New Century AirCenter

Airport Land Use Compatibility Plan

JOHNSON COUNTY
KANSAS

DRAFT FINAL
AIRPORT LAND USE COMPATIBILITY PLAN

For

New Century AirCenter
Johnson County, Kansas

Prepared for:
Johnson County, Kansas

Prepared by:

Coffman Associates
Airport Consultants

November 2023

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Chapter One
PURPOSE AND SCOPE

1.1 INTRODUCTION

This document is an update to the Airport Land Use Compatibility Plan (ALUCP) for the environs within one (1) mile of New Century AirCenter. New Century AirCenter is owned and operated by Johnson County, Kansas, as airport sponsor.

The ALUCP was prepared on behalf of the Johnson County Airport Commission (JCAC) pursuant to authority granted to it by the State of Kansas.[1] The plan updates and replaces the *New Century AirCenter Comprehensive Compatibility Plan* from 1996 and will be formally adopted as an update to Appendix D of the *Johnson County Rural Comprehensive Plan*.[2]

This plan has been prepared with reference to and consistency with guidance provided by the Kansas Department of Transportation (KDOT) Division of Aviation, as well as the *2016 Kansas Aviation System Plan* (KASP) and *2015 Regional Aviation System Plan* (RASP) for Greater Kansas City.

1.2 PURPOSE OF THE ALUCP

Airports play a vital role in the transportation systems and economies of cities and counties throughout the nation. Public-use airports in Johnson County provide services such as business travel, tourism, emergency response, fire suppression, law enforcement, and agriculture support.

The purpose of this updated plan is to protect and preserve the airport and the public investment in New Century Air Center and its environs by assuring future land uses are compatible with airport operations. Zoning strives to prevent and minimize noise impacts in residential and other noise-sensitive areas; reduce high density land uses in the approach and departure areas to protect people and property; restrict manmade and natural structures that could interfere with flight; and eliminate uses that may be affected by vibration or fumes from aircraft operations. This plan seeks to: (1) provide for appropriate densities and land use types with respect to the characteristics of the sites and the influences of the airport; and (2) provide for reasonable opportunities for viable economic uses of the land while recognizing and establishing appropriate measures to balance land use interests with airport interests.

1.3 RESPONSIBILITIES AND REQUIREMENTS

Airport land use compatibility involves two overarching concepts: a community's need for safe and efficient air transportation, and orderly compatible land use development within the airport environs. These two concepts must be balanced to achieve a favorable result for the airport and the residents and businesses in the airport's vicinity.

[1] K.S.A. 3-307e (https://www.ksrevisor.org/statutes/chapters/ch03/003_003_0007e.html)
[2] Johnson County Rural Comprehensive Plan: A Plan for the Unincorporated Areas of Johnson County, KS (https://www.jocogov.org/department/planning/zoning-regulations) (June 2004; Rev. 2019)

Airport land use compatibility planning can be a complicated matter when considering the various levels of government and documentation involved. The sections below briefly discuss the specific responsibilities of each governmental entity regarding aviation and land use, as necessary. It is important to note that some levels of government are limited in the actions they may take with respect to airport land use compatibility; these limitations are carefully described, where appropriate.

1.3.1 Federal Government

The federal government – primarily through the Federal Aviation Administration (FAA) – has the authority and responsibility to control aircraft operations associated with airport noise impacts using the following methods:

- **Implementation and Enforcement of Aircraft Operational Procedures:** These include pilot responsibilities; compliance with air traffic control instructions; flight restrictions; and monitoring careless and reckless operation of aircraft. Where and how aircraft are operated while not on the ground at an airport are under the complete jurisdiction of the FAA.
- **Management of the Air Traffic Control System:** The FAA is responsible for the control of navigable airspace and reviews any proposed alterations in flight procedures for noise abatement based on safety of flight operations; safe and efficient use of navigable airspace; management and control of the national airspace and air traffic control systems; effects on security and national defense; and compliance with applicable laws and regulations.
- **Certification of Aircraft:** The FAA requires the reduction of aircraft noise through certification, modification of engines, or aircraft replacement, as defined in Title 14 Code of Federal Regulations (14 CFR) Part 36.
- **Pilot Licensing:** Individuals licensed as pilots are trained under federal regulations with strict guidelines which concentrate on safe aircraft operating procedures.
- **FAA Airport Compliance and Grant Assurances:** FAA Order 5190.6B, *FAA Airport Compliance Manual,* defines the airport sponsor's role with regard to land use planning and implementation actions "to reduce the effect of noise on residents of the surrounding area. Such actions include optimal site location, improvements in airport design, noise abatement ground procedures, land acquisition, and restrictions on airport use that do not unjustly discriminate against any user, impede the federal interest in safety and management of the air navigation system, or unreasonably interfere with interstate or foreign commerce." Additionally, upon receipt of FAA grant funding, the airport sponsor agrees to take appropriate action – including the adoption of zoning laws within its jurisdictional authority – to the extent reasonable to restrict the use of land next to or near the airport to uses that are compatible with normal airport operations, in accordance with FAA Grant Assurance 21, *Compatible Land Use*.
- **Noise Compatibility Studies:** 14 CFR Part 150 establishes procedures and criteria for the evaluation of airport noise-related impacts.

While the FAA has no local zoning jurisdiction, the FAA provides guidance and expects the airport sponsor to zone and use other measures to ensure land use compatibility in the vicinity of the airport.

1.3.2 State of Kansas

1.3.2.1 Aviation

In cooperation with and in support of the FAA, the KDOT Division of Aviation promotes aviation; advises airport sponsors to help them identify ways to improve the safe operation of airports; and assists with multimodal transportation planning. KDOT also administers the *Kansas Airport Improvement Program* (KAIP) to assist airport sponsors in improving and maintaining the state's system of public-use airports; conducts aviation economic impact studies for each of the state's airports; and published the KASP in 2016.

1.3.2.2 Land Use

State law gives Johnson County general authority to adopt plans and land use regulations with the goal of "bringing unity, consistency and efficiency to the county's planning efforts."[3] As with the federal government, local planning decisions are established at the discretion of the local jurisdiction and the state may not interfere with these decisions.

1.3.3 City and County Governments

A city or county may be engaged in the national aviation system by owning and operating an airport. Cities and counties bear responsibility for the orderly development of areas surrounding the airports within their respective jurisdictions. To achieve this goal, each jurisdiction is encouraged to ensure all applicable planning documents and building codes are consistent with the county's adopted Airport Comprehensive Compatibility Plan.

Local jurisdictions that include territory within the airport influence area (AIA) boundary should work with the county to achieve consistency. Local jurisdictions are obligated to submit land use actions within one mile of New Century AirCenter – such as development projects or conditional use permits – to the Johnson County Airport Commission (JCAC) and Board of County Commissioners (BOCC) for review and approval.

1.3.3.1 Johnson County Board of County Commissioners

A unique intersection of airport planning and land use compatibility planning exists at the county level of government. In Johnson County, the county is the airport owner, airport sponsor, and airport zoning commission. Johnson County operates under the provisions of K.S.A. 3-301 through 3-307e, pursuant to which the BOCC created the JCAC. The BOCC delegated the duties and responsibilities of operating the county's two airports to the JCAC. The JCAC is comprised of seven commissioners appointed by the BOCC, including one commissioner from each of the six BOCC districts and one BOCC chair-appointed commissioner.

[3] K.S.A. 19-2956 et. seq.

The BOCC has authorized the JCAC to serve as the airport zoning commission, as provided by K.S.A. 3-307e. In this capacity, the JCAC "shall make such recommendations concerning type and boundary of zones and regulations to be adopted for public airports and all property within one (1) mile thereof."[4] The BOCC acts upon recommendations from the JCAC and may zone New Century AirCenter "and the surrounding area within one (1) mile except where such areas have already been zoned by city action. In such cases, city zoned areas shall keep such city zoning control except that any changes in existing city zoning must have the approval of the board of county commissioners."[5] Acting in its capacity as the airport zoning commission, the JCAC plays a key role in implementation of land use compatibility policies and criteria related to proposed development in the vicinity of New Century AirCenter. The JCAC also provides recommendations to the BOCC regarding the planning boundaries around each of these airport facilities that define safety areas, noise contours, and height/airspace protection for policy implementation. In 2011, the Kansas Supreme Court recognized Johnson County's zoning authority under K.S.A. 3-307e.[6]

The JCAC assumed responsibility for Olathe Naval Air Station (ONAS) in 1973 after it was deactivated, and ownership was transferred to Johnson County. ONAS was renamed Johnson County Industrial Airport upon transfer in 1973 and was renamed New Century AirCenter in 1995.

1.4 SCOPE OF THE ALUCP

1.4.1 ALUCP Assumptions

The updated Airport Land Use Compatibility Plan (ALUCP) is based on three key planning assumptions: (1) the airport layout plan (ALP)/approved airport diagrams; (2) the aviation activity forecasts; and (3) the future noise exposure contours.

1.4.2 Geographic Scope

The geographic scope for this ALUCP is demarcated by the airport influence area (AIA) boundary for New Century AirCenter, which is equal to the one-mile (1-mile) radius zoning and land use authority granted by state statute under K.S.A. 3-307e.

1.4.3 Limitations of the ALUCP

The ALUCP does not regulate airspace. Nothing in this plan shall be interpreted as regulating or conveying any recommendations concerning aircraft operations to/from/at the airport.

[4] K.S.A. 3-307e
[5] K.S.A. 3-307e
[6] 143rd Street Investors, L.L.C. v. Board of County Commissioners of Johnson County, 292 Kan. 690, 259 P.3d 644 (2011)

The ALUCP is not a specific development plan. This ALUCP does not designate specific land uses for any particular parcel or parcels of land. In addition, the land use compatibility guidelines and criteria contained within this document are intended to promote compatible land development in the vicinity of the airport. They are not intended to remove existing incompatible uses.

None of the compatibility criteria contained herein are retroactive to existing land uses.

Incompatible development that currently exists is recognized as existing nonconforming land use by the BOCC. Although this nonconforming land use may be acknowledged, neither this ALUCP nor the BOCC finds these uses to be consistent with this ALUCP.

The JCAC and the BOCC are responsible for the planning and development of land uses located on airport property. Separate from this ALUCP, the JCAC must comply with FAA grant assurances and regulations related to land use compatibility and the safe and efficient operation of the airport.

None of the compatibility criteria contained herein apply to land uses located on airport property.

1.5 PLAN ADOPTION, IMPLEMENTATION, AND AMENDMENTS

Adoption, implementation, and amendment of this ALUCP are coordinated through the Johnson County Planning Department, which provides staffing and administrative support for the BOCC and the JCAC.

1.6 ABOUT THIS DOCUMENT

This document includes all components of the updated ALUCP for New Century AirCenter. In addition to this chapter, which outlines the plan's purpose and scope, the subsequent three chapters provide the following information:

- **Chapter Two, New Century AirCenter Environs:** Provides an overview of the airport's setting, AIA, safety zones, noise, airspace, and overflight areas. Chapter Two will also discuss existing and planned land uses, as well as current and future airport facilities.

- **Chapter Three, Implementation and Definitions:** Describes the compatibility review process and defines terms contained in the plan.

- **Chapter Four, Compatibility Policies and Criteria:** Includes guidelines for safety, noise, height restriction, airspace protection, and wildlife hazards, to be used when considering land use development within the vicinity of the AIA boundaries for New Century AirCenter.

Appendices to supplement the analysis are also provided. The appendices include implementation materials for use by JCAC staff and local planning agencies to achieve the land use compatibility goals of this plan.

Chapter Two
NEW CENTURY AIRCENTER ENVIRONS

2.1 AIRPORT SETTING

This chapter provides an overview of New Century AirCenter's environs, including the existing airport influence area (AIA), which is the area encompassed by the planning boundaries established by the Airport Land Use Compatibility Plan (ALUCP) for New Century AirCenter in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses. The AIA constitutes the referral area within which certain airport actions and land use actions are subject to ALUCP review to determine consistency with the ALUCP.

