautics as to the approaches necessary to safe flying operations at such airport.

4563.09 ZONING REGULATIONS NOT TO INTERFERE WITH CONTINUANCE OF NONCONFORMING USES; EXCEPTIONS

No airport zoning regulations adopted under sections 4563.01 to 4563.21, inclusive, and section 4563.99 of the Revised Code, shall require the removal, lowering, or other change or alteration of any structure or object of natural growth not conforming to the regulations when adopted or amended, or otherwise interfere with the continuance of any nonconforming use, except as provided in section 4563.14 of the Revised Code.

4563.10 ZONING BOARD OR POLITICAL SUBDIVISION NOT GRANTED POWER TO PROHIBIT CERTAIN USES

Nothing in section 4563.01 to 4563.21, inclusive, of the Revised Code, shall confer any power on any political subdivision or any airport zoning board to prohibit the use of any land for farming, dairying, pasturage, apiculture, horticulture, floriculture, viticulture, or animal and poultry husbandry, except where such uses shall create an airport hazard. The provisions of section 4563.01 to 4563.21, inclusive, and section 4563.99 of the Revised Code shall not apply in respect to the location, relocation, erection, construction, reconstruction, change, alteration, maintenance, removal, use, or enlargement of any buildings or structures, now existing or constructed in the future , of any public utility or railroad.

4563.11 ADMINISTRATION AND ENFORCEMENT OF ZONING REGULATIONS

All airport zoning regulations adopted under sections 4563.01 to 4563.21, inclusive, of the Revised Code, shall provide for the administration and enforcement of such regulations. The duties of any administrative agency designated pursuant to sections 4563.01 to 4563.21, inclusive, of the Revised Code, shall include that of issuing all permits under section 4563.12 of the Revised Code.

4563.12 PERMIT TO CONSTRUCT, ALTER, OR ESTABLISH STRUCTURE OR USE

Airport zoning regulations adopted under sections 4563.01 to 4563.99, inclusive, of the Revised Code, may require that a permit be obtained before any new structure or use may be constructed or established and before and existing structure or use may be substantially changed or substantially altered in an airport hazard area. No permit shall be granted that would allow the establishment or creation of an airport hazard, or permit a nonconforming structure to be made higher or a nonconforming object of natural growth to become a greater hazard to air navigation than it was when the applicable regulations were adopted or than it is when the application for a permit is made. If any nonconforming use is voluntarily discontinued for two years or more, any future use of the premises shall be in conformity with sections 4563.01 to 4563.21, inclusive, of the Revised Code.

4563.13 ZONING BOARD OF APPEALS

All airport zoning regulations adopted under 4563.01 to 4563.21, inclusive, of the Revised Code, shall provide for an airport zoning board of appeals. Where a zoning board of appeals already exists, it may be designated as the airport zoning board of appeals. The airport zoning board of appeals, except in those instances in which an existing zoning board of appeals is designated as the airport zoning board of appeals, shall consist of five members, each to be appointed for a term of three years by the authority adopting the regulations and subject to removal by the appointing authority for cause upon written charges and after public hearing. The first members of such board of appeals shall be so designated that two shall serve for one year, tow shall serve for two years, and one shall serve for three years.

4563.14 POWERS OF AIRPORT ZONING BOARDS OF APPEALS

The board of appeals shall have and exercise the following powers:

(A) To hear and decide appeals from any order, requirement, decision, or determination made by the administrative agency in the enforcement of the airport zoning regulations, as provided in sections 4563.11 and 4563.12 of the Revised Code.

(B) To hear and allow, refuse, or allow with modifications or conditions, any variance from the terms of the airport zoning regulations which the board may be authorized to pass upon pursuant to such regulations.

(C) To hear and decide specific variances under section 4563.16 of the Revised Code.

4563.15 AIRPORT ZONING BOARD OF APPEALS MAY CHANGE AIRPORT ZONING REGULATIONS; HEARINGS

(A) An airport zoning board of appeals, by a majority vote of its members, may affirm, reverse, or modify any order, requirement decision, or determination of the administrative agency created pursuant to section 4563.11 of the Revised Code.

(B) The airport zoning board of appeals shall adopt rules in accordance with the provisions of the ordinance or resolution by which it was created. Meeting of the board shall be held at the call of the chairman and at such other times as the board determines. The chairman, or in his absence the acting chairman, may administer oaths and compel the attendance of witnesses. All hearings of the board shall be public. The board shall keep minutes of its proceedings, showing the vote of each member upon each question, or, if absent or failing to vote, indicating such fact, and shall keep records of its examination and other official actions, all of which shall immediately be filed in the office of the board and shall be a public record.

4563.16 APPLICATION TO AIRPORT ZONING BOARD OF APPEALS FOR VARIANCE

Any person desiring to create any structure, or increase the height of any structure, or permit the increases in height of any object of natural growth, or otherwise use his property in any manner in conflict with airport zoning regulations adopted under sections 4563.01 to 4563.21, inclusive, of the Revised Code, may apply to the airport zoning board of appeals for a variance from the zoning regulations in question. Such variances shall be allowed where a literal application or enforcement of the regulations would result in unnecessary hardship and the relief granted would not be contrary to the public interest or create conditions dangerous to the safety of aircraft using the airport, but would do substantial justice and would not be in conflict with factors set down for consideration in sections 4563.07 and 4563.08 of the Revised Code. The board of appeals may subject any variance to any reasonable conditions that they deem necessary.

4563.17 MAINTENANCE OF MARKERS AND LIGHTS ON AIRPORT HAZARDS

In granting any permit under section 4563.12 of the Revised Code by the administrative agency or under section 4563.16 of the Revised Code by the airport zoning board of appeals, such agency may so condition such permit, if they deem such action advisable and reasonable in the circumstances, to require the owner of the structure or object of natural growth in question to permit the political subdivision, owning the airport, at its own expense, to install, operate, and maintain thereon such markers and lights as may be necessary to indicate the presence of an airport hazard.

4563.18 APPEALS TO AIRPORT ZONING BOARD OF APPEALS

(A) Any person aggrieved by any decision of an administrative agency made in its administration of airport zoning regulations adopted under sections 4563.01 to 4563.21, inclusive, of the Revised Code, or any governing body of a political subdivision or any airport zoning board which is of the opinion that a decision of such an administrative agency is an improper application of airport zoning regulations of concern to such governing body or board, may appeal to the airport zoning board of appeals authorized to hear and decide appeals from the decisions of such administrative agency.

(B) All appeals taken under this section shall be taken within twenty days after an order is filed in the office of the administrative agency, as provided by the rules of the airport zoning board of appeals, by filing with the administrative agency from which the appeal is taken and with the airport zoning board of appeals a notice of appeal specifying the grounds of such appeal. The administrative agency from which the appeal is taken shall transmit to the airport zoning board of appeals all papers constituting the record upon which the action appealed from was taken.

(C) An appeal shall stay all proceedings in furtherance of the action appealed from unless the administrative agency from which the appeal is taken certifies to the airport zoning board of appeals, after the notice of appeal has been filed with it, that by reason of the facts stated in the certificate a stay would, in its opinion, cause imminent peril to life or property. In such cases proceedings shall be stayed other than by order of the airport zoning board of appeals on notice of the agency from which the appeal is taken and on due notice to the parties in interest.

(D) The airport zoning board of appeals shall fix a reasonable time for the hearing of appeals, give public notice and due notice to the parties in interest, and decide the same within a reasonable time. Upon the hearing any party may appear in person, by agent, or by attorney.

(E) The airport zoning board of appeals, in conformity with sections 4563.01 to 4563.21, inclusive, of the Revised Code, may reverse, affirm wholly or partly, or modify, the order, requirement, decision, or determination appealed from.

APPEALS TO COMMON PLEAS COURT

4563.19 APPEALS TO COURT OF COMMON PLEAS

Any person aggrieved, or any taxpayer, or any legislative authority, or any airport zoning board affected by any order of the airport zoning board of appeals may appeal within 30 days to the court of common pleas of the county in which the affected real estate lies, and upon appeal thereof a trial de novo shall be had.

PROHIBITIONS AND PENALTIES

4563.20 PROHIBITIONS

No person shall violate any regulation, order, or ruling promulgated or made pursuant to sections 4563.01 to 4563.21, inclusive, of the Revised Code.

