
Attachment 6. Clear Zone Guidance Statement

In order to restrict land uses which may be hazardous to the operational safety of aircraft and protect life and property in runway approach areas, it is the position of the Minnesota Department of Transportation, Office of Aeronautics (MnDOT Aeronautics), that state funding be limited to airports with fee simple ownership of MnDOT-approved clear zones based on the ultimate development of the airport.¹ Clear zones must be maintained free of airspace obstructions and in a manner that prevents congregations of people. An airport must be in full compliance with the Clear Zone Guidance effective at the time when the Airport Layout Plan (ALP) was or is signed and approved by MnDOT Aeronautics to be eligible for state funding. This includes the depiction of clear zones of the dimensions effective at the time of MnDOT ALP approval. Compliance with the current Clear Zone Guidance Statement (or Guidance) is required for all new or updated ALPs signed on or after the effective date of 01 June 2022. Actual property interests to be acquired will be determined upon consideration of land lines, availability of property, severance, terrain limitations, unusual cost affecting the safety and convenience of the public, and other like factors affecting airport compatibility of land uses surrounding the airport as defined by the Commissioner of Transportation (Commissioner).

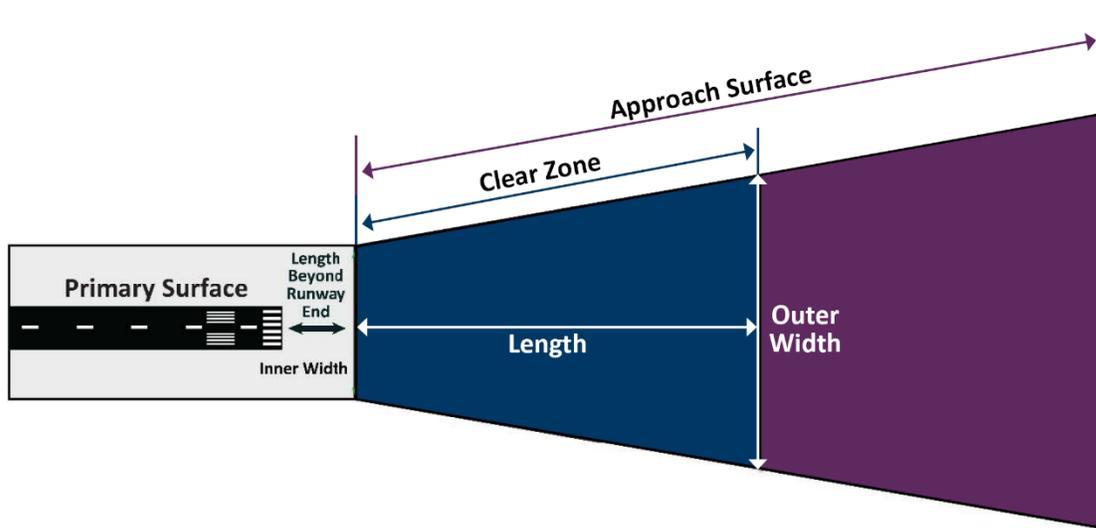
Clear zone configurations are primarily based on primary and approach surfaces as defined by Federal Aviation Regulations (FAR) Part 77, *Safe, Efficient Use, and Preservation of Navigable Airspace*.² Clear zone dimensions are based on runway category,³ visibility minimums (as applicable), and most critical approach type. Clear zone configurations are depicted in **Figure 1**, with associated dimensions provided in **Table 1**. Clear zones begin at the end of the primary surface. The primary surface extends 200 feet beyond each runway end for all paved runways. The primary surface ends at each runway end for all turf runways. Inner widths align with width of the primary surface as prescribed by the runway's most precise approach for either end of the runway. Outer widths are determined by the width of the approach surface at the applicable clear zone length. Clear zones do not have associated slopes, as clear zones are lands to be acquired and/or controlled, as well as maintained in accordance with applicable airport compatible zoning ordinance and regulations.

¹ Note: State funding can be awarded for the acquisition of clear zones pursuant to Minnesota Statutes Chapter 360.305, subd. 4(a), Costs allocated; local contribution; hangar construction account.