New Century AirCenter is a public-use facility owned and operated by Johnson County, Kansas, and is located in unincorporated Johnson County. The location of New Century AirCenter is shown on **Exhibit 2A**. The airport covers approximately 2,395 acres of land at an elevation of 1,087 feet above mean sea level. The Federal Aviation Administration's (FAA) *2023 - 2027 National Plan of Integrated Airport Systems* (NPIAS) classifies New Century AirCenter at the General Aviation Airport service level with a National role.[1]

New Century AirCenter's history as a military facility remains relevant to its current use. The airport, which was originally named Olathe Naval Air Station (ONAS), was constructed as a pilot training base and expanded during World War II into a defense logistics base with railroad access. ONAS was decommissioned in 1970 and ownership transferred to Johnson County in 1973. A portion of the facility still serves as Aviation Support Facility #37 for the U.S. Army Reserve and houses CH-47 Chinook helicopters. Presently, New Century AirCenter and Johnson County Executive Airport contribute a combined total annual economic impact of $1.289 billion and 5,124 jobs.[2]

Since adoption of the *1996 New Century AirCenter Comprehensive Compatibility Plan*, three substantial changes have occurred which necessitate this plan update, including:

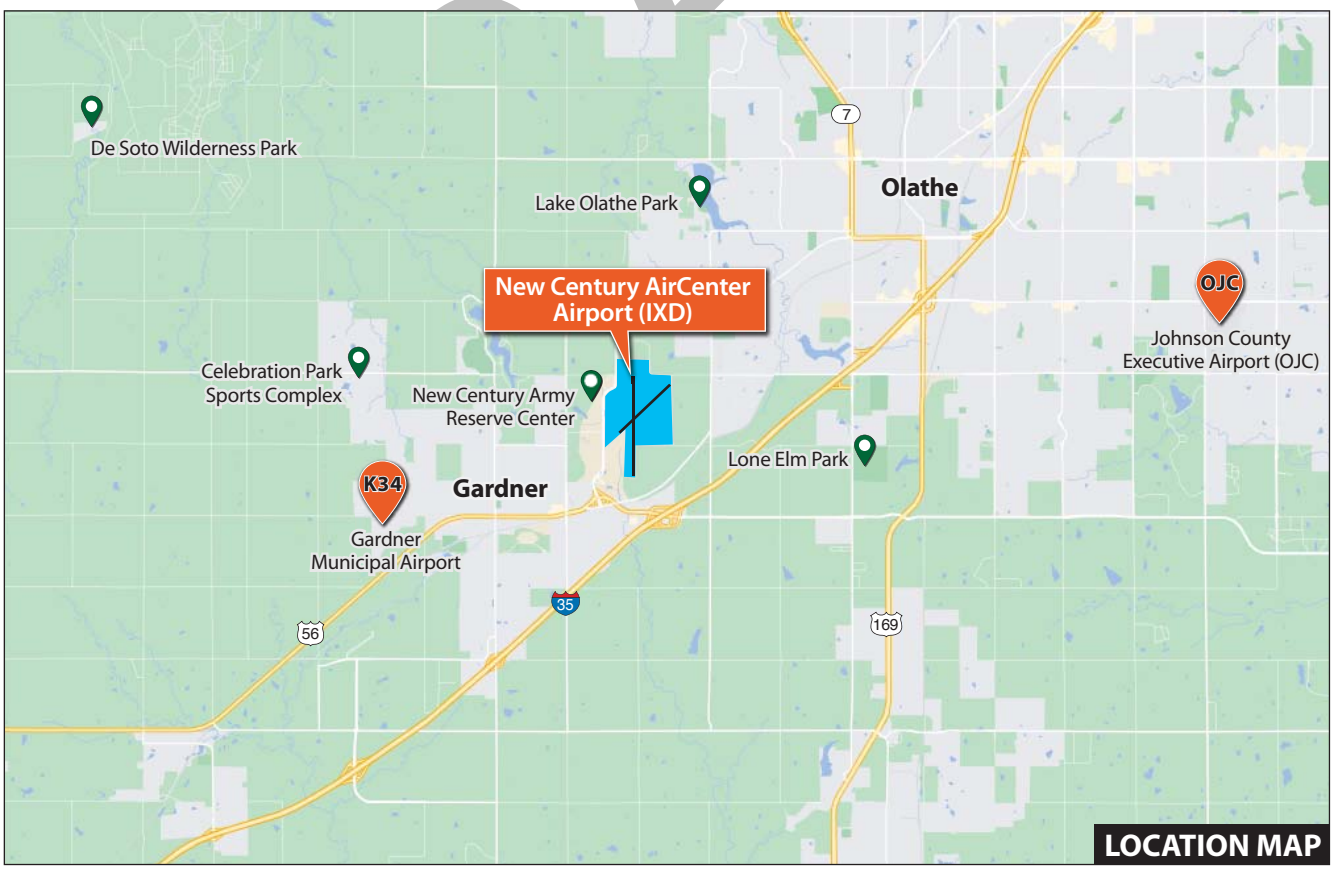
1. Development of airport property and land near New Century AirCenter, resulting in updates to the existing land use and future land uses described in Section 2.3 of this chapter;

2. An increase in airport operations from 44,916 in 2005 to 79,586 in 2022[3]; and

3. The recent publication of FAA guidance on land use (Advisory Circular 150/5190-4B, *Airport Land Use Compatibility Planning*) in September 2022.[4]

[1] Federal Aviation Administration 2023-2027 National Plan of Integrated Airport Systems (NPIAS) (https://www.faa.gov/airports/planning_capacity/npias) (September 2020)
[2] Economic Impact Analysis, New Century AirCenter and Johnson County Executive Airport, CERI, County Economic Research Institute, January 2020
[3] FAA Terminal Area Forecast, issued February 2023
[4] https://www.faa.gov/documentLibrary/media/Advisory_Circular/150_5190_4b_Land_Use_Compatibility.pdf

VICINITY MAP



LOCATION MAP

2.1.1 Airport Influence Area (AIA)

The airport influence area is shown on **Exhibit 2B**. For the purposes of this ALUCP, the AIA is the area encompassed by the planning boundaries established by the ALUCP for New Century AirCenter in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses. The AIA constitutes the referral area within which certain airport actions and land use actions are subject to review to determine consistency with the ALUCP. For the purposes of this ALUCP, the AIA is the area within a one-mile radius of the airport property boundary, which reflects the JCAC's jurisdictional authority and boundary. The AIA encompasses land within the following responsible jurisdictions: City of Gardner, City of Olathe, and Johnson County. The jurisdictional limits of each are depicted on **Exhibit 2C**.

2.2 AIRPORT INFORMATION

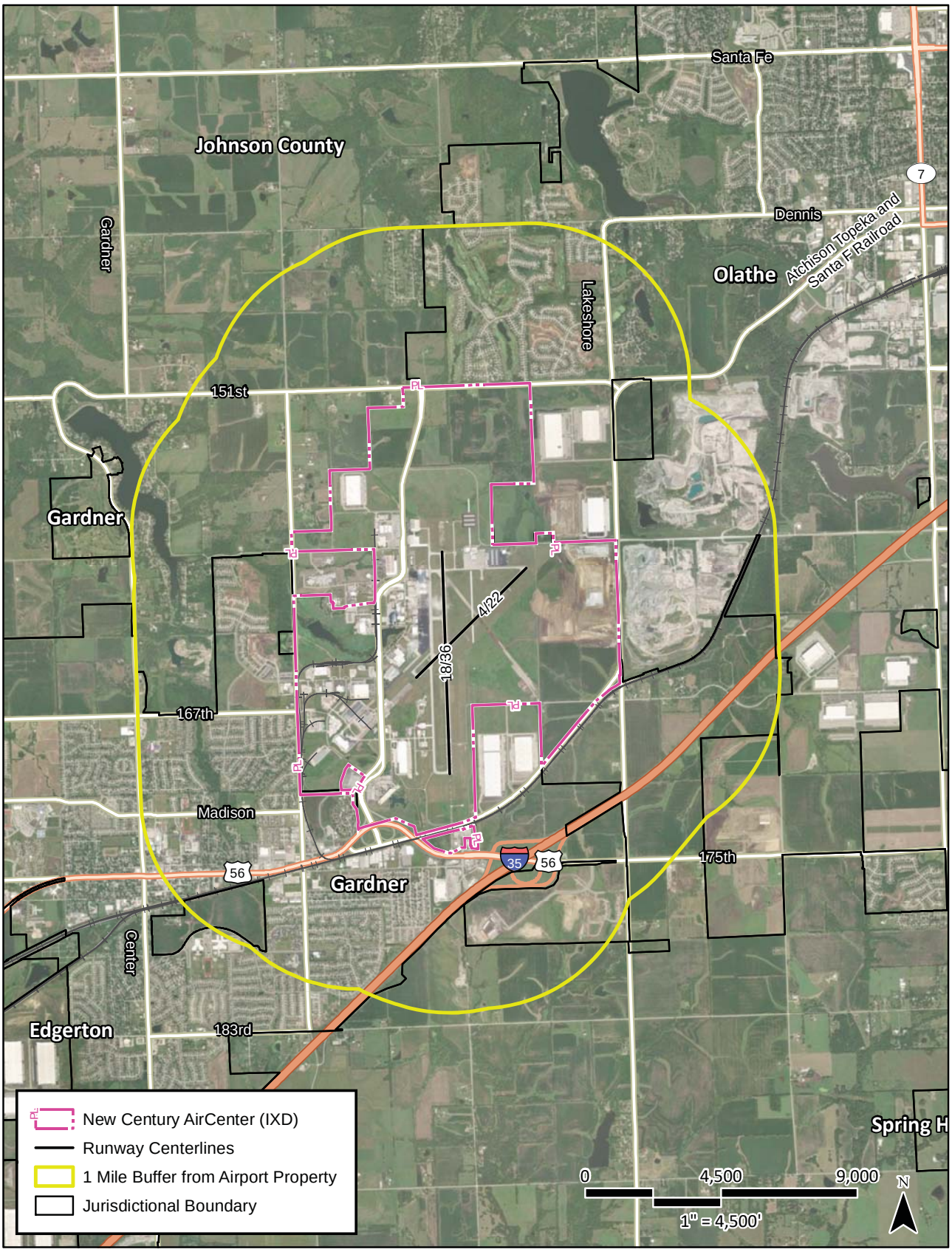
2.2.1 Airport Facilities

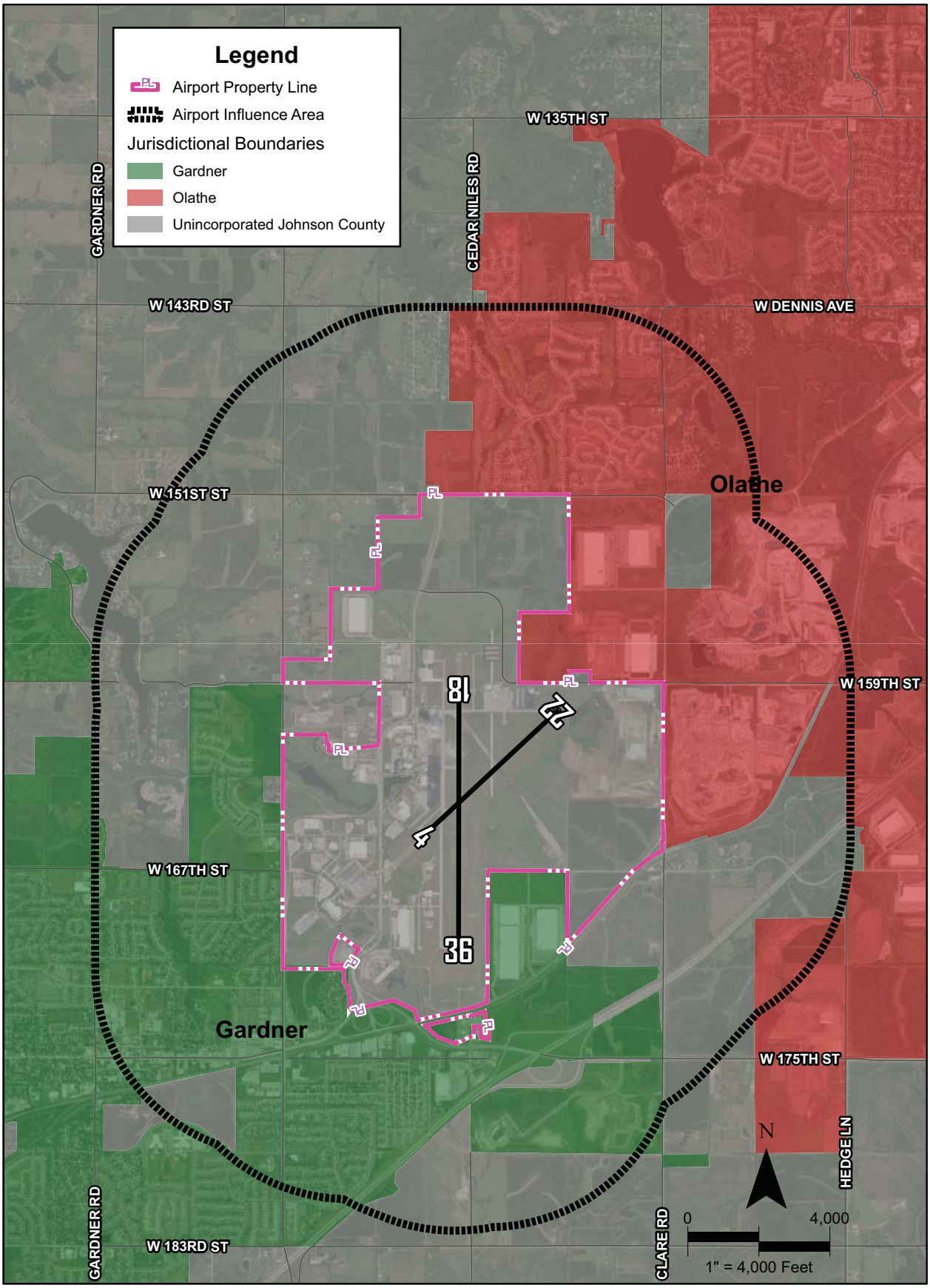
Table 2A summarizes the airside facilities data available at New Century AirCenter.