4563.21 COURT ACTION TO ENFORCE REGULATIONS

The political subdivision or airport zoning board adopting zoning regulations under sections 4563.01 to 4563.21, inclusive, of the Revised Code, may institute in any court of competent jurisdiction an action to prevent, restrain, correct, or abate any violation of sections 4563.01 to 4563.21, inclusive, of the Revised Code, or of airport zoning regulations adopted under such sections, or of any order or ruling made in connection with the administration or enforcement. The court shall adjudge to the plaintiff such relief, by way of injunction, which may by mandatory, or otherwise, as may be proper under all the facts of and circumstances of the case, in order fully to effectuate the purpose of sections 4563.01 to 4563.21, inclusive, of the Revised Code, and of the regulations adopted and orders and rulings made pursuant thereto.

4563.99 PENALTIES

Whoever violates section 4563.20 of the Revised Code shall be fined not more than one hundred dollars. Each day's willful continuation of such violation is a separate offense.

APPENDIX B:
OHIO REVISED CODE, CHAPTER 4561
"THE OHIO AIRPORT PROTECTION ACT"

AERONAUTICS

STRUCTURES AND OBJECTS OF NATURAL GROWTH

4561.30 DEFINITIONS

As used in sections 4561.30 to 4561.39 of the Revised Code:

(A) "Air navigation," "navigation of aircraft," or "navigate aircraft" means the operation of aircraft in the airspace over this state.

(B) "Air navigation hazard" means any structure, object of natural growth, or use of land, which obstructs the air space required for the flight of aircraft in landing or taking off at any airport or landing field, or which is otherwise hazardous to such landing or taking off.

(C) "Aircraft" means any contrivance used or designed for navigation or flight in the air, excepting a parachute or other contrivance for such navigation used primarily as safety equipment.

(D) "Airport" means any airport certified for commercial purposes by the Department of Transportation. "Airport" does not include a military airport owned by the United States government and used for no commercial purposes.

(E) "Commence to install" means undertaking any action that affects the natural environment of the site of a structure or object of natural growth, including, but not limited to, clearing of land, excavation, or planting, but excluding surveying changes needed for temporary use of the site and excluding uses in securing geological data, including making necessary borings to ascertain foundation conditions.

(F) "Person" means any individual, firm, partnership, corporation, company, association, joint stock association, or body politic, and includes any trustee, receiver, assignee, or other similar representative thereof.

(G) "Structure" means any object, whether permanent or temporary, including, but not limited to, a building, tower, crane, smokestack, earth formation, transmission line, flagpole, or ship mast, in includes a mobile object.

4561.31 PERMITS FOR STRUCTURES AND OBJECTS OF NATURAL GROWTH

(A) (1) Except as provided in division (D), (E), and (F) of this section, no person shall commence to install any structure or object of natural growth in this state, any part of which will penetrate or is reasonably expected to penetrate into or through any airport's clear zone surface, horizontal surface, conical surface, primary surface, approach surface, or transitional surface without first obtaining a permit from the Department of Transportation under section 4561.34 of the Revised Code. The replacement of an existing structure or object of natural growth with, respectively, a structure or object that is not more than ten feet or twenty per cent higher than the height of the existing structure or object, whichever is higher, does not constitute commencing to install a structure or object, except when any part of the structure or object will penetrate or is reasonably expected to penetrate into or through any airport's clear zone surface, horizontal surface, conical surface, primary surface, approach surface, or transitional surface. Such replacement of a like structure or object is not exempt from any other requirements of state or local law.

(2) No person shall substantially change, as determined by the Department, the height or location of any structure or object of natural growth in this state, any part of which, as a result of such change, will penetrate or is reasonably expected to penetrate into or through any airport's clear zone surface, horizontal surface, conical surface, primary surface, approach surface, or transitional surface, and for which installation had commenced or which was already installed prior to the effective date of this section, without first obtaining a permit from the Department under section 4561.34 of the Revised Code. This division does not exempt the structure or object from any other requirements of state or local law.

(3) No person shall substantially change, as determined by the Department , the height or location of any structure or object of natural growth for which a permit was issued pursuant to section 4561.34 of the Revised Code, without first obtaining an amended permit from the Department under that section.

(B) No person shall install, operate, or maintain any structure or object of natural growth for which a permit has been issued under section 4561.34 of the Revised Code, except in compliance with the permit's terms and conditions and with any rules or orders issued under sections 4561.30 to 4561.39 of the Revised Code.

(C) The holder of a permit issued under section 4561.34 of the Revised Code, with the Department's approval, may transfer the permit to another person who agrees to comply with its terms and conditions.

(D) Any person who receives a permit to construct, establish substantially change, or substantially alter a structure or object of natural growth from an airport zoning board on or after the effective date of this section under Charter 4563. of the Revised Code is not required to apply for a permit from the Department under sections 4561.30 to 4561.39 of the Revised Code, provided that the airport zoning board has adopted airport zoning regulations pursuant to section 4563.032 of the Revised Code.

(E) Any person who receives a certificate from the power siting board pursuant to section 4906.03 or 4906.10 of the Revised Code on or after the effective date of this section is not required to apply for a permit from the Department under sections 4561.30 to 4561.39 of the Revised Code.

(F). Any person who, in accordance with 14 C.F.R. 77.11 to 77.19 notified the Federal Aviation Administration prior to June 1, 1991, that he proposes to construct, establish, substantially change, or substantially alter a structure or object of natural growth is not required to apply for a permit from the Department under sections 4561.30 to 4561.39 of the Revised Code in connection with the construction, establishment, substantial change, or substantial alteration of the structure or object of natural growth either as originally proposed to the Federal Aviation Administration or as altered as the person of the Federal Aviation Administration considers necessary, provided that the Federal Aviation Administration, pursuant to 14 C.F.R. Part 77, does not determine that the proposed construction, establishment, substantial change, or substantial alteration of the structure or object of natural growth would be a hazard to air navigation.

4561.32 RULE MAKING POWERS; STUDIES AND INVESTIGATIONS

(A) In accordance with Chapter 119, of the Revised Code, the Department of Transportation shall adopt, and may amend and rescind, any rules necessary to administer sections 4561.30 to 4561.39 of the Revised Code and shall adopt rules based in whole upon the obstruction standards set forth in 14 C.F.R. 77.21 to 77.29, as amended, to uniformly regulate the height and location of structures and objects of natural growth in any airport's clear zone surface, horizontal surface, conical surface, primary surface, approach surface, or transitional surface. The rules shall provide that the Department may grant a permit under section 4561.34 of the Revised Code that includes a waiver from full compliance with the obstruction standards. The rules also provide that the Department shall base its decision on whether to grant such a waiver on sound aeronautic principles, as set out in FAA. technical manuals, as amended, including advisory circular 150/5300-13, "airport design standards": 7400.2c, "airspace procedures handbook,": and the U.S. terminal procedures handbook.

(B) The Department may conduct any studies or investigations it considers necessary to carry out sections 4561.30 to 4561.39 of the Revised Code.

4561.33 APPLICATIONS FOR PERMIT

(A) An applicant for a permit required by section 4561.31 of the Revised Code shall file with the Department of Transportation an application made on forms the Department prescribes, which shall contain the following information:

(1) A description of the structure or object of natural growth for which the permit is sought, its location, and the planned date of commencement of installation;

(2) A statement explaining the need for the structure or object;

(3) A statement of the reasons why the proposed location is best suited for the structure or object;

(4) Any additional information the applicant considers relevant or the Department requires.

An application for an amended permit shall be in the form and contain the information the Department prescribes. In lief of an application prescribed by the Department, an applicant may file a copy of the Federal Aviation Administration's form 7460-1, notice of proposed construction or alteration.

(B) An applicant shall file an application not less than thirty days nor more than two years prior to the planned date of commencement of installation or substantial change. This period may be waived by the Department for unforeseen emergencies.

(C) If the structure or object in the application could have a potential impact on a military installation, as such an impact is described in the airfield land use compatibility study of that military installation, the applicant shall send, within seven days after the filing of his application, a copy of the application to the commander of the installation and the appropriate branch of the United States Department of Defense.

(D) It is necessary that ownership of, option for, or other possessory right to a specific site be held by the applicant before an application may be filed under this section.

(E) If the Department has reason to believe that any person is commencing to install a structure or object of natural growth for which a permit appears to be required under section 4561.31 of the Revised Code, but concerning which no application for a permit under section 4561.34 of the Revised Code has been filed, the Department shall issue an order to such person to appear before the Department and show cause why a permit need not be obtained.