² MnDOT Aeronautics' clear zone dimensions differ from those established by FAR Part 77 for airports with a non-precision instrument approach (NP) by providing separate dimensions for runway ends with visibility minimums greater than ¾ mile (referred to as "D1") and visibility minimums of ½ mile (referred to as "D2"). FAR Par 77 only provides one dimensional standard for NP(D) for visibility minimums as low as ¾ mile. Part 77 surfaces are defined in Title 14, Chapter I, Subchapter E, Part 77 of the Code of Federal Regulations (<https://www.ecfr.gov/current/title-14/part-77>)

³ Runway categories are defined in terms of surface type (i.e., turf versus paved) and utility versus other-than-utility.

Figure 1. MnDOT Clear Zone Configurations



**Note: When the runway has a specially prepared hard surface (e.g., paved), the primary surface extends 200 feet beyond both ends of the runway. The primary surface ends at the physical ends of the runway when it has no specially prepared hard surface (e.g., turf). Sources: MnDOT Aeronautics, 2022; FAR Part 77*

Table 1. MnDOT Clear Zone Dimensions

Approach Type (Runway Category) – Visibility Minimum, As Applicable	Length of Surface (feet)	Length Beyond Runway End	Inner Width	Outer Width
Turf	1,000	End of the primary surface as prescribed by surface type	Width of primary surface as prescribed by the runway’s most precise approach for either end of the runway	Outer width of approach surface at clear zone length of surface
A(V)	1,000			
B(V)	1,000			
NP(A)	1,000			
NP(C) – Visibility minimums greater than ¾ mile	1,700			
*NP(D1) – Greater than or equal to ¾ - mile visibility	1,700			
*NP(D2) – ½ - mile visibility	2,500			
PIR	2,500			

**Note: Clear zone dimensions differ from those established by FAR Part 77 for airports with a non-precision instrument approach (NP) by providing separate dimensions for runway ends with visibility minimums greater than ¾ mile (referred to as D1) and visibility minimums of ½ mile (referred to as D2). FAR Par 77 only provides one dimensional standard for NP(D) for visibility minimums as low as ¾ mile. Definitions: A = Utility runways. B = Runways larger than utility. C = Visibility minimums greater than ¾ mile. D1 = Visibility minimums greater or equal to ¾ mile. D2 = Visibility minimums of ½ mile. V = Visual approach. NP = Non-precision instrument approach. PIR = Precision instrument approach. Sources: MnDOT Aeronautics, 2022; FAR Part 77*

Reason for Guidance

MnDOT Aeronautics established this Guidance to promote the protection of people and property near airports from safety hazards and nuisance associated with aircraft operations, as well as the safety of those in the air. Clear zones are trapezoidal shaped areas off each runway end, the size of which is determined by the runway category (paved/turf, utility/other-than-utility), visibility minimums (as applicable), and most critical approach ultimately planned for each runway configuration. Due to the altitude at which aircraft operate within the airspace above clear zones, maintaining clear zones free of obstructions is paramount to safe operations. Clear zones are subject to all applicable Minnesota Administrative Rules Part 8800 and Minnesota Statutes Chapter 360.

Because of the critical role of clear zones in enhancing airport safety, MnDOT Aeronautics determined that these areas must be acquired in fee to receive state participation (i.e., funding) in airport projects.⁴ Fee simple ownership provides airports and airport sponsors with the greatest level of control over land uses, including the height of objects within clear zones. Understanding that fee simple ownership is not feasible in some cases, the Guidance also provides for exceptions in certain defined cases and the procedures for obtaining an exception. Airport sponsors must document Guidance exceptions in a Clear Zone Acquisition Plan (or CZAP) approved by the Aviation Planning Director.

This Guidance defines the following:

- Clear zone dimensional standards by runway category (paved/turf and utility/other-than-utility), visibility minimums (as applicable), and most critical approach planned for each runway end (i.e., inner and outer widths, length, and distance from primary surface end)
- Purpose, process, and components of the Clear Zone Acquisition Plan, which is used to determine actual property interest to be acquired if 100 percent fee simple ownership is not feasible
- Responsibilities of the Aviation Planning Director associated with approving actual property interest for acquisition and clear zone Guidance exceptions as documented in the CZAP

Applicability

Key stakeholders affected by the Guidance include:

- Aviation Planning Director, MnDOT Aeronautics
- Airport sponsors operating a publicly owned, public-use airport in Minnesota recognized as part of the state aviation system
- MnDOT Aeronautics Airport Planning staff

⁴ Note: state funding can be awarded for the acquisition of clear zones pursuant to Minnesota Statutes Chapter 360.305, subd. 4(a), Costs allocated; local contribution; hangar construction account.