Exhibit 2D shows the current FAA-approved airport layout plan (ALP). New Century AirCenter has two runways: Runway 18-36 (primary), which is 7,339 feet long and 150 feet wide; and Runway 04-22 (crosswind), which is 5,132 feet long and 100 feet wide. Both runways are made of asphalt. Runways 18 and 22 have left-hand traffic patterns while Runways 36 and 04 have right-hand traffic patterns.

New Century AirCenter is a multimodal transportation hub with convenient highway access via Interstate 35 and Class I railroad service directly into the facility. Two fixed-base operators (FBOs), Signature Flight Support and Advanced Aviation, are available seven days per week to provide fuel and services at the facility.

The airport has 90 T-hangars, which are fully leased and range in size from 1,064 square feet to 1,596 square feet, as well as conventional and executive hangars. Aircraft apron parking is provided in multiple locations around the airfield. Airport property also contains New Century Commerce Center, which supports about 60 industrial, office, and light manufacturing facilities under long-term leases. The total area of airport property is 2,395 acres.


Santa Fe
Johnson County
Gardner
Dennis
7
Olathe
Atchison Topeka and Santa F Railroad
Lakeshore
151st
Gardner
Al/22
18/36
167th
Madison
56
35
56
Gardner
175th
Center
Edgerton
183rd
Spring H
New Century AirCenter (IXD)
Runway Centerlines
1 Mile Buffer from Airport Property
Jurisdictional Boundary
0
4,500
9,000
1" = 4,500'
N


Legend
Airport Property Line
Airport Influence Area
Jurisdictional Boundaries
Gardner
Olathe
Unincorporated Johnson County
W 135TH ST
GARDNER RD
CEDAR NILES RD
W 143RD ST
W DENNIS AVE
W 151ST ST
Olathe
PL
W 159TH ST
18
36
W 167TH ST
Gardner
W 175TH ST
HEDGE LN
N
W 183RD ST
CLARE RD
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4,000
1" = 4,000 Feet

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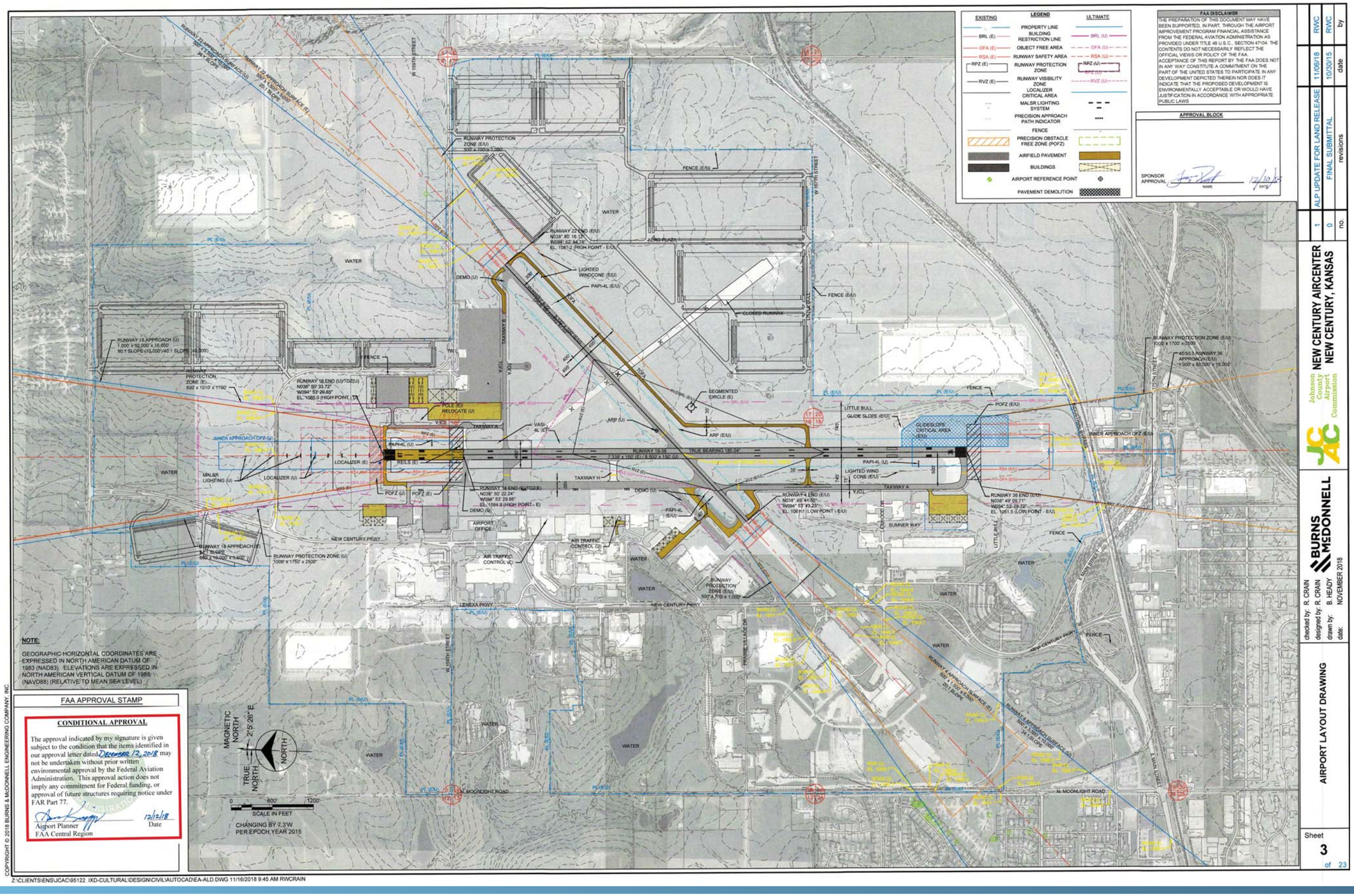

no.	revisions	date	by
1	ALP UPDATE FOR LAND RELEASE	11/06/18	RWC
0	FINAL SUBMITTAL	10/30/15	RWC

Johnson County Airport Commission

NEW CENTURY AIRCENTER
NEW CENTURY, KANSAS

BURNS McDONNELL

checked by: R. CRAIN
designed by: R. CRAIN
drawn by: B. HEADY
date: NOVEMBER 2018

AIRPORT LAYOUT DRAWING

Sheet 3 of 23

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TABLE 2A | Airside Facilities Data – New Century AirCenter

RUNWAYS		
Field Elevation: 1,087' Above Sea Level	**Runway 18-36**	**Runway 04-22**
Runway Length	7,339'	5,132'
Runway Width	150'	100'
Runway Surface Material	Asphalt	Asphalt
Traffic Pattern	Left/Right	Right/Left
Runway Weight Bearing Capacity		
Single Wheel Weight Bearing Capacity	75,000 lbs.	47,000 lbs.
Dual Wheel Weight Bearing Capacity	175,000 lbs.	55,000 lbs.
Dual Tandem Wheel Weight Bearing Capacity	350,000 lbs.	N/A
Lighting and Navigation		
Runway Lighting	HIRL	MIRL
Runway End Identifier Lights (REILs)	Yes (18)	N/A
Approach Lighting System	MALSR (36)	N/A
Taxiway Lighting	CTAF	CTAF
Visual Approach Aids	REIL, VASI-2L – 18 MALSR – 36	PAPI-4L (both ends)
Instrument Approach Procedures	ILS / LOC – 36 RNAV (GPS) – 36 & 18	RNAV (GPS) – 04 & 22
Communications and Weather (both runways)	• Lighted Wind Cones (3) • Automated Surface Observation System (ASOS) – (913) 780-6987 • Tower Freq – 133.0 Mhz (6:00 a.m.-10:00 p.m. daily)	• Ground Freq – 124.3 Mhz Universal Communication Frequency (UNICOM) – 122.95 Mhz • Common Traffic Advisory Frequency (CTAF) – 133.0 Mhz

Key:
- ILS = Instrument Landing System
- RNAV = Area Navigation (GPS variant)
- MALSR = Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights
- REIL = Runway End Identifier Lights
- CTAF = Common Traffic Advisory Frequency
- VOR = Very High Frequency Omnidirectional and Range
- PAPI = Precision Approach Path Indicator
- HIRL = High Intensity Runway Lights
- MIRL = Medium Intensity Runway Lights
- N/A = Not Applicable

Sources: Digital Chart Supplement (DCS) Application – North Central U.S. (effective November 3, 2022); airport records

2.2.2 Future Airport Plans

The airport has contemplated certain facility improvement plans, as documented in the *New Century AirCenter Master Plan* (2006), in which a number of short-, intermediate-, and long-term improvement projects are recommended. Recommended short-term improvements primarily include reconstruction of pavement and other airside facilities; intermediate-term improvements focus on expansion of landside facilities; and long-term improvements recommend an extension of Runway 18-36.[5] Completed projects under this plan include installation of GPS approaches and precision approach path indicators (PAPIs) for Runway 4-22; mill and overlay of Taxiway A; crack and seal repairs to the northeast transient ramp; and modernizations of the administration building, primary pumphouse, and maintenance building. In 2021, a slurry seal of the west transient ramp was completed. A mill and overlay of Runway 18-36 and a slurry seal of Runway 4-22 are planned for 2024. In 2018, property planned for a parallel runway was released by the FAA for further development. As a result, expansion of New Century Commerce Center's multi-modal park with large industrial facilities was planned for the north and east portions of airport property; Phase I of construction began in May 2022.

[5] Johnson County Airport Commission, New Century AirCenter Airport Master Plan (November 2006)

2.3 LAND USE

As development on and off the airport continues, an updated evaluation of land use classifications surrounding the airport is necessary to determine existing and future land use compatibility within the AIA.

2.3.1 Existing Land Uses

Exhibit 2E illustrates existing land uses within the AIA. Detailed land use information has been obtained for the AIA, as depicted by a black dashed line on **Exhibit 2E**. For comparative purposes, the total area for each land use category is presented in **Table 2B**. The areas of the land use categories are based on parcels identified on **Exhibit 2E**.

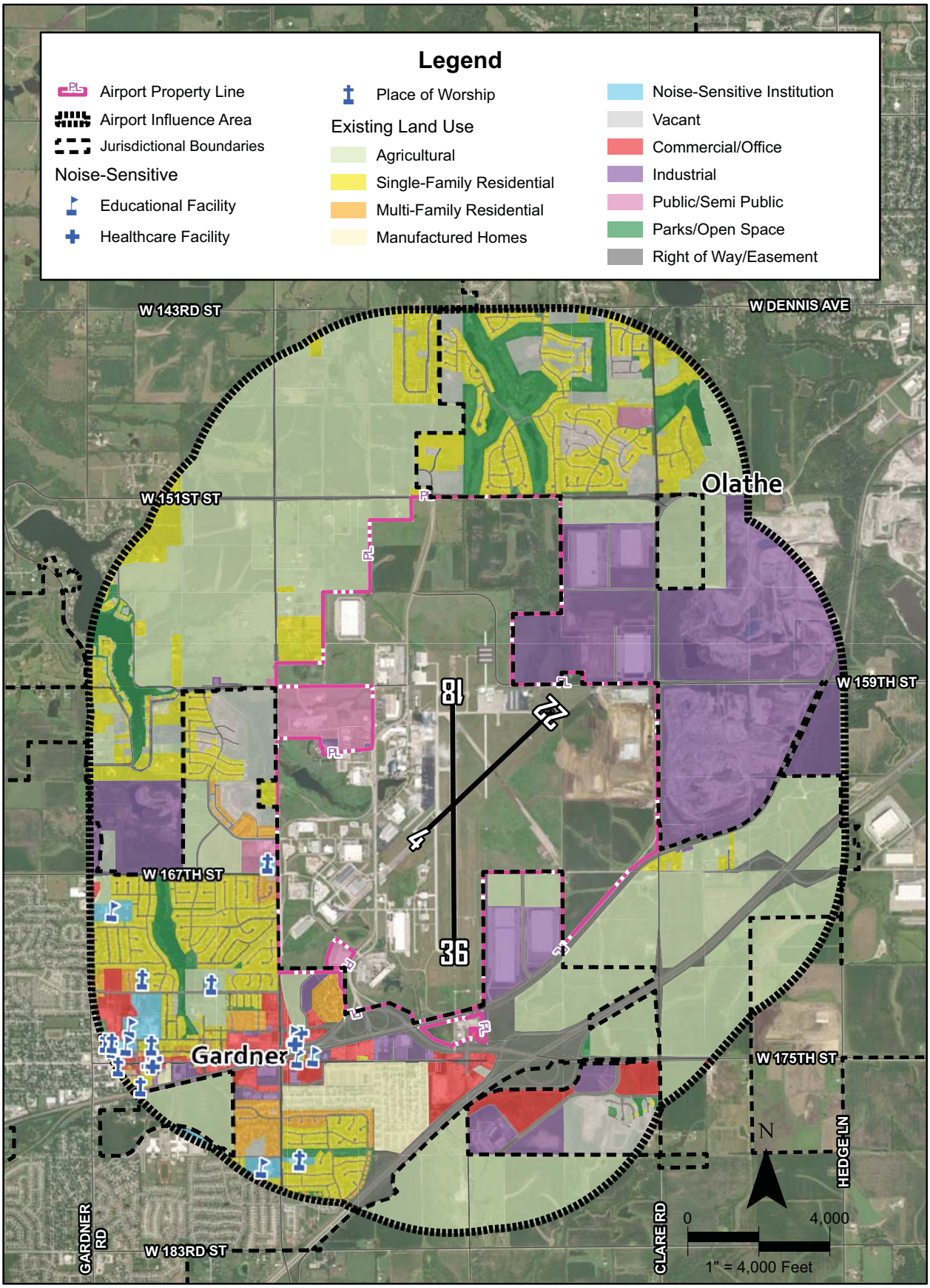
TABLE 2B | Existing Land Uses

Land Use Type	Area (Acres)	Percentage of AIA
Airport Property	2,395	23.4
Agricultural	2,840	27.8
Single-Family Residential	1,010	9.9
Multi-Family Residential	141	1.4
Commercial, Industrial, Transportation, and Utilities	1,746	17.1
Parks/Open Space	363	3.5
Public/Quasi-Public	134	1.3
Manufactured Homes	149	1.5
Noise-Sensitive Uses	90	0.9
Undeveloped/Vacant Parcels	410	4.0
Right-of-Way	948	9.2
Total	**10,226**	**100**