4561.34 GRANT OR DENIAL OF PERMIT

(A) The Department of Transportation, subject to Chapter 119. of the Revised Code, shall grant or deny a permit for which an application has been filed under section 4561.33 of the Revised Code. In determining whether to grant or deny a permit, the Department shall determine whether the height and location of a structure or object of natural growth, as set forth in the permit application, will be an obstruction to air navigation based upon the rules adopted under section 4561.32 of the Revised Code if installed as proposed. In the case of an application to substantially change an existing structure or object, the Department shall determine whether the change in the height or location of the structure or object, as set forth in the application, will create such an obstruction. The consideration of safety shall be paramount to considerations of economic or technical factors. In making a determination under this division the Department shall render its decision upon the record, but may consider findings and recommendations of other governmental entities and interested persons concerning the proposed structure or object; however, those findings and recommendations are not binding on the Department.

(B) The Department may grant a permit under this section subject to any modification of the height or location of a structure or object the Department considers necessary. In the absences of such modification or unless it grants a waiver from compliance with the obstruction standards, the Department shall deny a permit if it determines, in accordance with division (A) of this section, that a proposed structure or object or a change to an existing structure or object, as set forth in the application, would be an obstruction to air navigation based upon the rules adopted under section 4561.32 of the Revised Code.

(C) In rendering a decision on an application for a permit, the Department shall issue an opinion stating its reasons for the action taken. The Department shall serve upon the applicant and each party, as provided in division (C) of section 4561.33 of the Revised Code, a copy of its decision regarding a permit and the option.

4561.341 REVIEW OF APPLICATIONS BY AVIATION DIVISION

Pursuant to any consultation with the power siting board regarding an application for certification under section 4906.03 or 4906.10 of the Revised Code, the Division of Aviation of the Department of Transportation shall review the application to determine whether the facility constitutes or will constitute an obstruction to air navigation based upon the rules adopted under section 4561.32 of the Revised Code. Upon review of the application, if the Division determines that the facility constitutes or will constitute an obstruction to air navigation, it shall provide, in writing, this determination and either the terms, conditions, and modifications that are necessary for the applicant to eliminate the obstruction or a statement that compliance with the obstruction standards may be waived, to the power siting board under section 4906.03 or 4906.10 of the Revised Code, as appropriated.

4561.35 TERMS AND CONDITIONS OF PERMITS

The Department of Transportation shall specify all of the following in each permit granted under section 4561.34 of the Revised Code:

(A) The terms and conditions regarding the height and location of the structure or object of natural growth that the Department considers necessary to ensure the safety of aircraft in landing or taking off at any airport, the safety of persons occupying or using such area, and the security of property, including any modifications to the height or location of the structure or object of natural growth set forth in the permit application. If the Department modifies the location of all or part of a proposed structure or object, it shall provide notice of the relocation to the municipal corporation or township and the county to which the structure or object is being relocated, and the persons residing in the area of relocation, by whatever means the Department considers appropriate.

(B) The obstruction markers, markings, lighting, or other visual or aural identification, if any, must be installed on or in the vicinity of the structure or object of natural growth as a condition of the permit. Any such identification shall conform as much as practicable to federal guidelines and standards. As a condition of the permit, the Department shall require that any required lighting be maintained in operable condition.

4561.36 WAIVER OF COMPLIANCE WITH OBSTRUCTION STANDARDS; RESTRICTIONS ON STRUCTURE AND OBJECTS OF NATURAL GROWTH

(A) The Department of Transportation shall not issue any permit under sections 4561.30 to 4561.39 of the Revised Code that will result in the creation of an obstruction to air navigation based upon the rules adopted under section 4561.32 of the Revised Code, unless the Department waives compliance with the obstruction standards included in those rules.

(B) Sections 4561.30 to 4561.39 of the Revised Code do not authorize the Department to restrict the height or location of structures or objects of natural growth under those sections for any reason other than to ensure the safety of aircraft in landing and taking off at an airport, the safety of persons occupying or using the area, and the security of property.

4561.37 REMOVAL OR LOWERING OF OBSTRUCTIONS NOT REQUIRED

Sections 4561.30 to 4561.39 of the Revised Code shall not be constructed to require the removal or lowering of or the making of any other change in any structure or object of natural growth not conforming to rules or orders of the Department of Transportation under those sections when adopted or amended, or otherwise interfere with the continuance of any nonconforming use; except that, if ordered by the Department, the owner of a nonconforming structure or object that is permanently out of service or partially dismantled, destroyed, deteriorated, or decayed shall demolish or remove that structure or object; and, if any nonconforming use is voluntarily discontinued for two years or more, any future use of the premises shall be in conformity with sections 4561.30 to 4561.39 of the Revised Code.

4561.38 PRIORITY OF RULES AND TERMS AND CONDITIONS OF PERMITS

With respect to any structure or object of natural growth for which a permit is required under section 4561.34 of the Revised Code, rules adopted or orders issued under sections 4561.30 to 4561.39 of the Revised Code and the terms and conditions of any permit issued under those sections prevail in the event of a conflict with any airport zoning regulation adopted under sections 4563.01 to 4563.21 of the Revised Code, any local regulation under section 4905.65 of the Revised Code, any zoning regulation otherwise applicable to the structure or object, or the terms or conditions of any permit issued under sections 4563.01 to 4563.21 of the Revised Code after the effective date of this section.

4561.39 INJUNCTIVE RELIEF

In addition to any other remedy provided by law, the Department of Transportation may institute in any court of competent jurisdiction an action to prevent, restrain correct, or abate any alleged violation or threatened violation of sections 4561.30 to 4561.39 of the Revised Code or any rule adopted or order issued under them. The court may grant such relief as may be necessary.

4561.99 PENALTIES

(A) Whoever violates division (A)(1) or (2) of section 4561.31 of the Revised Code is guilty of a misdemeanor of the third degree. Each day of violation constitutes a separate offense.

(B) Whoever violates division (A)(3) or (B) of section 4561.30 of the Revised Code is guilty of a misdemeanor of the first degree. Each day of violation constitutes a separate offense.

APPENDIX C:
COUNTY COMMISSIONERS HANDBOOK,
CHAPTER 87
"AIRPORT ZONING"

CHAPTER 87

AIRPORT ZONING

87.01 INTRODUCTION

Unlike county zoning, that requires a vote by the residents of the unincorporated area of the township, counties may enact an airport zoning resolution after holding public hearings. As development activity increases the need to protect airports for safety reasons and to avoid land use conflicts in the vicinity of an airport becomes more important. As a result of inconsistent regulations and enforcement in recent years, legislation was enacted in 1991 (H.B. 15, effective 10/15/92) to further protect air surfaces near airports. The new law, for the first time, authorizes the Division of Aviation of the Ohio Department of Transportation to issue permits for development in airport hazard areas--a responsibility reserved exclusively for airport zoning boards in the past. The law also requires local airport zoning ordinances and resolutions to use the regulations adopted by the Division of Aviation that are generally based on federal regulations. This effectively means that if local airport zoning boards do not adopt these new uniform regulations, that they loose airport zoning authority. Finally, under Section 4563.031 of the Revised Code the new law also expands the authority of local airport zoning boards. Under former law, the power of airport zoning boards was limited to the regulation of land uses and the height of structures and objects of natural growth in airport hazard areas for the purpose of preventing obstructions to aircraft landing and taking off. Local airport zoning boards now have the authority to zone for the expanded purposes of ensuring safety of persons occupying or using these areas and the security of property located within airport hazard areas. These additional requirements could include regulations concerning population density and the concentration of persons within airport hazard areas. Under prior law these broader purposes were limited to the airport hazard areas associated with military airports. Counties were originally given the authority for airport zoning in 1955.

Ohio's airport zoning law is contained in Chapter 4563 of the Revised Code, while the authority and responsibilities of the Division of Aviation are found in Sections 4561.30-.39 of the Revised Code. Finally, Ohio Administrative Code Sections 5501:1-10-01 to 5501:1-10-15 contains rules of the Division of Aviation relating to airport zoning including state procedures and the new uniform regulations that must be used by counties.

87.02 AIRPORT ZONING BOARDS

Counties, townships, and municipalities all have the authority to adopt and enforce airport zoning regulations. A township or municipality, however, only has the authority if all airport hazard areas are located entirely within the territorial limits of the city, village, or township. The county has airport zoning authority if any airport hazard area is located in more than one political subdivision. In all cases the legislative authority of the political subdivision is the airport zoning board, and thus the board of county commissioners is the airport zoning board when any airport hazard area is located in more than one township or municipality (4563.03). In the case where one or more counties has established a regional airport authority under Chapter 308 of the Revised Code, the joint board of county commissioners constitutes the airport zoning board. The airport zoning board, however, only has authority to zone for publicly owned airports with hard surfaced runways that are at least 3500 feet in length. Publicly owned airports are those where the portion of the airport used for the landing and taking off of aircraft are owned, operated, leased to, or leased by:

1. The U. S. government.
2. The State of Ohio or another state.
3. Any political subdivision of Ohio or another

state.