Definitions

Airport compatible land use – Airport compatible land uses are those that do not hinder the operations of aircraft or the airport, negatively impact safety, nor cause unreasonable nuisance impacts to surrounding populations, as defined by the Commissioner. Airport compatible land use is used interchangeably with airport compatibility within the context of the Clear Zone Guidance.

Air navigation obstructions – An obstruction is any existing or proposed object, terrain, or structure, including a mobile object, that is of greater height than those established in Minnesota Administrative Rules chapter 8800.1200.

Airport sponsor – An airport sponsor is a public agency or tax-supported organization such as an airport authority or local government authorized to own and operate an airport; obtain property interests; obtain funds; and otherwise be responsible for meeting all applicable legal and financial requirements of current laws, regulations, and other obligations associated with that airport.

Clear Zone Acquisition Plan (CZAP) – The CZAP documents an airport sponsor’s plan for acquiring its clear zones in fee simple and/or formally requests an exemption to MnDOT Aeronautics’ Clear Zone Guidance by providing justification regarding why the airport is unable to fully comply with this Guidance. Full compliance is defined as owning 100 percent of clear zones off all existing and planned runway ends at ultimate build-out. Clear Zone Acquisition Plans must be prepared in accordance with the specifications provided by this Clear Zone Guidance Statement and submitted to the Aviation Planning Director for review and approval. Airport sponsors that have a MnDOT-approved ALP as of 01 June 2022 are required to develop and submit a CZAP in conjunction with their next ALP update.

Maintained – Clear zones shall be managed in a manner that supports airport compatible land use and prohibits height obstructions.

Ownership – Ownership is defined as possession in fee simple. The airport has full and irrevocable ownership of the land and any buildings on located on it.

State aviation system – The state aviation system encompasses all publicly owned, public use airports in the state of Minnesota eligible to receive funding through the State Airports Fund in accordance with Minnesota Statutes Chapter 360.305.

Ultimate – Ultimate conditions reflect existing and planned airport build-out as depicted on a MnDOT-approved ALP.

Responsibilities

Airport Sponsor

- Acquire in fee simple clear zones associated with each runway end in accordance with the standards established by the MnDOT Clear Zone Guidance
- If an exception to these standards is requested, the airport sponsor must develop a CZAP in accordance with the specifications provided as follows:

- Submit the proposed CZAP to the Aviation Planning Director for review
- Respond to Aviation Planning Director requests for additional information
- If the Aviation Planning Director deems the exception(s) requested within the CZAP do not provide for a reasonable level of safety for aircraft and surrounding populations, the airport sponsor must:
 - Acquire all property within clear zone in fee simple, or
 - Revise the CZAP and resubmit to the Aviation Planning Director for reevaluation

Aviation Planning Director

- Maintain a list of grant-eligible airports based on compliance with the Clear Zone Guidance
- Communicate Guidance requirements to airports, airport sponsors, and other stakeholders
- Issue a written record of determination (i.e., approval) for clear zones that are owned in accordance with MnDOT Aeronautics' Clear Zone Guidance
- If an airport sponsor requests an exception to the MnDOT clear zone dimensional standards via a Clear Zone Acquisition Plan, the Aviation Planning Director must:
 - Examine CZAP submitted by airport/airport sponsor. Additional details regarding the content and form of the CZAP are provided within the MnDOT Clear Zone Guidance Statement.
 - Determine if proposed clear zone exemptions provide for a reasonable level of safety for airport users and surrounding populations in consideration of airport-specific constraints and requirements
 - Issue a written record of determination documenting approval or denial of proposed Clear Zone Acquisition Plan