Sources: Johnson County Appraiser's Office Local Tax Roll database (December 2022); ESRI Basemap Imagery (2022); Coffman Associates analysis and windshield survey (September 2022)

The AIA is approximately 10,213 acres, 2,343 acres of which belong to the airport (22.9 percent). Agricultural uses comprise the largest portion of land area, covering 28.1 percent of the AIA. The second largest land use consists of commercial, industrial, transportation, and utility uses, which account for 17.2 percent of land in the AIA. Other significant uses include single-family residential (9.9 percent), right-of-way (9.4 percent), and parks/open space (3.6 percent). Undeveloped/vacant parcels account for 3.9 percent of the AIA. Noise-sensitive uses – which include educational facilities, healthcare facilities, and places of worship – currently account for 0.9 percent of land use. Other uses include manufactured homes (1.5 percent), multi-family residential (1.4 percent), and public/quasi-public facilities (1.3 percent).

As indicated on **Exhibit 2E**, New Century AirCenter is surrounded by a wide range of existing land uses within in the City of Gardner, City of Olathe, and unincorporated Johnson County. In the City of Gardner, which lies west and south of New Century AirCenter, land uses include: multiple subdivisions of single-family residential properties; several multi-family apartment complexes; public uses, such as the city courthouse and police department; several places of worship to the east; and a variety of retail businesses and employment locations. In the City of Olathe, which is located northeast of New Century AirCenter, land uses within the AIA include residential to the north and industrial and mining to the northeast. Land uses in unincorporated Johnson County within the study area are generally rural residential, residential, and agricultural.


Legend
Airport Property Line
Airport Influence Area
Jurisdictional Boundaries
Noise-Sensitive
Educational Facility
Healthcare Facility
Place of Worship
Existing Land Use
Agricultural
Single-Family Residential
Multi-Family Residential
Manufactured Homes
Noise-Sensitive Institution
Vacant
Commercial/Office
Industrial
Public/Semi Public
Parks/Open Space
Right of Way/Easement
W 143RD ST
W DENNIS AVE
W 151ST ST
Olathe
W 159TH ST
W 167TH ST
Gardner
W 175TH ST
W 183RD ST
GARDNER RD
CLARE RD
HEDGE LN
N
0
4,000
1" = 4,000 Feet

2.3.2 Zoning

The City of Gardner, City of Olathe, and unincorporated Johnson County have authority over the land uses in the AIA around New Century AirCenter. Each has adopted zoning ordinances that establish a variety of zones to control land use within all areas of their respective jurisdictions.

The zoning districts have been generalized to provide a uniform display of the zoning districts from the communities within the AIA. **Table 2C** represents the classification of zoning districts for each jurisdiction and how those zoning districts fit into a generalized zoning land use category.

TABLE 2C | Classification of Zoning Districts

Generalized Zoning Category	City of Gardner	City of Olathe	Johnson County
Agricultural	A	AG	RUR
Single-Family Residential (Low-Density)	M-P, R-1, R-1A, R-E, MP-1, RP-1	R-1	PRUR, RLD, RN-1, RN-2, PRN-2, PRN-1, PRU-1A, PRU-1B
Multi-Family Residential (Medium-Density)	R-2, R-3, RP-2, RP-3	R-2	PRU-2, PRU-3, PRMHP, PRMHS
Multi-Family Residential – Apartment/Condo Residential (High-Density)	R-5, RP-5	R-4	PRU-4
Commercial (including Office and Professional)	C-1, CP-1, C-2, C-3, C-O, CP-2, CP-3, CP-O	O, C-3, C-4, BP	PRB-1A, PRB-1, PRB-3
Mixed-Use	CO-A, PUD	N, C-1, C-2, PD, D, TOD	
Planned Development		PR	
Industrial	M-1, M-2	M-1, M-2, M-3	PEC-1, PEC-2, PEC-3, PEC-4, PEC-LP
Parks/Open Space	REC		

Sources: City of Gardner Planning and Zoning Division; City of Olathe Planning Department; Johnson County Planning, Housing and Community Development Department; Coffman Associates analysis.

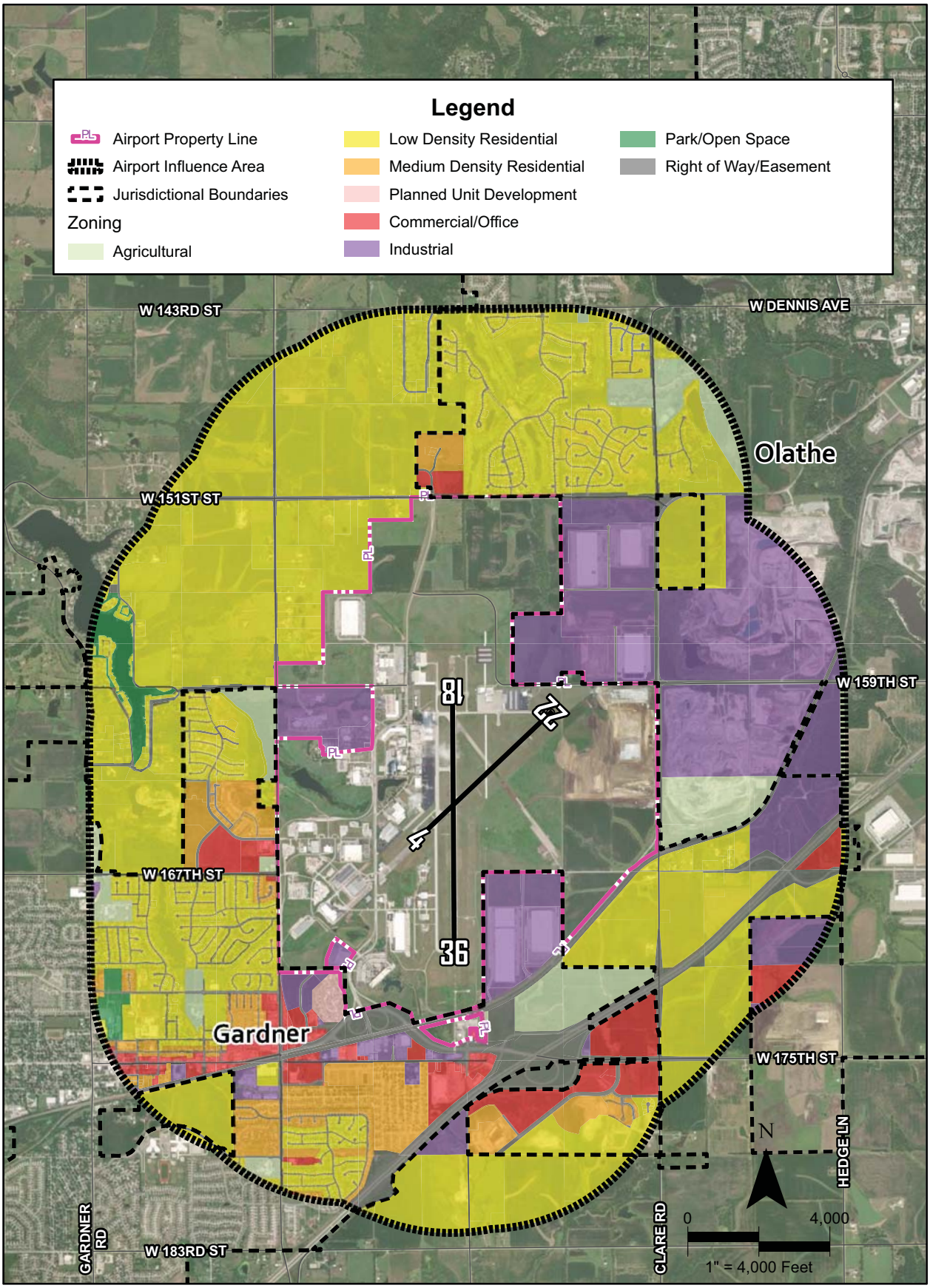
Table 2D and **Exhibit 2F** present the generalized zoning districts in the AIA.

TABLE 2D | Generalized Zoning Within the AIA

Land Use Type	Acreage	Percentage of AIA
New Century AirCenter Property	2,395	23.4
Agricultural	431	4.2
Single-Family Residential	3,905	38.2
Multi-Family Residential	464	4.6
Commercial	414	4.0
Industrial	1,562	15.3
Parks/Open Space	88	0.9
Planned Development	24	0.2
Right-of-Way	943	9.2
Total	**10,226**	**100.0**

Sources: City of Gardner Planning and Zoning Division; City of Olathe Planning Department; Johnson County Planning, Housing and Community Development Department; Coffman Associates analysis

Single-family residential (38.4 percent) accounts for the greatest percentage of the AIA zoning. Airport property accounts for 22.9 percent of the AIA. Another 15.3 percent of the AIA is zoned industrial, and 9.4 percent consists of right-of-way, which includes Interstate 35 and State Highway 56, as well as the arterial, collector, and local road network. More than 85 percent of the AIA falls within those four generalized zoning categories (single-family residential, airport property, industrial, and right-of-way). The remaining area is zoned commercial (4.0 percent); multi-family residential (4.6 percent); agricultural (4.3 percent); parks/open space (0.9 percent); and planned development (0.2 percent). Note that there are no areas zoned to be vacant.



Source: Johnson County AIMS Zoning Shapefile
ESRI Basemap Imagery, 2022

Exhibit 2F
ZONING PARCELS

2.3.3 Future Land Use

Future land use designations from the following sources are identified on **Exhibit 2H** and the total area for each land use category is presented in **Table 2E**.

- City of Gardner – *Gardner Comprehensive Plan* (adopted 2014)
- City of Olathe – *Olathe's Comprehensive Plan (Plan Olathe)* (adopted 2010, updated 2021)
- Johnson County – *The Rural Comprehensive Plan: A Plan for the Unincorporated Area of Johnson County, Kansas* (adopted 2004, reviewed annually)

Airport property comprises 22.9 percent of planned land use within the AIA. Single-family residential accounts for 30.6 percent of the future land use and parks/open space accounts for an additional 16.0 percent of planned land use. Combined, single-family residential, parks/open space, and airport property account for almost 70 percent of the planned land use in the AIA (69.5 percent). Other significant future planned land uses are divided between right-of-way (9.3 percent); industrial (8.6 percent); commercial (6.8 percent); multi-family residential (3.6 percent); and public/quasi-public (2.1 percent). Agricultural accounts for less than one percent. Note that no areas are planned to be vacant.