4. Any other governmental body, public agency, or public corporation.

Publicly owned airports should not be confused with what is commonly referred to a "public use" airports that are privately owned. The county airport board has not zoning authority over such "public use" airports, but these airports are under the control of the Division of Aviation.

87.03 EXTENT OF REGULATORY AUTHORITY

Airport zoning regulations may divide an airport hazard area into zones and may regulate and restrict land uses that are hazardous to aircraft. Naturally, the primary authority is to restrict the height of structures, but the law also allows restrictions on the height to which trees and other natural vegetation may grow (ORC 4563.03). In addition to this general authority, the airport zoning board may adopt additional regulations within the approach, transitional, inner transitional, and conical areas of publicly owned airports. These are areas adjacent to an airport and within the airport hazard area as defined by the Division of Aviation based on the approach plan for the airport. The purpose of these additional regulations is to ensure the safety of persons occupying or using these defined areas and security to property in such areas. These areas may be further divided into zones, and the airport zoning board may regulate land use to minimize injury, loss of life, hazards to the safety of persons, or security of property. These regulations may restrict population density and the concentration of people in such zones (ORC 4563.03). In addition to these general provisions the following additional provisions of the law further help to define the extent of the authority to enact and enforce airport zoning:

1. The regulations only apply to publicly owned airports that have hard surfaced runways at least 3500 feet in length and that are designed for the storing, repair and operation of aircraft and which are utilized in the interest of the public. Regulations may also apply to airports that are being developed that comply with these standards if the plans for the airport have been approved by the Division of Aviation, and at least 70 per cent of the land shown in the plans has actually be acquired (4563.01).

2. Any obstruction in an airport hazard area up to 40 feet in height is considered to be reasonable by law. In addition, any obstruction is considered to be reasonable if its height does not exceed three feet per 100 feet that the obstruction is located from the nearest point of the perimeter of the airport (ORC 4563.03). The Division of Aviation, however, may control below 40 feet.

3. In the event of a conflict with other zoning regulations adopted by a municipality, county, or township concerning the height of structures or objects of natural growth, use of land, or any other matter, the regulation or requirement that best insures safety prevails.

4. The regulations must be reasonable. In this regard, the regulations may not impose any requirement which is not reasonably necessary to insure the safety of aircraft in landing or taking off, the safety of persons occupying or using the property, and the security of airport property. When determining necessary regulations the following factors must be considered:

   a. The character of the flying operations to be conducted at the airport.

   b. The per cent of slope or grade used in descent or ascent of aircraft in relation to the size, speed, and type of aircraft.

   c. The nature of the terrain in the airport hazard area.

   d. The character of the neighborhood.

   e. The uses to which the property to be zoned is adaptable.

5. The regulations do not apply to nonconforming uses and may not require

existing uses to be removed, lowered, or altered. A nonconforming use that has been voluntarily discontinued for two years, however, can not be used again unless it complies with the requirements of the airport zoning resolution.

6. The regulations do not allow the airport zoning board to prohibit the use of land for agricultural purposes unless the use creates an airport hazard. Likewise, the regulations confer no power to regulate public utilities or railroads. The Division of Aviation, however, has the authority to regulate public utilities.

Finally, and as mentioned in the introduction, recent changes in state law provide that if regulations are adopted by the county commissioners acting in their capacity as the airport zoning board, they must adopt the rules adopted by the Division of Aviation (ORC 4563.032). These rules are based on federally accepted standards and the law now guarantees that the regulations of all airport zoning boards will uniformly regulate the height and location of structures and objects of natural growth in any airport's clear zone surface, horizontal surface, conical surface, primary surface, approach surface, or transitional surface. To reinforce this concept of uniformity, Section 4561.38 makes it clear that in the event of a conflict with locally adopted airport zoning regulations, any conditions that may be attached to a local airport zoning permit, or conditions attached to a variance, that the state regulations prevail.

87.04 ADOPTION OF AIRPORT ZONING REGULATIONS

The procedure to adopt airport zoning regulations specified in Chapter 4563 of the Revised Code is less specific than the procedures specified for regular county zoning. Following is a summary of the steps specified in the law:

1. The county commissioners appoint an airport zoning commission to recommend the boundaries of the various zones to be established and the regulations to be adopted. The law does not specify the number of members to be on the commission, however, a county zoning commission may be appointed to also serve as the airport zoning board.

2. The airport zoning commission requests the Division of Aviation to define the airport hazard area for the airport. In defining the airport hazard area, the Division of Aviation actually formulates and adopts an airport approach plan. This plan shows the airport hazard area and specifies the circumstances under which structures, natural vegetation, highways, and other land uses would constitute a hazard. The plan also shows height limits and other restrictions that should be included in the airport zoning resolution.

3. The airport zoning commission makes a preliminary report and holds public hearings on this report. The law does not specify the number of hearings nor does it require the publication of advertisements in a newspaper. It is recommended that two hearing be held and that adequate notice be given in a newspaper of general circulation in the county using the same time requirements as for county zoning. See Chapter 86 of this Handbook for additional information.

4. After the public hearing the airport zoning commission may make changes to the preliminary report, votes to adopt the final report, and submits it to the county commissioners.

5. The county commissioners schedule a public hearing on the final report of the airport zoning commission and must give thirty day notice of the hearing in a newspaper of general circulation in the county.

6. The county commissioners vote on the adoption of the airport zoning resolution, whereupon the regulations become effective.

87.05 ADMINISTRATION OF AIRPORT ZONING REGULATIONS

The airport zoning resolution must provide for the administration and enforcement of the regulations. The primary responsibility of the administrative agency or official specified in the resolutions is to issue permits in conformance with the regulations. Permits must be obtained before any new structure or use may be constructed or established and before any existing structures may be substantially changed or altered in an airport hazard area. A permit may not be issued if the use would create an airport hazard, permit a nonconforming structure to be made higher, or permit a nonconforming object of natural growth to become higher or to become a greater hazard to aircraft than it was when the regulations were adopted. Unlike county zoning, the airport zoning administrative agency or inspector may attach conditions to a permit (ORC 4563.17). It would appear that this authority must be granted in the airport zoning resolution and general guidelines for the attachment of such conditions should also be specified in the resolution.

87.06 AMENDMENTS TO AIRPORT ZONING REGULATIONS

Unlike regular county zoning regulations, the law (ORC 4563.06) does not require a recommendation from the zoning commission prior to an amendment to airport zoning regulations. The law simply requires the county commissioners, acting as the airport zoning board, to hold a public hearing on the proposed amendment and give thirty days notice of the public hearing in a newspaper of general circulation in the county. While the involvement of the zoning commission is not required by the law, it is generally agreed that the practice of receiving a recommendation from the commission is a good approach.

87.07 AIRPORT BOARD OF ZONING APPEALS

The county commissioners must appoint an airport board of zoning appeals composed of five members. The terms of the members are for a period of three years, except for the initial members, whose terms are for staggered periods of time (ORC 4563.13). The county commissioners may also designate that the county board of zoning appeals serve as the airport appeals board in a county that has county zoning. The airport board of zoning appeals has two main responsibilities:

1. To hear and decide appeals from any determination of the administrative agency or zoning inspector in the granting of a permit or in other enforcement activities. Appeals may be made by any person aggrieved by a decision of the zoning inspector, the governing body of a political subdivision, or by the board of county commissioners in its role as the airport zoning board.

2. To hear and act on variances from the strict terms of the airport zoning regulations. The law provides that variances shall be granted by the appeals board "where a literal application or enforcement of the regulations would result in unnecessary hardship and the relief granted would not be contrary to the public interest or create conditions dangerous to the safety of aircraft using the airport, but would do substantial justice and would not be in conflict with Sections 4563.07 and 4563.08 of the Revised Code." These two sections essentially deal with the broad purposes of airport zoning that have been summarized in Section ____ of this Chapter. In addition, and unlike regular county zoning in most respects, the board of appeals may attach such conditions to the approval of a variance that it deems necessary. Such conditions could include requiring the owner of a structure or object of natural growth to permit the subdivision to install, operate, and maintain lights on the object at the expense of the political subdivision.

87.08 PROCEDURE FOR APPEALS AND VARIANCES

The following procedure should be used by the zoning board of appeals in hearing and deciding requests for appeals or variances:

1. An appeal must be filed with the administrative agency or inspector and with the board of appeals within twenty days

after refusal of a permit. The appeal must include the grounds upon which the appeal is being made.