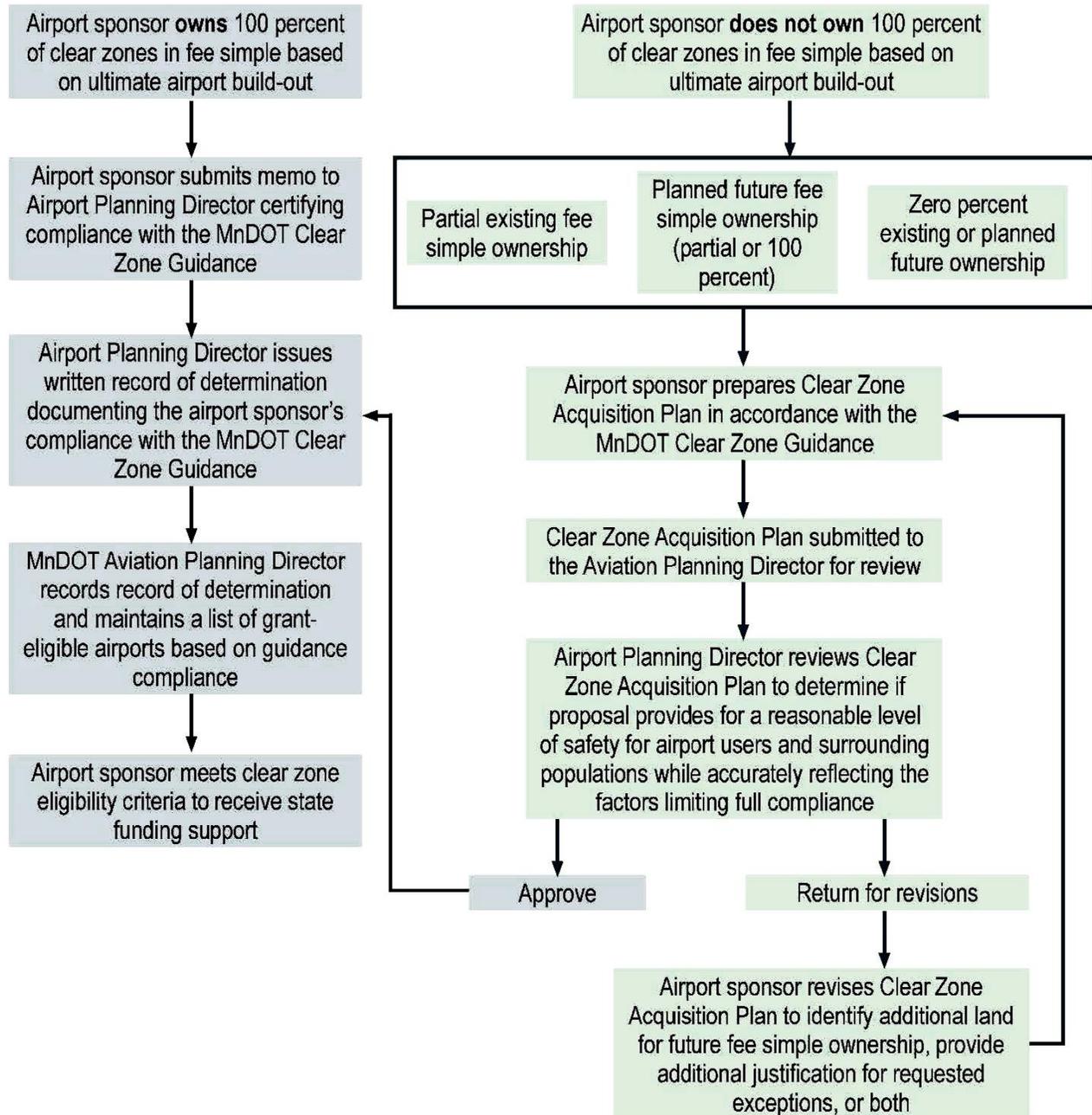
Airport Planning Staff

- Distribute MnDOT Aeronautics' Clear Zone Guidance including diagrams to all airports with the Minnesota state aviation system
- Respond to airport inquiries regarding clear zone policies including, but not limited to, required documentation and processes related to Clear Zone Acquisition Plans and state funding requests for the acquisition of clear zones in fee
- Coordinate Aviation Planning Director approval process for airports that have acquired clear zones in fee or are requesting an exemption via a Clear Zone Acquisition Plan

Clear Zone Guidance Compliance Process

Figure 2 depicts the process by which an airport sponsor complies with the MnDOT Clear Zone Guidance Statement and the primary responsibilities of key stakeholders.