TABLE 2E | Future Land Use

Land Use Type	Acreage	Percentage of AIA
Airport Property	2,395	23.4
Agricultural	23	0.2
Single-Family Residential	3,123	30.6
Multi-Family Residential	371	3.6
Commercial	692	6.8
Industrial	841	8.2
Public/Quasi-Public	213	2.1
Parks/Open Space	1,629	15.9
Right-of-Way	939	9.2
Total	**10,226**	**100.0**

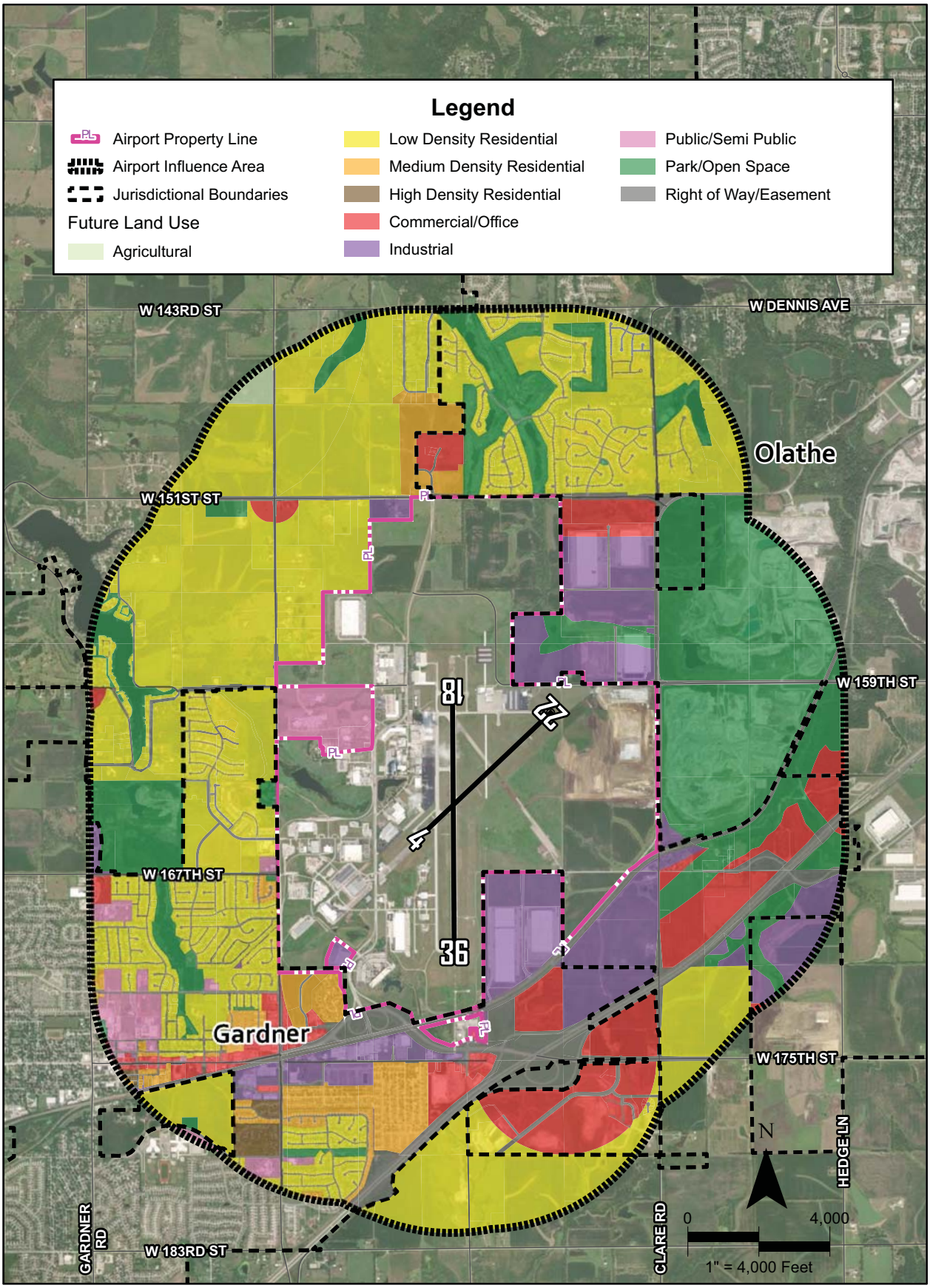
Sources: City of Gardner Planning and Zoning Division; City of Olathe Planning Department; Johnson County Planning, Housing and Community Development Department; Coffman Associates analysis

2.3.3.1 Gardner Comprehensive Plan & Growth Management Strategy

The *City of Gardner Comprehensive Plan* was adopted in 2014. This comprehensive plan is a guide that assists the community with decision-making related to future growth and development of the city. Chapter 6, *Land Use & Development*, was updated in 2016 to include the future land use map utilized in this analysis. The City of Gardner's planning area extends beyond the municipal boundary into areas of unincorporated Johnson County, including airport property, which is designated as public/semi-public.

2.3.3.2 Olathe's Comprehensive Plan (Plan Olathe)

Olathe's Comprehensive Plan was adopted by the Olathe City Council in 2010 and was updated in 2021. As part of its comprehensive plan, *Exhibit 4-3, Olathe Future Land Use Map*, was utilized in this analysis. The planning area extends into unincorporated Johnson County, where a mixed-density residential neighborhood and neighborhood commercial center are planned directly north of airport property near 151st Street, surrounded by clusters of conventional neighborhoods. A greenway makes up most of the planned property east of airport property. An employment area, regional commercial center, and industrial area — known as I-35 Logistics Park — are planned and under development to the northeast of airport property, buffered by a greenway.


Legend
Airport Property Line
Airport Influence Area
Jurisdictional Boundaries
Future Land Use
Agricultural
Low Density Residential
Medium Density Residential
High Density Residential
Commercial/Office
Industrial
Public/Semi Public
Park/Open Space
Right of Way/Easement
W 143RD ST
W DENNIS AVE
Olathe
W 151ST ST
W 159TH ST
W 167TH ST
Gardner
W 175TH ST
W 183RD ST
GARDNER RD
CLARE RD
HEDGE LN
18
36
N
0
4,000
1" = 4,000 Feet

2.3.3.3 The Rural Comprehensive Plan: A Plan for the Unincorporated Area of Johnson County

The *1996 New Century AirCenter Comprehensive Compatibility Plan* was incorporated as Appendix D of the *Rural Comprehensive Plan* for Johnson County, Kansas, which was adopted by Resolution No. 48-04 in June 2004 and was updated in 2015 and 2019.

2.3.4 Airspace and Overflight

Exhibit 2J depicts the airspace plan for New Century AirCenter. This exhibit includes the airport's 14 CFR Part 77 surfaces. (14 CFR Part 77 surfaces are explained in more detail in **Appendix B**.)

2.3.5 Aircraft Flight Tracks

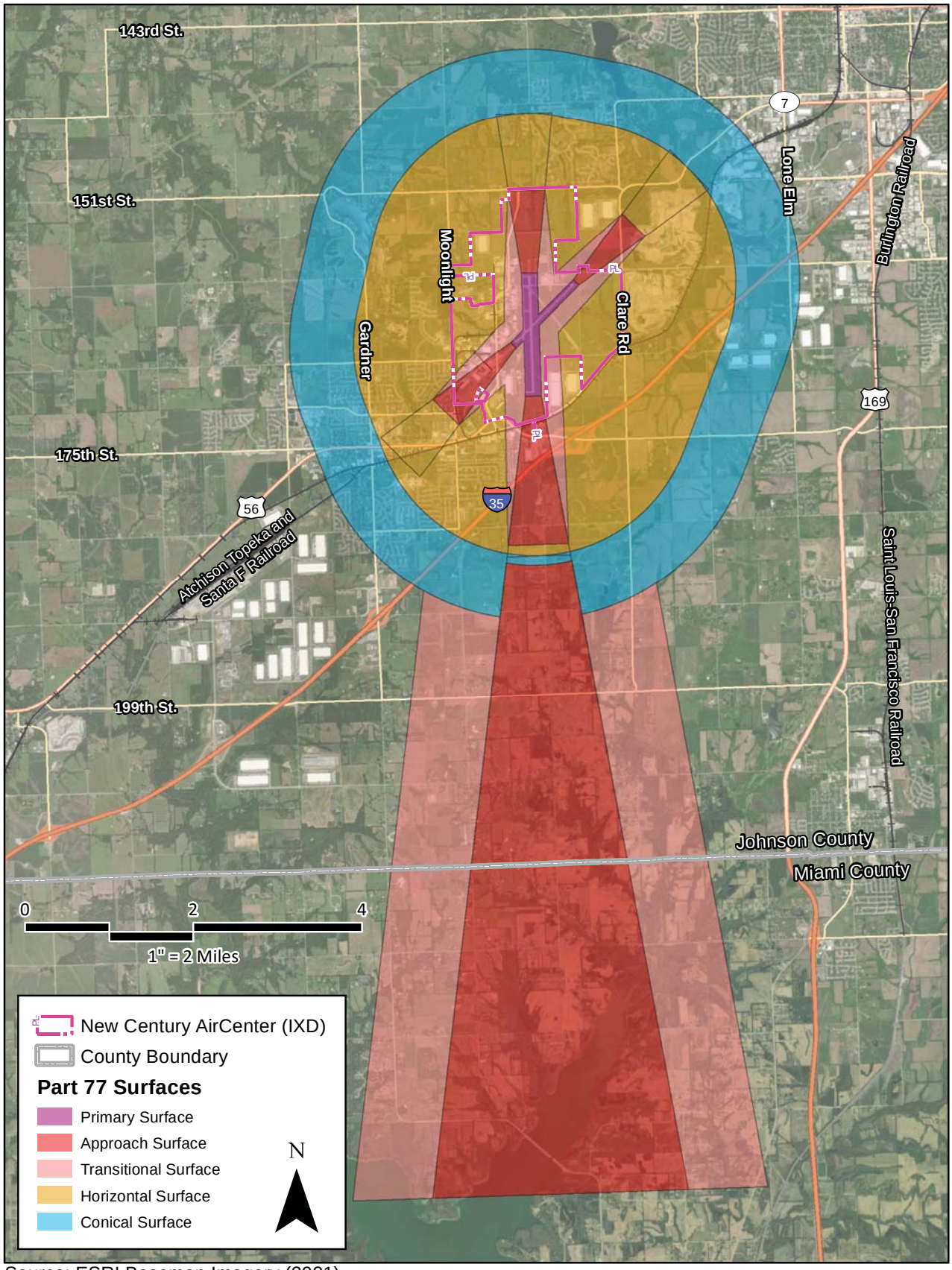
Consolidated flight tracks for New Century AirCenter are depicted on **Exhibit 2K** for arrivals; **Exhibit 2L** for departures; and **Exhibit 2M** for helicopters and touch-and-go maneuvers. Flight track information was collected using Automatic Dependent Surveillance-Broadcast (ADS-B) from November 21 through December 2, 2022.

2.3.6 Aircraft Noise Contours

Existing and 20-year future day-night average sound level (DNL) aircraft noise exposure contours are depicted on **Exhibit 2N**. Aircraft noise exposure contours for the airport were developed using the FAA's Aviation Environmental Design Tool (AEDT), Version 3e, using the assumptions discussed in **Appendix A**. Noise exposure contours for New Century AirCenter remain entirely on airport property.

2.4 COMPATIBILITY FACTORS

Exhibit 2P is a compatibility factors map which compiles ADS-B data, noise exposure contours, and arrival and departure flight tracks from the noise exposure contour modeling.



Source: ESRI Basemap Imagery (2021),
ESRI Road Network

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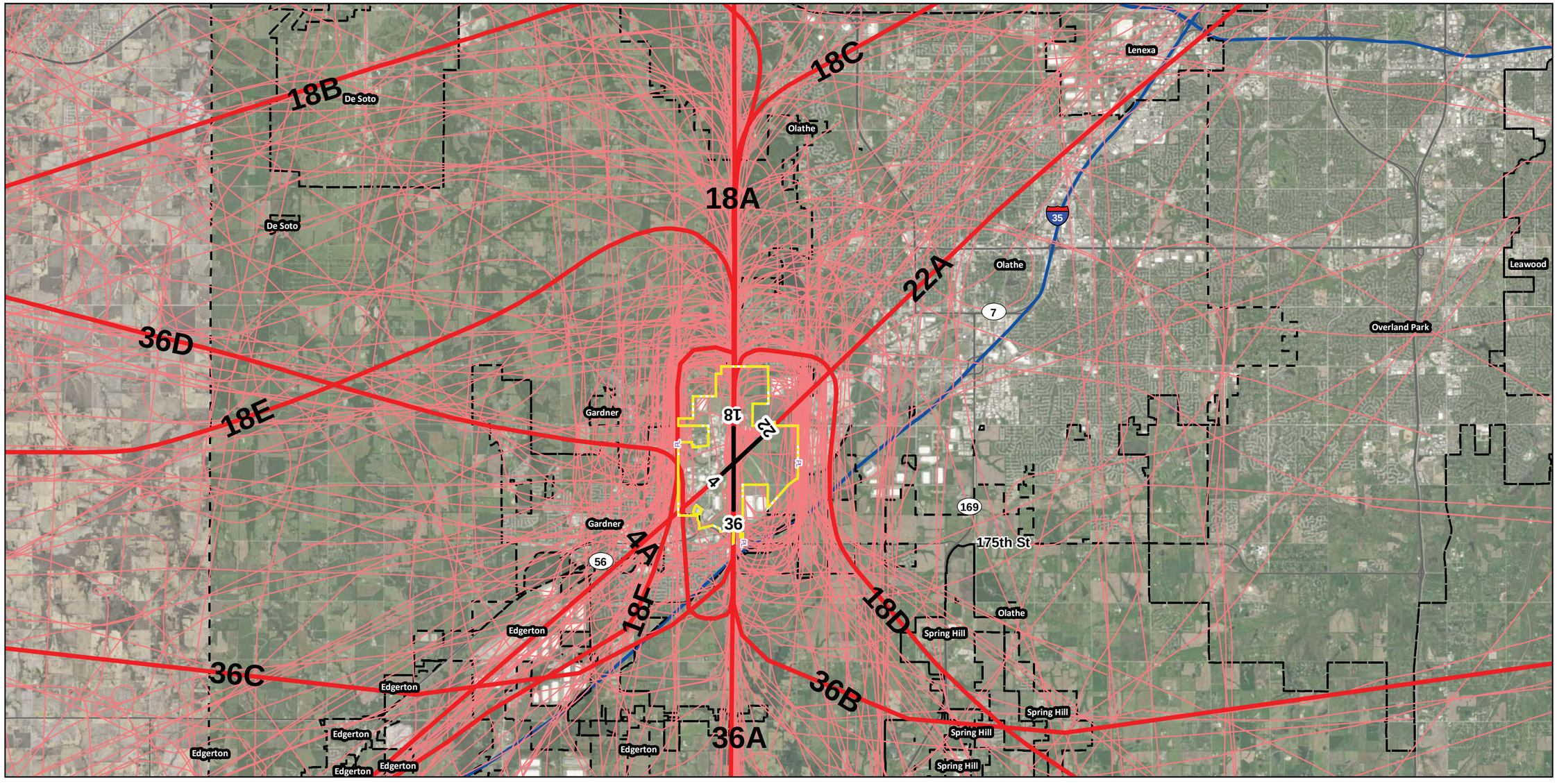