2. The inspector transmits to the appeals board all papers that constitute the record of the case.

3. An appeal has the effect of staying the proceedings unless the zoning inspector certifies to the appeals board that a stay would cause imminent peril to life or property. The appeals board must then decide whether a stay should be granted and give notice of its decision to the inspector and to the applicant.

4. A public hearing must be scheduled within a reasonable period of time, public notice must be given, notice to parties in interest must be given, and the appeals board must act on the appeal within a reasonable period of time.

5. An appeal from the decision of the zoning board of appeals may be taken to common pleas court by eny aggrieved party, any taxpayer, or by any political subdivision.

87.09 FINAL COMMENTARY

With the enactment of H.B. 15 in 1992, both counties and the state, through the Division of Aviation of the Ohio Department of Transportation, may have a greater role in the regulation of development and construction in the vicinity of airports. Coordination between counties and the Division of Aviation is thus critical In fact, both may be able to control different types of development to protect airports. Some of the major issues to consider include:

1. A county must adopt the uniform regulation promulgated by the Division of Aviation or they loose their authority.

2. County regulations may restrict population density and the concentration of people in airport hazard areas to ensure the safety of persons and the security of property. State regulations are solely for the protection of the landing and taking off of aircraft.

3. Counties can not regulate structures lower than 40 feet in height or any public utility, but the state may regulate in both situations.

In addition, before adopting or amending regulations the need for legal counsel is important as some of the provisions of law are complex and this general summary leans in the direction of maximum county and state authority.

An Act

ENROLLED HOUSE
BILL NO. 2919

By: Morgan, Shannon, Luttrell, Williams, Cox, Wright (Harold), Ritze and Pittman of the House

and

Myers, Corn, Easley and Coates of the Senate

An Act relating to airports; creating the Aircraft Pilot and Passenger Protection Act; stating intent; defining terms; requiring permit for certain construction; declaring certain structures incompatible with act; stating requirements for permit applications for certain purposes; authorizing the Oklahoma Aeronautics Commission to investigate and evaluate certain permit applications; providing for validation of permits and requiring recording in counties; providing for duration of permits; providing for denial of permits by Commission; stating application of act; stating penalties for violations; providing for fees; authorizing Commission to promulgate rules; providing for codification; and providing an effective date.

BE IT ENACTED BY THE PEOPLE OF THE STATE OF OKLAHOMA:

SECTION 1. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 120.1 of Title 3, unless there is created a duplication in numbering, reads as follows:

A. This act shall be known and may be cited as the "Aircraft Pilot and Passenger Protection Act".

B. It is the intent of this act to:

1. Regulate obstructions to air navigation that have the potential of endangering the lives and property of aircraft pilots and passengers and those that live or work in the vicinity of public-use airports; that may affect existing and future instrument approaches to a public-use airport; and that may reduce the size of areas available for the landing, takeoff and maneuvering of aircraft thus impairing the utility of a public-use airport and the public investment therein;

2. Regulate the use of land in close proximity to a public-use airport to ensure compatibility with aircraft operations; and

3. Provide specific powers and duties to the Oklahoma Aeronautics Commission in the interest of the health, safety and welfare of the public so that the state may properly fulfill its duty to ensure that land use around a public-use airport is compatible with normal airport operations including the landing and takeoff of aircraft.

C. All heights or surfaces set forth in this act are from the standards set forth in Subpart C of Federal Aviation Regulations (FAR) Part 77.

D. Depending upon the type of survey used, an adjustment will be made to the horizontal and vertical measurements of the proposed structure as follows:

Survey Type	Horizontal Adjustment	Survey Type	Vertical Adjustment
1	±20 ft (6 m)	A	+3 ft (1 m)
2	±50 ft (15 m)	B	+10 ft (3 m)
3	±100 ft (30 m)	C	+20 ft (6 m)
4	±250 ft (75 m)	D	+50 ft (15 m)
5	±500 ft (150 m)	E	+125 ft (38 m)

If the survey type (horizontal and vertical) is not certified by a licensed engineer or a licensed surveyor, a horizontal adjustment of plus or minus two hundred fifty (250) feet and a vertical

adjustment of fifty (50) feet will be applied to the structure measurements.

E. This act shall neither prevent nor preempt a municipality from having ordinances or regulations governing land use that may affect public-use airports.

SECTION 2. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 120.2 of Title 3, unless there is created a duplication in numbering, reads as follows:

As used in the Aircraft Pilot and Passenger Protection Act:

1. "Airport reference point" is the geometrical center of all usable runways;

2. "Airport elevation" is the highest point of an airport's usable runways measured in feet from mean sea level;

3. "Approach surface" is an imaginary surface shaped like a trapezoid:

a. longitudinally centered on the extended runway centerline at a public-use airport,

b. beginning two hundred (200) feet beyond the end of each runway pavement and at the runway end elevation,

c. having an inner-edge width of one thousand (1,000) feet expanding outward uniformly to a width of sixteen thousand (16,000) feet at the outer edge, and

d. sloping upward for a distance of ten thousand (10,000) feet at a slope of fifty (50) to one (1), with an additional forty thousand (40,000) feet at a slope of forty (40) to one (1);

4. "Commission" means the Oklahoma Aeronautics Commission or a successor agency;

5. "Conical surface" is an imaginary surface extending outward and upward from the periphery of the horizontal surface at a slope of twenty (20) to one (1) for a horizontal distance of four thousand (4,000) feet;

6. "FAA" means the Federal Aviation Administration or a successor agency to the Federal Aviation Administration;

7. "Horizontal surface" is an imaginary horizontal plane one hundred fifty (150) feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of ten thousand (10,000) feet radii from a point located on the extended runway centerline two hundred (200) feet beyond each end of runway pavement and connecting the adjacent arcs by lines tangent to those arcs;

8. "Incompatible purpose" means the use of a building or structure as a residence, educational center (including all types of primary and secondary schools, preschools, and child-care facilities), places of worship, hospital, medical inpatient treatment facility, nursing/convalescent home, retirement home, or similar use;

9. "Legal representative" means a person who is authorized to legally bind an entity;

10. "Permit" means a permit issued by the Commission under this act;

11. "Person" means an individual, firm, partnership, corporation, association, or body politic and includes a trustee, receiver, assignee, or other similarly authorized representative of any of them;

12. "Primary surface" is a surface longitudinally centered on a runway. When the runway has a specially prepared hard surface, the primary surface extends two hundred (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 the primary surface is one thousand (1,000) feet;

13. "Public-use airport" means a structure or an area of land or water that is designed and set aside for the landing and taking off of aircraft, is utilized or to be utilized by and in the interest of the public for the landing and taking off of aircraft and is identified by the FAA as a public-use airport. Public-use airport shall include any military airport operated by a branch of

the armed services of the United States government. Public-use airport shall not include any privately owned airport for private use as identified by the FAA, or any airport owned by a municipality with a population exceeding five hundred thousand (500,000) according to the most recent Federal Decennial Census;

14. "Runway" means the portion of an airport designated as the area used for the landing or takeoff of aircraft;

15. "Runway protection zone" is a trapezoidal zone centered along the extended runway centerline, beyond each end of the primary surface, two thousand five hundred (2,500) feet long, with an inner width of one thousand (1,000) feet and an outer width of one thousand seven hundred fifty (1,750) feet. The function of the runway protection zone is to enhance the protection of people and property on the ground;

16. "Structure" means any constructed or installed object, including, but not limited to buildings, towers, wind turbines, smokestacks, electronic transmission or receiving towers, and antennae and overhead transmission lines. The term does not include:

a. any aviation navigational aids that are fixed by function, or

b. any construction or installed object on property owned by the federal government; and

17. "Total structure height" means the elevation of the ground above mean sea level at the structure's location, plus the height of the structure above ground level in feet, plus the applicable survey type adjustment.

SECTION 3. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 120.3 of Title 3, unless there is created a duplication in numbering, reads as follows:

A. A person shall obtain a permit from the Commission prior to the construction or installation of any of the following near a public-use airport:

1. Any proposed structure for an incompatible purpose in the primary surface or the runway protection zone;

2. Any structure, alteration or addition to a structure within three (3) statute miles from the airport reference point of a public-use airport, that would result in a total structure height in excess of one hundred fifty (150) feet above the established airport elevation; and

3. Any structure, alteration or addition to a structure that would result in a total structure height greater than the horizontal, conical or approach surfaces, as defined in Section 2 of the Aircraft Pilot and Passenger Protection Act.