Figure 2. Clear Zone Guidance Compliance Process



Sources: MnDOT Aeronautics, 2022; Kimley-Horn, 2022

Clear Zone Acquisition Plan

The CZAP outlines the specific documentation to be provided to MnDOT Aeronautics if an airport sponsor does not fully comply with the MnDOT Clear Zone Guidance effective at the time when MnDOT Aeronautics approves and signs its ALP. Full compliance is defined as fee simple ownership of clear zones off all runway ends based on ultimate build-out conditions. Dimensional standards are established by the effective Clear Zone Guidance. As such, Clear Zone Acquisition Plans are required when the airport sponsor holds:

- Partial clear zone fee simple ownership (less than 100 percent of property interest is owned by the airport sponsor)
- Planned future clear zone acquisition but clear zones not owned on the date when the ALP is signed by MnDOT Aeronautics
- Fee simple ownership is not feasible now or in the anticipated future due to airport-specific constraints including, but not limited to, undue cost burdens for the airport sponsor, terrain, and severability

In these cases, the airport sponsor is required to develop a detailed analysis that achieves the following objectives:

- Documents the proposed clear zone property interest to be acquired in fee (if any)
- Provides justification regarding why some or all clear zones cannot be acquired in fee
- Identifies existing or proposed alternative land use control mechanisms enacted or pursued to enhance safety and reduce nuisances associated with aircraft operations

In consideration of these objectives, the CZAP must provide the following information in the order presented below.

SECTION 1: AIRPORT AND SURROUNDING VICINITY MAP

This map is designed to provide a graphic depiction of the airport and surrounding vicinity. All features within and adjacent to clear zones relevant to airport land use compatibility must be shown including:

- Clear zone dimensions as established by the MnDOT Clear Zone Guidance Statement (inner/outer width and length based on approach type)
- Existing land ownership within clear zones, including parcels owned by the airport sponsor in fee simple
- Property interests proposed for future fee simple ownership
- Property interests neither proposed nor designated for future fee simple ownership
- Natural and manmade features, structures, and objects pertaining to the airport compatibility of land uses within and in the vicinity of clear zones, including those that may result in congregations of people or exceed height standards defined by Minnesota Administrative Rules Part 8800.1200
 - Denote mitigation measures that have been enacted to protect people and property, including all marked and/or lighted obstructions (see Minnesota Administrative Rules Part 8800.1200, subpart 7, *Obstruction Marking and Lighting*).
- Existing airport property boundary
- Part 77 approach surface at ultimate airport build-out

SECTION 2: NARRATIVE REPORT

The narrative report provides a clear explanation of each factor contributing to the exception request that answers the question of why the airport sponsor is unable to comply with the MnDOT Clear Zone Guidance (i.e., 100 percent ownership of clear zones in fee simple). These factors include, but are not limited to, land lines, terrain, severability, unusual cost, and current ownership status.

- Factors limiting current or future ownership must be depicted on the airport map presented in Section 1, as feasible.
- Existing or proposed alternative land use control strategies to support airport compatible land uses within clear zones should be described in the narrative report. Alternative strategies may include aviation or conservation easements, transfer or purchase of development rights, non-suit covenants and hold harmless agreements, and disclosure notices. Airport sponsors should describe any steps that have been taken or are currently underway to enact alternative land use control strategies, even if those steps did not result in implementation.

SECTION 3: PROPERTY OWNERSHIP TABLE

The property ownership table must provide the following information for each parcel within the airport's clear zones:

- Owner
- Estimated market value
- Existing land use (e.g., residential, light industrial, commercial, etc.)
- Distance of all buildings from extended runway centerline (if applicable)
- Height of all buildings (if applicable)
- When the parcel is anticipated to be acquired and proposed funding source(s) (if applicable)

ATTACHMENT

Attach the following supporting documentation to the Clear Zone Acquisition Plan.

- Attachment A: Legal documentation of alternative land use control strategies currently in-place (as available)

Resources and Related Information

- Minnesota Statutes Chapter 360.061 to 360.074, *Airport Zoning*
- Minnesota Statutes Chapter 360.81 to 360.915, *Regulation of Structure Heights*
- Minnesota Administration Rules Part 8800.1100, *Regulation of Structure Height*
- Minnesota Administration Rules Part 8800.1200, *Criteria for Determining Air Navigation Obstructions*
- Minnesota Administration Rules Part 8800.1600, *Public Airport Licensing*
- Minnesota Administration Rules Part 8800.2400, *Airport Zoning Standards*

History and Updates

Title: *Clear Zone Guidance Statement*

Revision	Year	Comments
Initial adoption	1978	Guidance adopted
1st revision	2005	Guidance revisions adopted
2 nd revision	2022	Guidance revisions adopted including clarification associated with Guidance compliance

Source: MnDOT Aeronautics, 2022