Legend

- Airport Property Boundary
- Municipal Boundary
- Interstate
- Highway
- Consolidated Arrivial Tracks
- Arrivial Tracks

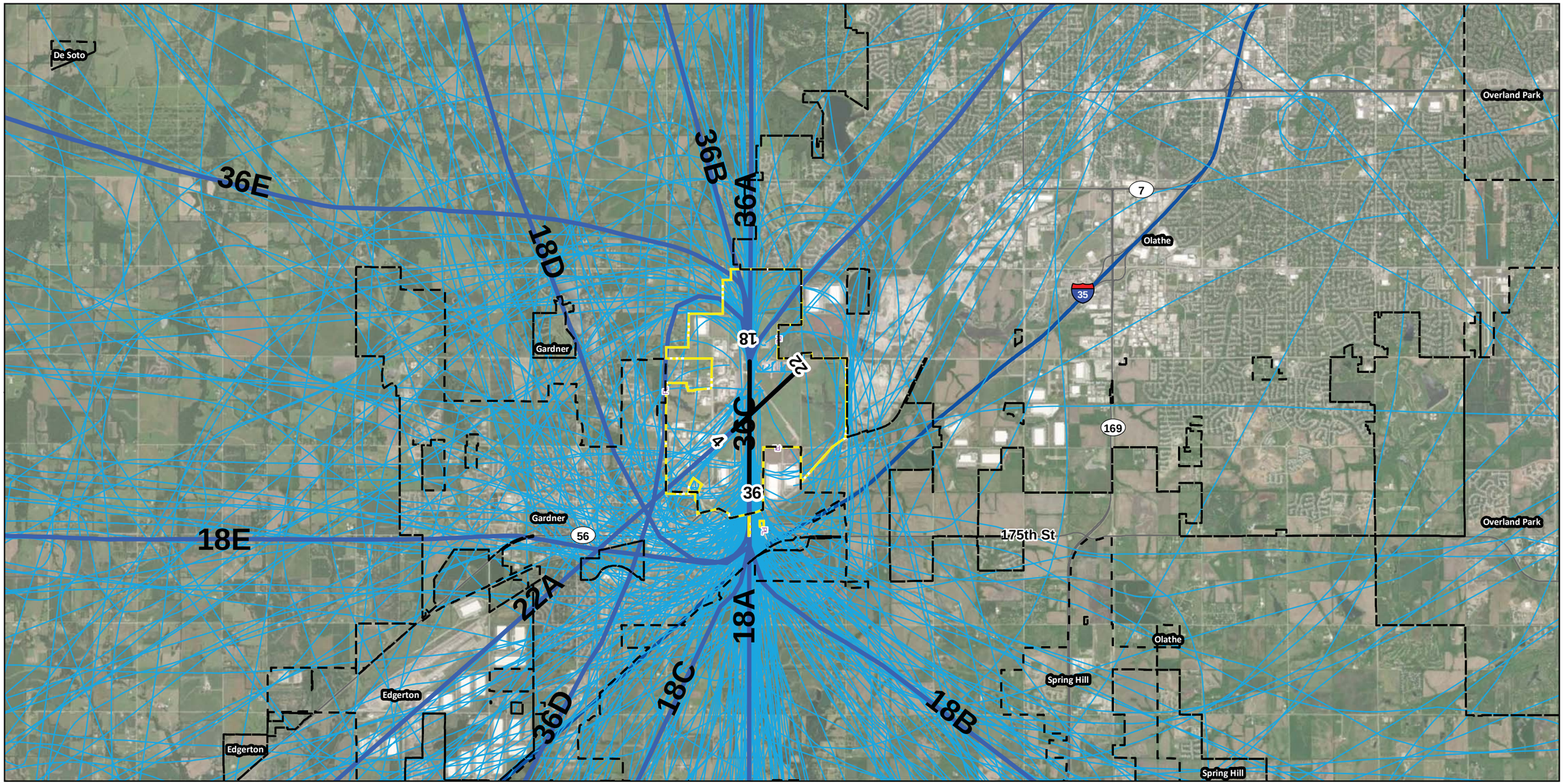
Source: Coffman Associates Analysis, ESRI Basemap Imagery, Accessed (2022), TIGER/Line

Radar Flight Tracks:
Novmeber 21, 2022 - December 2, 2022

N

0 9,000 18,000

1" = 9,000'



Legend

- Airport Property Boundary
- Municipal Boundary
- Interstate
- Highway
- Consolidated Departure Tracks
- Departure Tracks

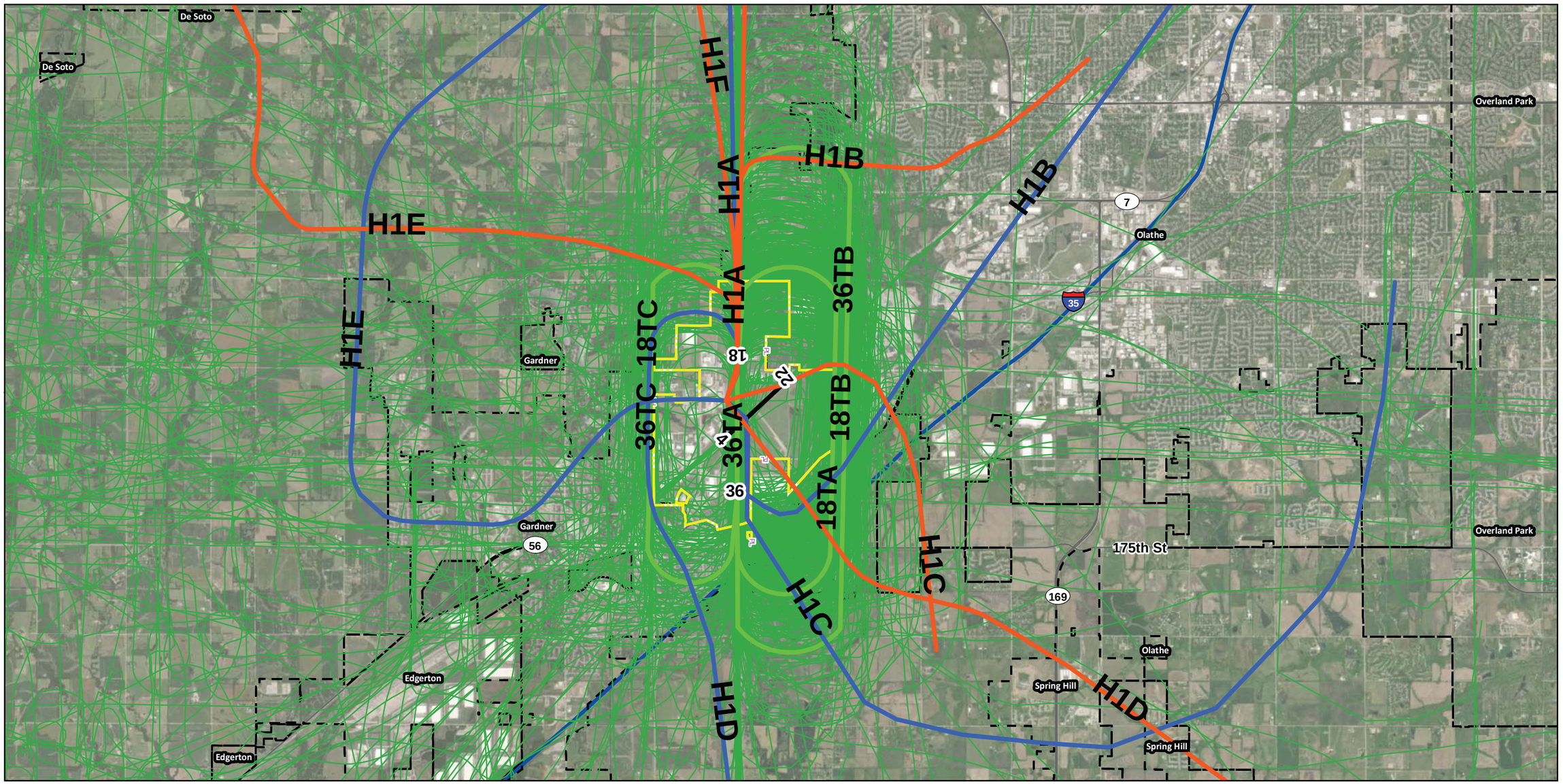
Source: Coffman Associates Analysis, ESRI Basemap Imagery, Accessed (2022), TIGER/Line

Radar Flight Tracks:
Novmeber 21, 2022 - December 2, 2022

N

0 6,000 12,000

1" = 6,000'



Legend

- Airport Property Boundary
- Municipal Boundary
- Interstate
- Highway
- Consolidated Helicopter Arrival
- Consolidated Helicopter Departure
- Consolidated Touch and Go
- Touch and Go

Source: Coffman Associates Analysis, ESRI Basemap Imagery, Accessed (2022), TIGER/Line

Radar Flight Tracks:
Novmeber 21, 2022 - December 2, 2022

N

0 6,000 12,000

1" = 6,000'

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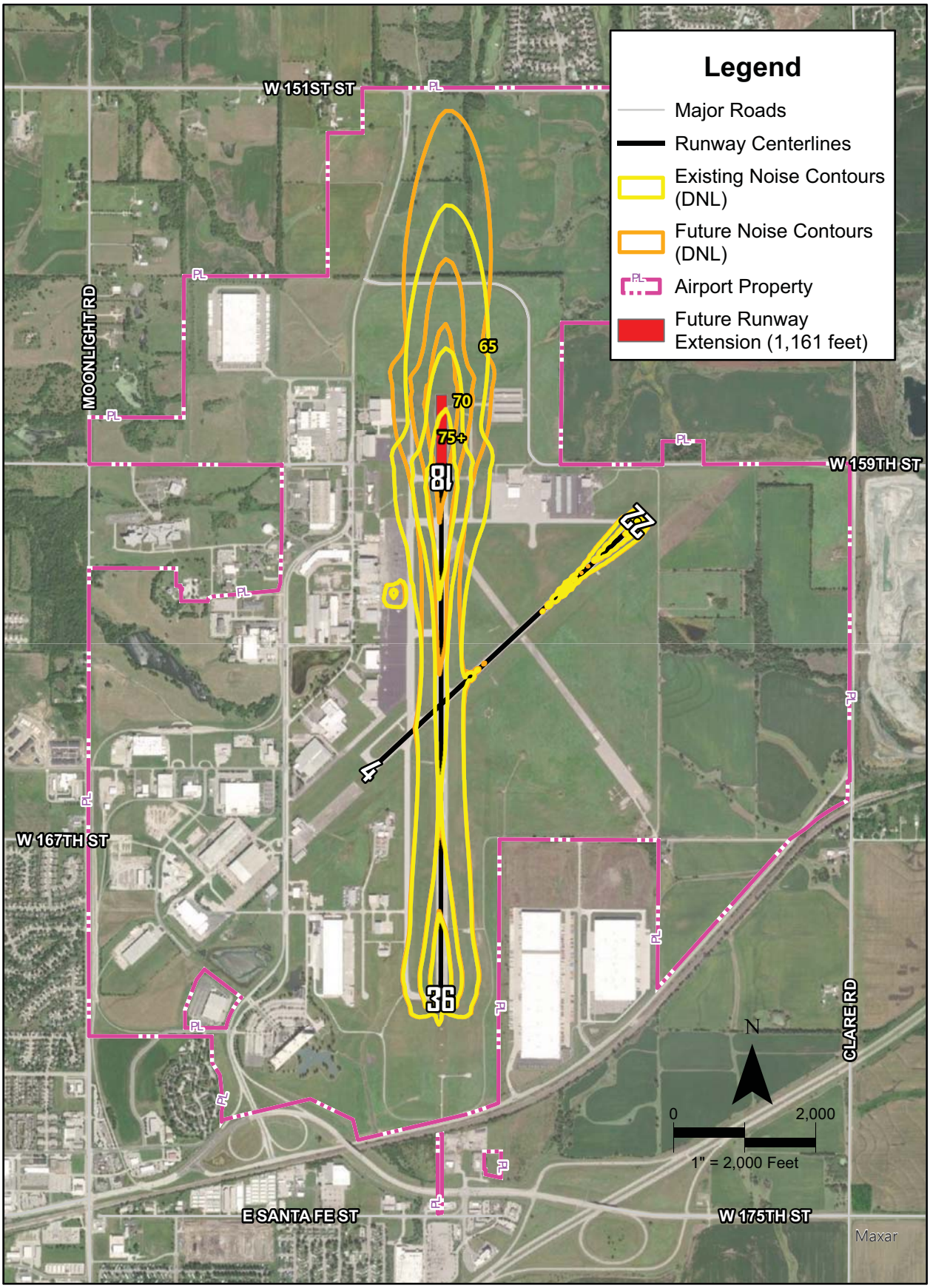
Legend
Major Roads
Runway Centerlines
Existing Noise Contours (DNL)
Future Noise Contours (DNL)
Airport Property
Future Runway Extension (1,161 feet)
W 151ST ST
MOONLIGHT RD
W 159TH ST
W 167TH ST
CLARE RD
E SANTA FE ST
W 175TH ST
65
70
75+
81
22
36
PL
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1" = 2,000 Feet
Maxar