B. No permit shall be required:

1. For mobile or temporary equipment used to construct or install a new structure or to perform routine maintenance, repairs, or replace parts of an existing structure; or

2. To repair, replace, or alter an existing structure that would not result in a total structure height greater than the horizontal, conical or approach surfaces as defined in Section 2 of this act, or change the location of an existing structure.

C. Any person required to notify the FAA of any proposed construction or alteration pursuant to Subpart B of Section 77.13 of the Federal Aviation Regulations Part 77, that in response receives an acknowledgement from the FAA that further aeronautical study is required to determine whether the proposed construction or alteration would be a hazard to air navigation, shall, upon requesting further aeronautical study by the FAA, concurrently notify the Commission of the request and shall provide the Commission with true and correct copies of all relevant filings made with the FAA.

Upon receipt of such notification of the filing of a request for further aeronautical study, the Commission shall give timely notice thereof to the Oklahoma Strategic Military Planning Commission, or any successor agency, and to any military airport within Oklahoma potentially affected by the proposed construction or alteration.

The Commission further shall use its best efforts to establish regular and consistent communication with the FAA to encourage sharing of information regarding construction or alteration in a military training route or slow-speed low-altitude training route within the state of Oklahoma with appropriate state agencies and military installations.

SECTION 4. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 120.4 of Title 3, unless there is created a duplication in numbering, reads as follows:

The construction of a structure for an incompatible purpose within the primary surface or the runway protection zone is presumed to be incompatible with normal airport operations including the landing and takeoff of aircraft.

SECTION 5. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 120.5 of Title 3, unless there is created a duplication in numbering, reads as follows:

Any structure or alteration to a structure is presumed to be a hazard to air navigation if its total structure height is greater than the horizontal, conical or approach surfaces, as defined in Section 2 of the Aircraft Pilot and Passenger Protection Act.

SECTION 6. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 120.6 of Title 3, unless there is created a duplication in numbering, reads as follows:

Applications to the Commission for a permit in accordance with the provisions of the Aircraft Pilot and Passenger Protection Act for construction near a public-use airport shall include the following:

1. For construction in a primary surface or runway protection zone, under paragraph 1 of subsection A of Section 3 of this act:

a. a completed application on a form prescribed by the Commission with the following statement on the application, signed by a legal representative of the applicant:

"The applicant acknowledges for itself, its heirs, its successors, and its assigns, that the real estate described in this application is located in the primary surface or the runway protection zone of a public-use airport, and that the applicant is building a structure upon this real estate, with the full knowledge and acceptance that it may be incompatible with normal airport operations including the landing and takeoff of aircraft.", and

b. if required, a copy of the FAA Form 7460-1, "Notice of Proposed Construction or Alteration", as described in 14 CFR part 77, sub-part B, Section 17, to be submitted to the FAA; and

2. For construction or alteration of a structure in a horizontal, conical, or approach surface under paragraph 2 or 3 of subsection A of Section 3 of this act:

a. a completed application on a form prescribed by the Commission, and

b. a copy of FAA Form 7460-1, to be submitted to the FAA.

SECTION 7. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 120.7 of Title 3, unless there is created a duplication in numbering, reads as follows:

A. If FAA Form 7460-1 is required, then an application for a permit pursuant to Section 3 of the Aircraft Pilot and Passenger Protection Act shall be filed at the same time the FAA Form 7460-1 is sent to the FAA, or at any time before that. If FAA Form 7460-1 is not required, then the application shall be filed at least thirty (30) days before the earlier of the following:

1. The date the proposed construction or alteration is to begin; or

2. The date an application for a construction or building permit is to be filed with the municipality.

Upon receiving an application, the Commission shall notify a legal representative of the public-use airport owner affected by the application and solicit comments from the airport owner.

B. In determining whether to issue a permit, the Commission shall consider:

1. The nature of the terrain and height of existing structures;

2. Public and private interests and investments;

3. The character of flying operations and planned developments of an airport;

4. Whether the construction of the proposed structure would cause an increase in the minimum descent altitude or the decision height at the affected airport;

5. Technological advances;

6. The safety of persons on the ground and in the air;

7. Land use density;

8. Comments from all interested persons; and

9. Findings and determinations of other government agencies.

C. If FAA Form 7460-1 is required, then the Commission shall notify the applicant of its determination within thirty (30) days of the FAA completing its aeronautical study. If the applicant has not been notified by the Commission of its determination within thirty (30) days of the FAA completing its aeronautical study, then the applicant shall notify the Commission that it has not received notice of the Commission's determination. The Commission shall then have seven (7) working days from the date of the applicant's notice to notify the applicant of its determination. Nothing herein precludes the Commission from making its determination before the FAA completes its aeronautical study.

D. If FAA Form 7460-1 is not required, then the Commission shall notify the applicant of its determination within sixty (60) days of filing the application. If the applicant has not been notified by the Commission of its determination within sixty (60) days of filing the application, then the applicant shall notify the Commission that it has not received notice of the Commission's determination. The Commission shall then have seven (7) working days from the date of the applicant's notice to notify the applicant of its determination.

SECTION 8. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 120.8 of Title 3, unless there is created a duplication in numbering, reads as follows:

Once a permit is issued by the Commission, the applicant shall be required to complete the following steps to complete the permit process:

1. The applicant for a permit under Section 3 of the Aircraft Pilot and Passenger Protection Act shall record each permit issued by the Commission in the office of the county clerk for the county where the structure is located not later than thirty (30) business days after the Commission issues the permit. If a structure is located in more than one county, the county that contains the majority of the structure is the county in which the permit must be filed. A permit issued under paragraph 1 of subsection A of Section 3 of this act shall contain the following statement:

"The permittee acknowledges for itself, its heirs, its successors, and its assigns, that the real estate described in this permit is located within the primary surface or the runway protection zone of a public-use airport, and that the permittee is building a structure upon this real estate with the full knowledge and acceptance that it may be incompatible with normal airport operations including the landing and takeoff of aircraft.";

2. A permit issued in accordance with the provisions of Section 3 of this act is valid only after the Commission receives a certified copy of the recorded permit with the recording data from the county clerk of the county in which the structure is located; and

3. Every permit granted by the Commission shall specify that obstruction markers, markings, lighting, or other visual or aural identification required to be installed on or in the vicinity of the structure shall conform to federal laws and regulations.

SECTION 9. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 120.9 of Title 3, unless there is created a duplication in numbering, reads as follows:

A permit issued in accordance with the provisions of Section 3 of the Aircraft Pilot and Passenger Protection Act is valid only if the proposed structure has been constructed within ten (10) years of the issuance of a permit by the Commission pursuant to Section 8 of this act.

SECTION 10. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 120.10 of Title 3, unless there is created a duplication in numbering, reads as follows:

A. If the Commission determines that a permit should not be issued under the provisions of the Aircraft Pilot and Passenger Protection Act, the Commission shall notify the applicant in writing of its determination. The notification may be served by delivering it personally to the applicant or by sending it by certified or registered mail to the applicant at the address specified in the application.

B. The determination is final thirty (30) days after notification of the determination is served, unless the applicant, within the thirty-day period, requests reconsideration in writing to the Commission and provides written evidence showing why the application should have been granted. The Commission has up to a period of thirty (30) days from the receipt of the request. The Commission shall notify the applicant of its determination as specified in subsection A of this section. In the event of a second denial by the Commission of the permit request, the applicant can request a hearing before the Commission with reference to the application. A hearing under this section shall be open to the public. The applicant may appear and be heard either in person or by counsel and may present pertinent evidence and testimony. At the hearing, the applicant has the burden to show cause why the Commission should have granted the permit to erect the proposed structure.

SECTION 11. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 120.11 of Title 3, unless there is created a duplication in numbering, reads as follows:

The provisions of the Aircraft Pilot and Passenger Protection Act shall not apply to structures that existed or have an approved building permit from the local authority with jurisdiction over the property that the structure is proposed to be constructed upon, prior to the effective date of this act.

SECTION 12. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 120.12 of Title 3, unless there is created a duplication in numbering, reads as follows:

Each violation of the Aircraft Pilot and Passenger Protection Act, or rulings promulgated by the Commission pursuant to this act, shall constitute a misdemeanor punishable by a fine of not more than Five Hundred Dollars ($500.00). Each day that such a violation or failure continues constitutes a separate offense. In addition, the Commission may institute in any court of general jurisdiction, an

action to prevent, restrain, correct, or abate any violation of this act, or any rules adopted or orders issued by the Commission pursuant to this act. The court may grant such relief, by way of injunction, which may be mandatory, or otherwise, as may be necessary under this act and the applicable rules or orders of the Commission issued under this act.

SECTION 13. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 120.13 of Title 3, unless there is created a duplication in numbering, reads as follows:

The Commission shall prepare and charge a schedule of reasonable fees for services rendered, not to exceed Two Hundred Dollars ($200.00) per permit application.

SECTION 14. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 120.14 of Title 3, unless there is created a duplication in numbering, reads as follows:

The Commission is authorized to promulgate any rules necessary to implement the provisions of the Aircraft Pilot and Passenger Protection Act.

SECTION 15. This act shall become effective October 1, 2010.

Passed the House of Representatives the 27th day of May, 2010.

Presiding Officer of the House of Representatives

Passed the Senate the 28th day of May, 2010.

Presiding Officer of the Senate

OFFICE OF THE GOVERNOR

Received by the Governor this 28th **day of** May, 20 10, **at** 8:45 **o'clock** P **M.**

By:

Approved by the Governor of the State of Oklahoma the 7th **day of** June, 20 10, **at** 6:50 **o'clock** P **M.**

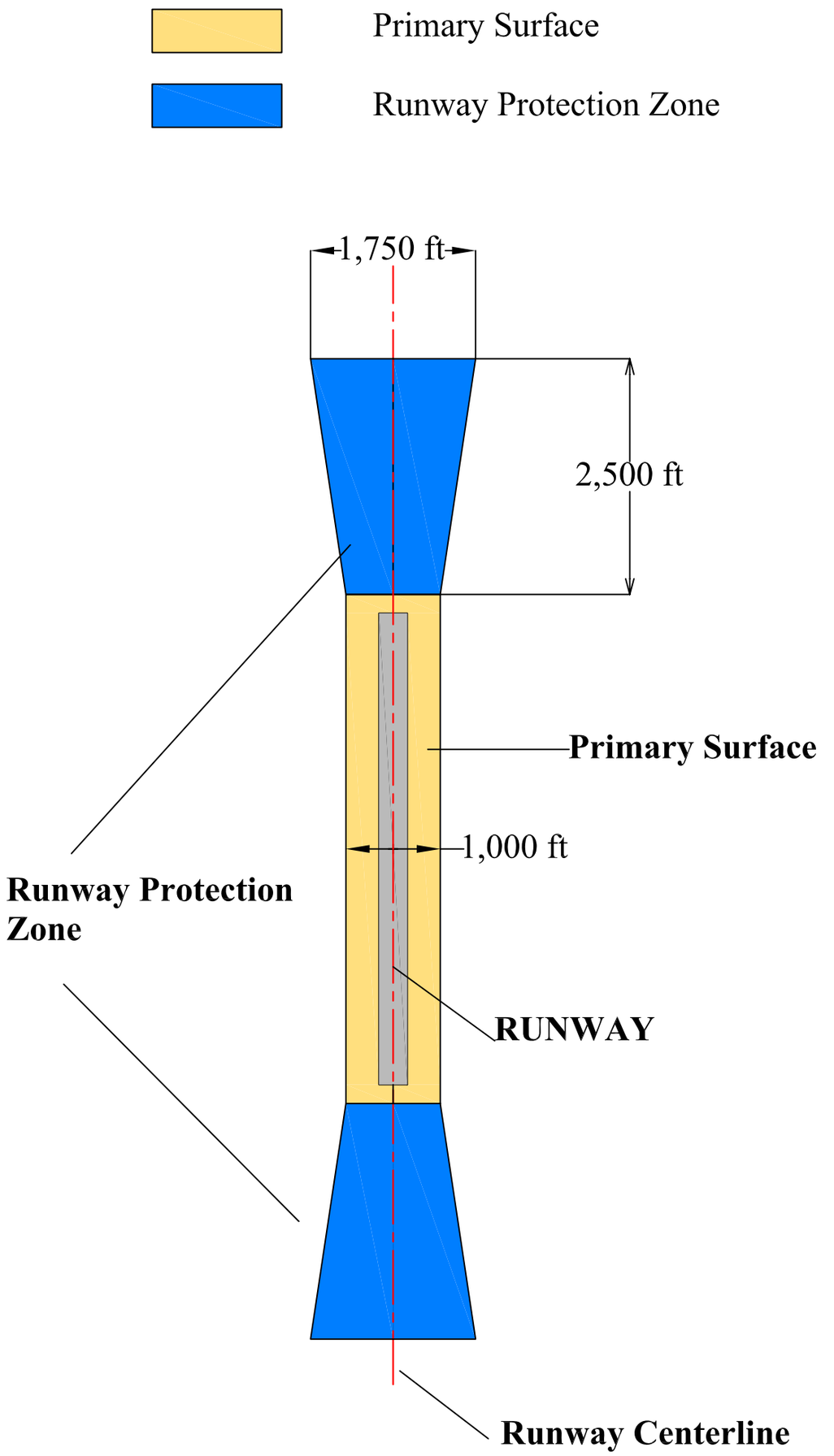
Governor of the State of Oklahoma

OFFICE OF THE SECRETARY OF STATE

Received by the Secretary of State this 8th **day of** June, 20 10, **at** 4:38 **o'clock** P. **M.**

By:

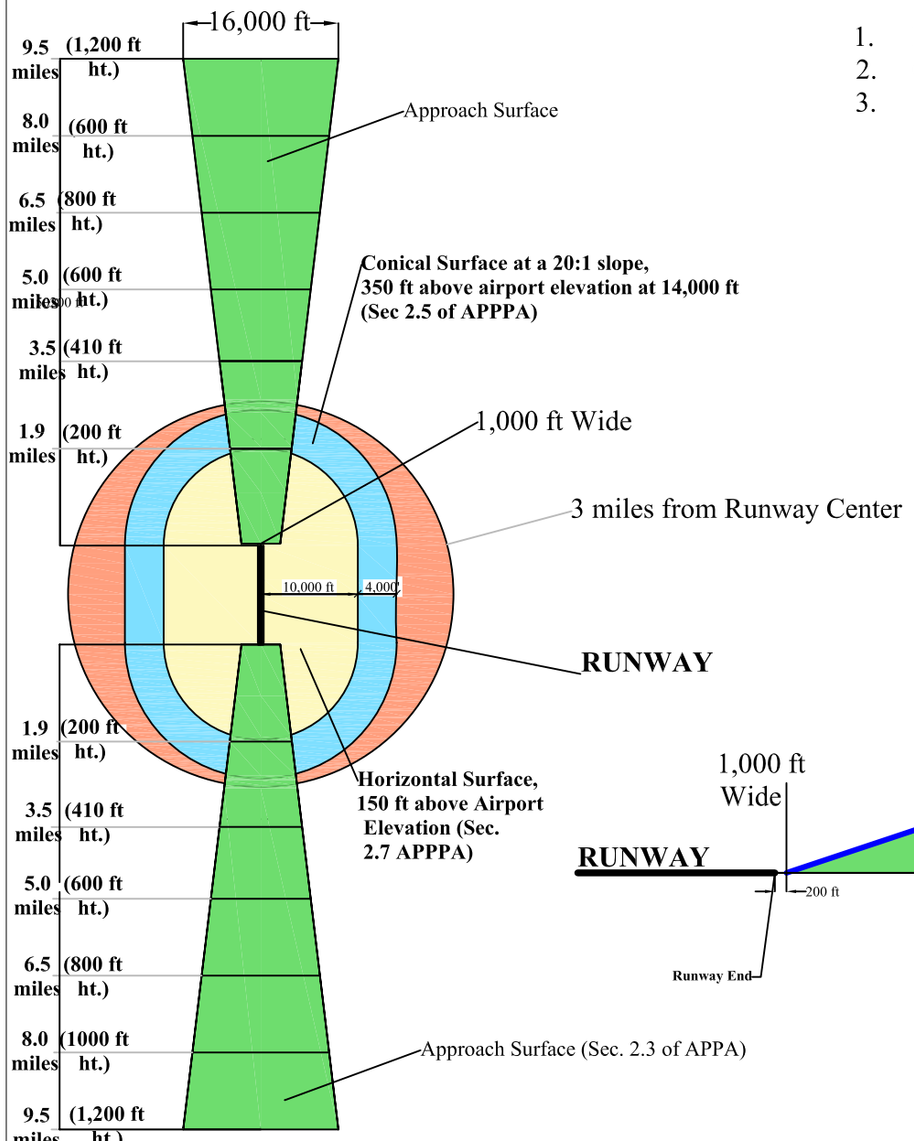
Aircraft Pilot and Passenger Protection Act