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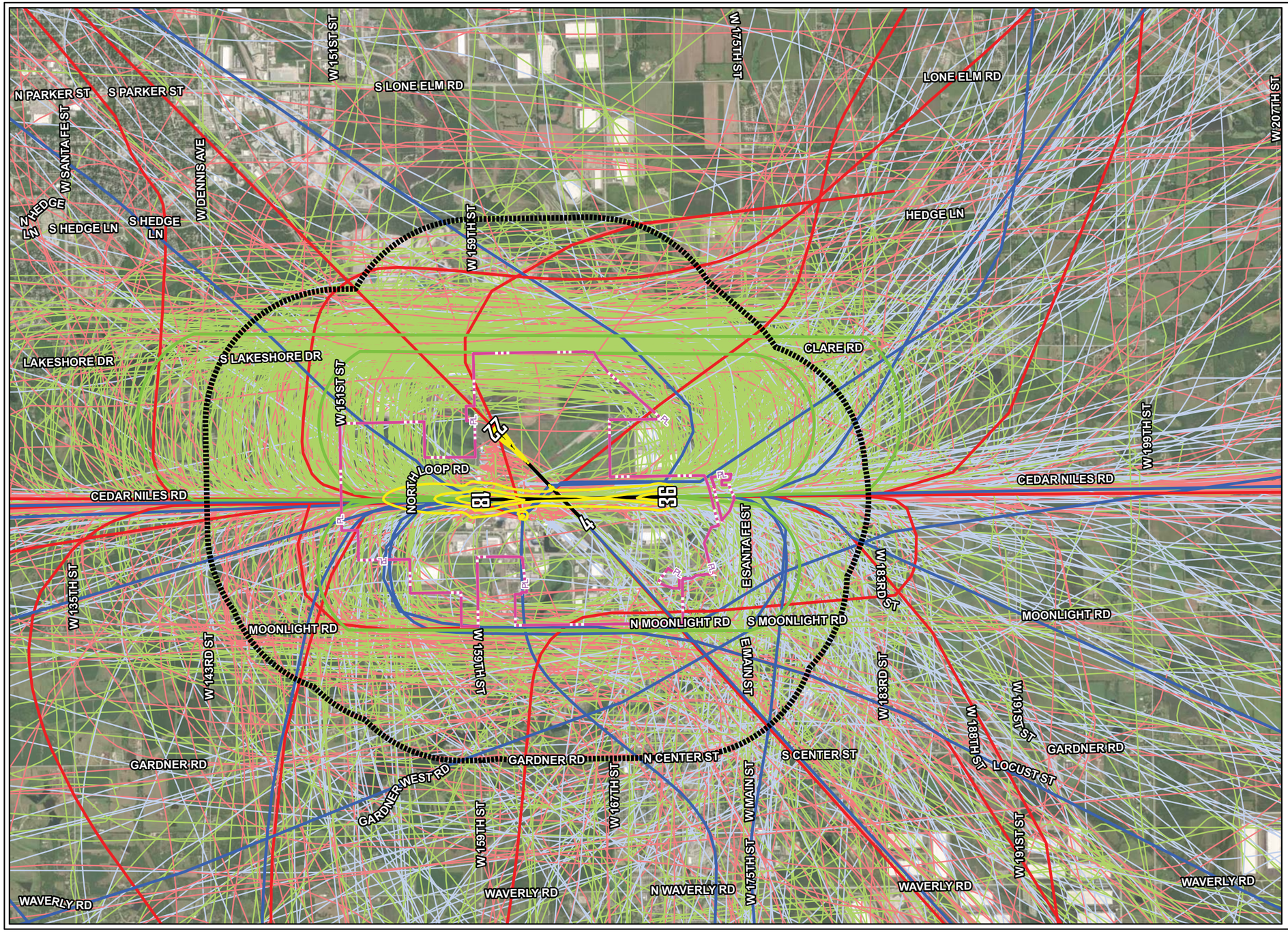

Legend

- Airport Property Line
- Airport Influence Area
- Major Roads
- Runway Centerlines
- Existing Noise Contours

Consolidated Flight Tracks

- Arrival Tracks
- Departure Tracks
- Touch & Go Tracks

ADSB Tracks

- Arrival Tracks
- Departure Tracks
- Touch & Go Tracks

Radar Flight Tracks:
November 21 - December 2, 2022.

Source:
ADSB Flight Tracks collected by Coffman Associates
Normalized Accident Points, NTSB
ESRI Basemap Imagery, 2022

N

0 4,000

1" = 4,000 Feet

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Chapter Three
IMPLEMENTATION AND DEFINITIONS

3.1 EFFECTIVE DATE

This Airport Land Use Compatibility Plan (ALUCP) for New Century AirCenter supersedes the previous plan – which was adopted on February 8, 1996 – and becomes effective on the date of its adoption by the Johnson County Board of County Commissioners (BOCC). Following adoption of this ALUCP, the previous plan shall not be used to make consistency determinations. If any portion of this ALUCP is invalidated by court action, other portions of this ALUCP remain unaffected and in full force.

3.2 LOCAL AGENCIES AND STAKEHOLDERS SUBJECT TO THIS ALUCP

Those affected most directly by this ALUCP include four groups of stakeholders: the JCAC, BOCC, local agencies, and project sponsors. The following briefly describes these stakeholders and their roles in using or implementing this ALUCP:

- **JCAC** refers to the Johnson County Airport Commission and airport staff. The role of the JCAC and airport staff is to operate, manage, and develop the county's airports. The JCAC also acts as the airport zoning commission on behalf of the BOCC.
- **BOCC** refers to the Johnson County Board of County Commissioners and staff. Among other duties, the BOCC is responsible for enacting, amending, and repealing local legislation; levying taxes and making appropriations; adopting budgets; and making appointments to certain offices, boards, and commissions, including the JCAC. The BOCC makes final judgments on land use applications and consistency determinations based on this ALUCP. County planning staff administers the zoning and land use review process related to projects within the one-mile airport influence area (AIA) and makes recommendations regarding such projects to the JCAC and BOCC.
- **Local agency** refers to any municipality with land use regulatory and permitting authority within one mile of the airport property boundary, including the City of Gardner and City of Olathe for this ALUCP.
- **Project sponsor** refers to any person or entity having a legal interest in a property – including a local agency, landowner, or nonresidential tenant – who submits an application to a local agency for review of a project proposed on such property. Project sponsors should refer to the compatibility policies and standards of this ALUCP in designing and building projects.

3.2.1 Authority to Regulate Land Uses

The authority of the JCAC and BOCC to establish zoning and development regulations within the AIA is granted in K.S.A. 3-307e, which states: "The airport commission…shall make such recommendations concerning type and boundary of zones and regulations to be adopted for public airports and all property within one (1) mile thereof. The board of county commissioners shall act on such recommendations and

may zone such public airports and the surrounding areas within one (1) mile except where such areas have already been zoned by city action. In such cases, city zoned areas shall keep such city zoning control except that any changes in existing city zoning must have the approval of the board of county commissioners. All airport zoning regulations adopted as provided for herein shall be administered by the airport commission, as directed by the board of county commissioners. The county commissioners shall exercise directly all the zoning authority granted by this act in the event an airport commission is not appointed or functioning."

Other potential impacts created by airports within their environs (e.g., air quality, water quality, resource impacts) are addressed by other federal and state laws and are not within the statutory authority for the JCAC to review.

3.3 EXEMPTIONS FROM FORMAL REVIEW

3.3.1 Existing Land Uses

Existing land uses are exempt from review under this ALUCP by the JCAC and BOCC. As noted in Section 3.7, an existing land use is defined as the actual use of land, or the proposed use of the land evidenced by approval to proceed with development or occupancy – provided the new occupancy remains within the same or a reduced level of occupancy as the most recent one – as of the effective date of this ALUCP.

If a modification to an existing land use is proposed after the effective date of this ALUCP and such proposed modification falls within K.S.A. 3-307e, then it is subject to consistency review under this ALUCP.

3.4 GOVERNING ALUCP

Land Use Policy Actions, Projects, and Development Actions are subject to this ALUCP unless the circumstances defined below apply.

3.4.1 Development Actions with Previous Airport Land Use Consistency Determinations

Development Actions reviewed and approved by the BOCC prior to the effective date of this ALUCP and determined to be consistent with the *1996 New Century AirCenter Compatibility Plan* do not require further review under this ALUCP, unless the proposed development is within the AIA and one or more of the following conditions occur:

1. Increase in the proposed residential density or nonresidential intensity, which would exceed the limits in **Table 4A**;
2. Alteration or reconstruction of a nonresidential use which expands a portion of the site or the floor area of the building, thereby increasing the maximum intensity limits (number of people per acre) or the floor area ratio to levels above existing levels;
3. Addition of a land use incompatible with this ALUCP;

4. A structure height increase which creates a hazard or obstruction, as determined by the Federal Aviation Administration (FAA); or
5. Addition of a characteristic that would create a hazard to air navigation (e.g., glare, plumes, wildlife attractants) or impact airport operations, as determined by the airport operator.
6. Additional Development Action(s) within the same Project.

If any of these changes are proposed, the planning or development application will be reviewed for consistency with this ALUCP following the process set forth in this ALUCP.

An ALUCP consistency determination does not expire, but is limited to the project plans and description submitted with its application, as reviewed by the JCAC and BOCC. Except as provided in Section 3.4.2, Development Actions that have not previously been reviewed and approved by the BOCC prior to the effective date of this ALUCP shall require a consistency determination under this ALUCP.

A consistency determination is transferable to a modified project only if there are no changes (as listed in any of the preceding bullets) and only if such modifications do not trigger K.S.A. 3-307e. Any change in these characteristics or any change that falls within K.S.A. 3-307e requires a new consistency determination. The previous consistency determination will be rescinded or amended if the JCAC and BOCC make a new determination.

3.4.2 Development Actions in the Review Process Before the Effective Date of this ALUCP

Any proposed Development Action within the AIA that has a completed application on file with the County Planning Office prior to the effective date of this ALUCP will be evaluated under the previous compatibility plan.

3.5 CONSISTENCY REVIEW AFTER ALUCP ADOPTION

This section describes the process for consistency determinations after the effective date of this ALUCP.

3.5.1 Consistency Determination Review Process

The application process for Land Use Plans and Projects within the AIA is set forth on **Exhibit 3A**. An applicant or local agency will submit an application for consistency determination to the JCAC through County Planning Staff for proposed Land Use Plans and Projects within the AIA as set forth in this ALUCP. Proposed Land Use Plans and Projects should be referred to the JCAC and County Planning Staff at the earliest reasonable point in time so that questions and concerns may be raised and addressed early in the review process. A pre-application meeting with the JCAC and County Planning Staff is recommended.

3.5.2 Review of Application for Completeness

Johnson County planning staff will determine if the application for consistency determination is complete and will notify the applicant/local agency of application completeness in writing. The completed application can then proceed through the approval process outlined on **Exhibit 3A**.

3.5.3 Public Notice

Johnson County Planning Staff will provide public notice 20 days before a scheduled hearing on any Land Use Plan or Project under consideration. Approximately one week prior to the JCAC meeting, an annotated agenda will be made available on the Johnson County Airport Commission website at https://www.jocogov.org/department/airport-commission/airport-commission.

3.5.4 Consistency Determination Result

The JCAC will conduct a public hearing and make a recommendation on the application. The JCAC may continue the hearing as needed and may request additional information. Following the public hearing, the application will be forwarded to the BOCC for its review and final decision. The BOCC may continue the hearing as needed and may remand the matter back to the JCAC for further consideration. Johnson County planning staff will notify the applicant and local agency of the BOCC's determination in writing in a final action letter with a copy of the adopted resolution indicating that the proposed Land Use Plan or Project is determined to be one of the following:

- **Consistent with all four compatibility factors (safety, noise[1], airspace, and overflight) as addressed in this ALUCP** – The local agency may proceed with its decision to approve the proposed land use plan, regulation, or project.
- **Consistent with approved stipulations**– The proposed Land Use Plan or Project may be approved subject to approved stipulations. Any approved stipulations shall be consistent with the provisions of this ALUCP.
- **Not consistent with this ALUCP** – Should the BOCC deny the application for consistency review, reasons for the denial will be provided to the applicant and local agency. Denial of an application shall not preclude submittal of a new application which addresses the reasons provided in the denial.

3.5.5 Findings as to Similar Uses

Cases may arise where a proposed development project involves a land use that is not explicitly provided for by the land use criteria addressed in Chapter Four of this document. In such cases, County Planning Staff shall review and recommend the land use(s) specified in the plan criteria the proposed development project most closely resembles. In making these determinations, County Planning Staff shall

[1] See Section 2.3.6

JOHNSON COUNTY KANSAS

CURRENT PROCESS

Application filed with appropriate City jurisdiction (Overland Park, Gardner, Olathe).