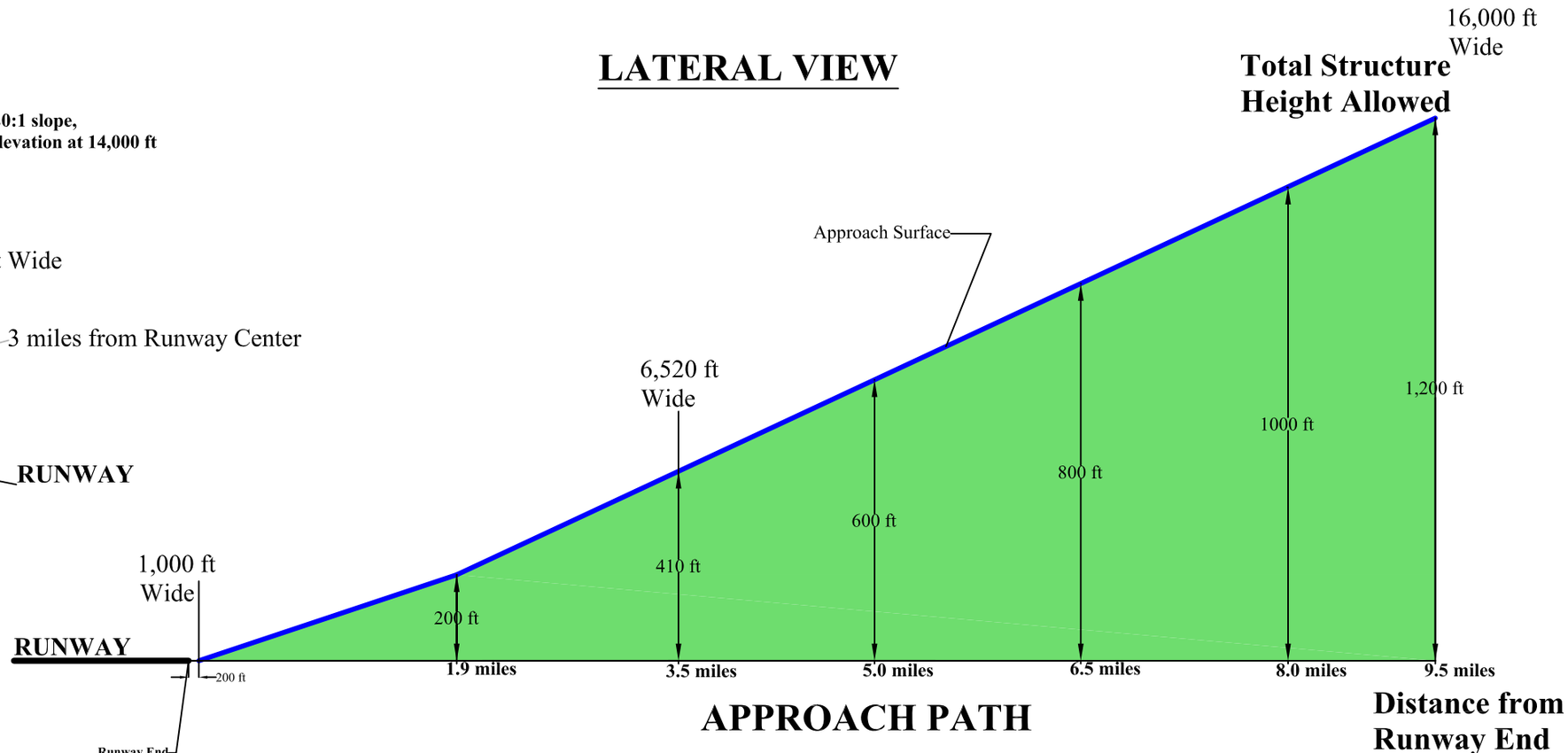
Aircraft Pilot and Passenger Protection Act (APPPA)
Tall Structures Regulation

1. Horizontal Surface - Yellow
2. Conical Surface (20:1) for 4,000 ft - Blue
3. 3-Mile radius from airport reference point - Orange

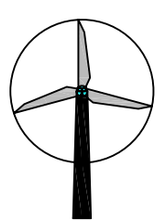
AERIAL VIEW



LATERAL VIEW



APPROACH PATH



Typical 3-Megawatt rated Wind-Turbine - 410 ft

Tall Structures Application Form

NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION

OAC Form A-2

Return to: Oklahoma Aeronautics Commission, 120 N. Robinson Ave., Suite 1244W, Oklahoma City, OK 73102 Contact Telephone Number: (405) 604-6900

Before completing this form, review the Oklahoma Statutes Title 3, Section 120.3 reproduced below:

3 O.S., §120.3 "A". A person shall obtain a permit from the Commission prior to the construction or installation of any of the following near a public use airport: Any structure, alteration or addition to a structure within three (3) statute miles from the airport reference point of a public-use airport, that would result in a total structure height in excess of one hundred fifty (150) feet above the established airport elevation; or Any structure, alteration or addition to a structure that would result in a total structure height greater than the horizontal, conical, or approach surfaces, as defined in Section 2 of the Aircraft Pilot and Passenger Protection Act.

1. Name, address and contact information (e-mail address, telephone) of the person (the owner) proposing the construction.

2. The type and complete description of proposed structure:

3. Attach a copy of the FAA Form 7460-1(with a USGS 7.5 minute Quadrangle Map), "Notice of Proposed Construction or Alteration", as described in 14 CFR part 77, sub-part B, Section 17.

Name of Person Filing 7460-1 Form	Date 7460-1 was Submitted to FAA	FAA Aeronautical Study # (If Known)

4. Attach a copy of the certified survey and indicate survey type below:

Horizontal Survey Type (1 through 5):	Vertical Survey Type (A through E):	Name of Surveyor

5. Application Fee: Enclose a check or money order payable to the Oklahoma Aeronautics Commission in the amount of: $_____
Application for a new permit: $200.

6. CERTIFICATION: I hereby certify that all the above statements made by me are true and complete to the best of my knowledge.

Name and Title of Person Filing This Application	Signature (In Ink)
Telephone Number & E-mail Addresss	Date of Signature

Building for an Incompatible Purpose Application Form

NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION

OAC Form A-1

Return to: Oklahoma Aeronautics Commission, 120 N. Robinson Ave., Suite 1244W, Oklahoma City, OK 73102 Contact Telephone Number: (405) 604-6900

Before completing this form, review the Oklahoma Statutes Title 3, Section 120.3 reproduced below:

3 O.S., §120.3 "A". A person shall obtain a permit from the Commission prior to the construction or installation of any of the following near a public use airport: Any proposed structure for an incompatible purpose in the primary surface or the runway protection zone, as defined in Section 120.2.

Incompatible purpose means the use of a building or structure as a residence, educational center (including all types of primary and secondary schools, preschools, and child-care facilities), places of worship, hospital, medical inpatient treatment facility, nursing/convalescent home, retirement home, or similar use.

1. Name, address and contact information (e-mail address, telephone and fax) of the person proposing the construction.

2. The type and complete description of proposed structure:

3. Complete legal description of the location of the proposed structure (If a copy of FAA Form 7460-1 is not required in item #5) :

4. I hereby accept the following statement:

The applicant acknowledges for itself, its heirs, its successors, and its assigns, that the real estate described in this application is located in the primary surface or the runway protection zone of a public-use airport, and that the applicant is building a structure upon this real estate, with the full knowledge and acceptance that it may be incompatible with normal airport operations including the landing and takeoff of aircraft

Name And Title of the Legal Representative of the Applicant (Type or Print)	Signature (In Ink) accepting the above statement
Telephone No.	Date of Signature

5. Attach a copy of the FAA Form 7460-1(with a USGS 7.5 minute Quadrangle Map), "Notice of Proposed Construction or Alteration", as described in 14 CFR part 77, sub-part B, Section 17, if required to be submitted to the FAA.	
Name of Person Filing 7460-1 Form	Date 7460-1 was Submitted to FAA

6. Attach a copy of the certified survey and indicate survey type below:	
Horizontal Survey Type (1 through 5):	Vertical Survey Type (A through E):

7. Application Fee: Enclose a check or money order payable to the Oklahoma Aeronautics Commission in the amount of: $_____ Application for a new permit: $200.

8. CERTIFICATION: I hereby certify that all the above statements made by me are true and complete to the best of my knowledge.	
Name And Title of Person Filing This Notice (Type or Print)	Signature (In Ink)
Area Code & Telephone No.	Date of Signature