City Approval (both Planning Commission and City Council, if applicable for the Project).

Pre-application meeting with County Planning Staff and Airport Staff.

- This item may not occur at this time in the process or does not happen at all.

Application and plans forwarded to County Planning Department by either the City or the Applicant.

County Planning Staff and Airport Staff review the plans and send comments to the Applicant and City, if necessary, regarding Airport compatibility.

Date for the Johnson County Airport Commission (JCAC) Meeting set (generally the month following approval by the jurisdiction).

Legal Notification for JCAC Public Hearing prepared by County (must be published in the paper 20 days prior to JCAC meeting).

200-foot property owner legal notification letters sent by County (generally mailed 2 weeks before the JCAC meeting).

County Staff drafts a staff report, which is sent to the JCAC one week prior to the hearing with a recommendation based on land use compatibility with the airport.

JCAC Public Hearing (typically the 4th Wednesday of the Month). The JCAC will provide a recommendation to the Board of County Commissioners.

Application set for the Board of County Commissioner Meeting (typically 4 weeks after JCAC Meeting).

Board of County Commissioners Meeting where application is either approved, remanded back to the JCAC for further consideration, or denied.

Pursuant to K.S.A. 3-307e, changes in existing city zoning must be approved by the Board of County Commissioners of Johnson County, Kansas (BOCC), to be valid and effective. The following chart describes the review and approval process for city planning and zoning applications within 1-mile of Johnson County airports.

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consult the land use classification systems available through the American Planning Association and other authoritative sources. The BOCC shall make the final determination with respect to appropriate land use classification.

3.5.6 Properties Divided by Compatibility Zone Boundary

For the purpose of evaluating consistency with the compatibility criteria set forth in this ALUCP, a Development Action shall be evaluated for consistency based on the compatibility zone that covers the majority of the development (>50%). If the Development Action is equally divided between two compatibility zones, the Development Action will be evaluated for consistency based on criteria for the more restrictive zone. This does not limit or preclude review and consideration of the four compatibility factors for the entire development.

3.5.7 Land Use Compatibility Planning Coordination

An important purpose and function of the ALUCP is to coordinate airport land use compatibility planning across jurisdictions. To further that purpose, the following policies apply:

3.5.7.1 Notification and Review of Proposed Land Use Policies

Any proposed Land Use Policy Action that affects property within the AIA should be referred to the JCAC and BOCC for a determination of consistency. Local jurisdictions should notify Johnson County planning staff of every such proposed Land Use Policy Action in a timely manner to enable the proposed Land Use Policy Action to be reviewed.

3.5.7.2 Notification to Airport Management of Potential Aviation Hazards

Local governments should inform the Executive Director of the JCAC when a proposed Project:

- Has characteristics that may result in the creation of a hazard to air navigation, as discussed in **Chapter Four, Section 4.4**; or
- Has received a determination from the FAA that it will constitute a hazard or obstruction to air navigation.

3.5.7.3 Voluntary Advisory Review of Development Proposals

Local Agencies and applicants may submit development proposals within the AIA to Johnson County Planning Staff for voluntary, non-binding advisory review. County planning staff shall encourage local agencies and applicants to submit the following types of proposals for development within the AIA for voluntary advisory review:

- Commercial or mixed-use development of more than 100,000 square feet of gross building area
- Residential or mixed-use development that includes more than 50 dwelling units
- Public or private schools

- Hospitals or other inpatient medical care facilities
- Libraries
- Places of public assembly
- Communication towers, wind turbines, or other towers

3.6 ENSURING LONG-TERM COMPLIANCE WITH THIS ALUCP

Local Agency Land Use Plans and regulations should include provisions for long-term compliance with this ALUCP. Local Agencies should define the process they will follow when revising or amending land use plans and regulations, or when reviewing and approving land use projects within the AIA, to ensure they will be consistent with this ALUCP. Land Use Plans and regulations – including zoning, subdivision, and building regulations – should include standards for reviewing land use projects for consistency with this ALUCP.

3.7 DEFINITIONS

3.7.1 **Affidavit of Interest:** A written notice, following the model form in **Appendix C, Exhibit C-1**, in conjunction with the recording with the Johnson County Register of Deeds of any approved development plan or subdivision plat within the one-mile AIA. A statement providing the same notice is also placed on the recorded final plan or plat.

3.7.2 **Airport Hazard:** Any structure, tree, or use of land that obstructs the airspace required for the flight of aircraft in landing at or taking off from any airport, or is otherwise hazardous to such landing or taking off of aircraft.

3.7.3 **Airport Influence Area (AIA):** The area encompassed by the planning boundaries established by the ALUCP for New Century AirCenter in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses. The AIA constitutes the referral area within which certain airport actions and land use actions are subject to review to determine consistency with this ALUCP. For the purposes of this ALUCP, the AIA is the area within a one-mile radius of the airport property boundary, which reflects the JCAC's jurisdictional authority and boundary.

3.7.4 **Airport Layout Plan (ALP):** A scaled drawing, prepared in conformance with criteria promulgated by the ***FAA***, that depicts existing and proposed airport facilities; their location(s) on an airport; and pertinent clearance and dimensional information. The airport property boundary, as shown on the FAA-approved ALP, is used as the basis for this ALUCP. Note: The airport property boundary may change as JCAC acquires or liquidates property.

3.7.5 **Airport Master Plan:** A long-range feasibility plan for development of an airport, including descriptions of the data and analyses on which the plan is based.

3.7.6 **Airport Zoning Commission:** The commission duly appointed by the Board of County Commissioners and charged with airport planning and zoning duties. As of the effective date of this ALUCP, the Johnson County Airport Commission is the Airport Zoning Commission for Johnson County.

3.7.7 **Airspace Protection Area:** The area beneath the ***airspace protection surfaces*** for the airport. Airspace protection primarily involves limitations on the height of objects on the ground near the airport. Other concerns include activities that can cause electronic or visual impairments to navigation or attract wildlife.

3.7.8 **Airspace Protection Surfaces:** Imaginary surfaces in the airspace surrounding airports, defined in accordance with criteria set forth in ***14 CFR Part 77***, Subpart C. An object is an obstruction to air navigation if it is of greater height than any of the imaginary surfaces.

3.7.9 **Aviation-Related Use:** Any facility or activity directly associated with the air transportation of persons or cargo; or the operation, storage, or maintenance of aircraft at an airport or heliport. These uses specifically include runways, taxiways, and their associated protection areas, as defined in accordance with ***FAA*** criteria, together with aircraft parking aprons; hangars; fixed-base operations facilities; terminal buildings; and related facilities.

3.7.10 **Code of Federal Regulations (CFR) Part 77:** The part of the Federal Aviation Regulations (Title 14 of the Code of Federal Regulations) that deals with objects affecting navigable airspace in the vicinity of airports. ***14 CFR Part 77*** establishes standards for identifying obstructions to navigable airspace; sets forth requirements for notice to the ***FAA*** of certain proposed construction or alteration activities; and provides for aeronautical studies of obstructions to determine their effect on the safe and efficient use of airspace.

3.7.11 **Compatibility:** The degree to which land uses or types of development can coexist or integrate.

3.7.12 **Conditional Use:** A use permitted only upon showing that such use in a specified location will comply with all the conditions and standards for the location; or operation of such use, as specified in the local agency's regulations and authorized by the permitting authority.

3.7.13 **Development Actions:** All changes in existing city zoning within one mile of New Century AirCenter under K.S.A. 3-307e, including, but not limited to, rezonings; conditional use permits; special use permits; preliminary and final plats; and preliminary and final development plans. Development Actions are all actions and activities included in the definition of ***Local Agency Actions, Regulations, and Permits***, and/or ***Projects***.

3.7.14 **Density:** The average number of persons or dwelling units per unit of land. Density is usually expressed as "persons per acre" or "dwellings per acre." (See also: ***Intensity***)

3.7.15 **Dwelling:** A building, or a portion thereof, used or designed and intended to be used for human habitation.

3.7.16 **Existing Land Use:** The actual use of land; or the proposed use of the land, evidenced by approval to proceed with development or occupancy (provided the new occupancy remains within the same or a reduced level of occupancy as the most recent one), as of the effective date of this ALUCP.

3.7.17 **FAA:** The Federal Aviation Administration.

3.7.18 **Infill:** Development of vacant land (as defined specifically for this ALUCP) within established communities or neighborhoods that: (1) are already served with streets, water, sewer, and other infrastructure; and/or (2) may be comprised of existing land uses inconsistent with the compatibility criteria in this ALUCP.

3.7.19 **Intensity:** A measure of the concentration of nonresidential development in a given area. Intensity can be expressed as the number of people per acre using a net acreage calculation. See **Appendix C, Exhibit C-3**, for guidance on calculating land use intensity.

3.7.20 **Land Use Jurisdiction:** Johnson County and the municipalities with land use regulatory jurisdiction within each one-mile ***Airport Influence Area***.

3.7.21 **Land Use Plan:** For the purpose of this ALUCP, this term means any comprehensive plan, community plan, or specific plan; zoning ordinance; building regulation; land use policy document; or implementing ordinance, or any change/amendment thereto.

3.7.22 **Land Use Policy Action:** Adoption of any city or county comprehensive plan, specific plan, community plan, or zoning ordinance (including zoning maps and/or text) or any amendment to a city or county general plan, specific plan, community plan, or zoning ordinance (including zoning maps and/or text). A Land Use Policy Action also refers to any school district, community college district, or special district facilities' master plans or amendments to such master plans. Also see definition of ***Project***.

3.7.23 **Local Agency:** A land use jurisdiction, school district, or other special district subject to the provisions of this ALUCP. The JCAC and BOCC do not have authority over land use actions of federal agencies or Native American tribes.

3.7.24 **Local Agency Actions, Regulations, and Permits:** Any human-caused change to improved or unimproved real property that requires a discretionary permit or approval from any ***Local Agency,*** or that is sponsored and proposed to be built by a ***Local Agency***, developer, or the real property owner. ***Actions*** include, but are not limited to, construction of buildings or other structures; mining; dredging; filling; grading; paving; an excavation or drilling operation; and/or storage of materials.

3.7.25 **Nonconforming Use, Building, Lot, or Yard:** A use, building, lot, or yard that does not – by reason of design, use, or established dimensions – conform to the regulations for the district in which the use, building, lot, or yard is situated; which complied with the applicable regulations at the time it was established; and which existed as such on the date of adoption of these regulations.

3.7.26 **Open Space:** Any parcel or area of land or water essentially unimproved and set aside, dedicated, designated, or reserved for public or private use or enjoyment; or for the use and enjoyment of owners or occupants of land adjoining or neighboring such area.

3.7.27 **Planned Zoning:** Similar to conventional zoning, with the addition of a site development plan review to the process. Uses permitted in the zoning district may be developed only after review and approval by the governing body of a specific plan for the development of the site. Planned Zoning encourages more flexible development of land compared to the rigidity associated with conventional zoning. Concepts such as transfer of development rights, zero-lot line development, and cluster housing are typically developed under Planned Zoning.

3.7.28 **Primary Flight Corridor:** A 500-foot-wide open strip of land located along the extended centerline of the airport runway. It is considered important to discourage development within this area due to the area's increased potential for accidents.

3.7.29 **Project:** Any land use matter, either publicly or privately sponsored, that is subject to the provisions of this ALUCP. For the purposes of this ALUCP, this term means any action, regulation, or permit.

3.7.30 **Public Airport:** For the purposes of this ALUCP, public airport is defined as New Century AirCenter.

3.7.31 **Residential Density:** For airport compatibility purposes, the chief distinguishing feature among residential land uses is the number of dwelling units per acre. To be compatible with airport activities, the number of dwelling units per acre should not exceed the criterion specified for the compatibility zone where the use would occur.

3.7.32 **Runway Protection Zone (RPZ):** A trapezoidal area located at ground level beyond each end of a runway. Ideally, each RPZ should be entirely clear of all objects. The dimensions for the RPZ are taken from the respective airport's ALP or diagram and are based on FAA Advisory Circular (AC) 150/5300-13B, *Airport Design*.

3.7.33 **Special Use:** See ***Conditional Use***.

3.7.34 **Touch-and-Go:** Refers to an aircraft that lands and makes an immediate takeoff without coming to a full stop or exiting the runway. These operations are normally associated with training and are considered local operations.

3.7.35 **Zoning (Conventional):** An exercise of the police powers of the state, as delegated to local governments, designating the uses permitted on each parcel of land within the zoning jurisdiction.

Chapter Four

COMPATIBILITY POLICIES AND CRITERIA

4.1 AIRPORT COMPATIBILITY ZONES AND CRITERIA

This chapter presents criteria and maps relating to airport compatibility factors and zones, including safety; airspace protection; overflights; and other hazards, such as wildlife attractants and flight interference.

4.2 SAFETY COMPATIBILITY CRITERIA

The overall objective of safety compatibility criteria is to minimize the risks associated with potential aircraft accidents. The most fundamental safety compatibility component is to provide for the safety of people and property on the ground in the event of an aircraft accident near an airport.

4.2.1 Safety Zones

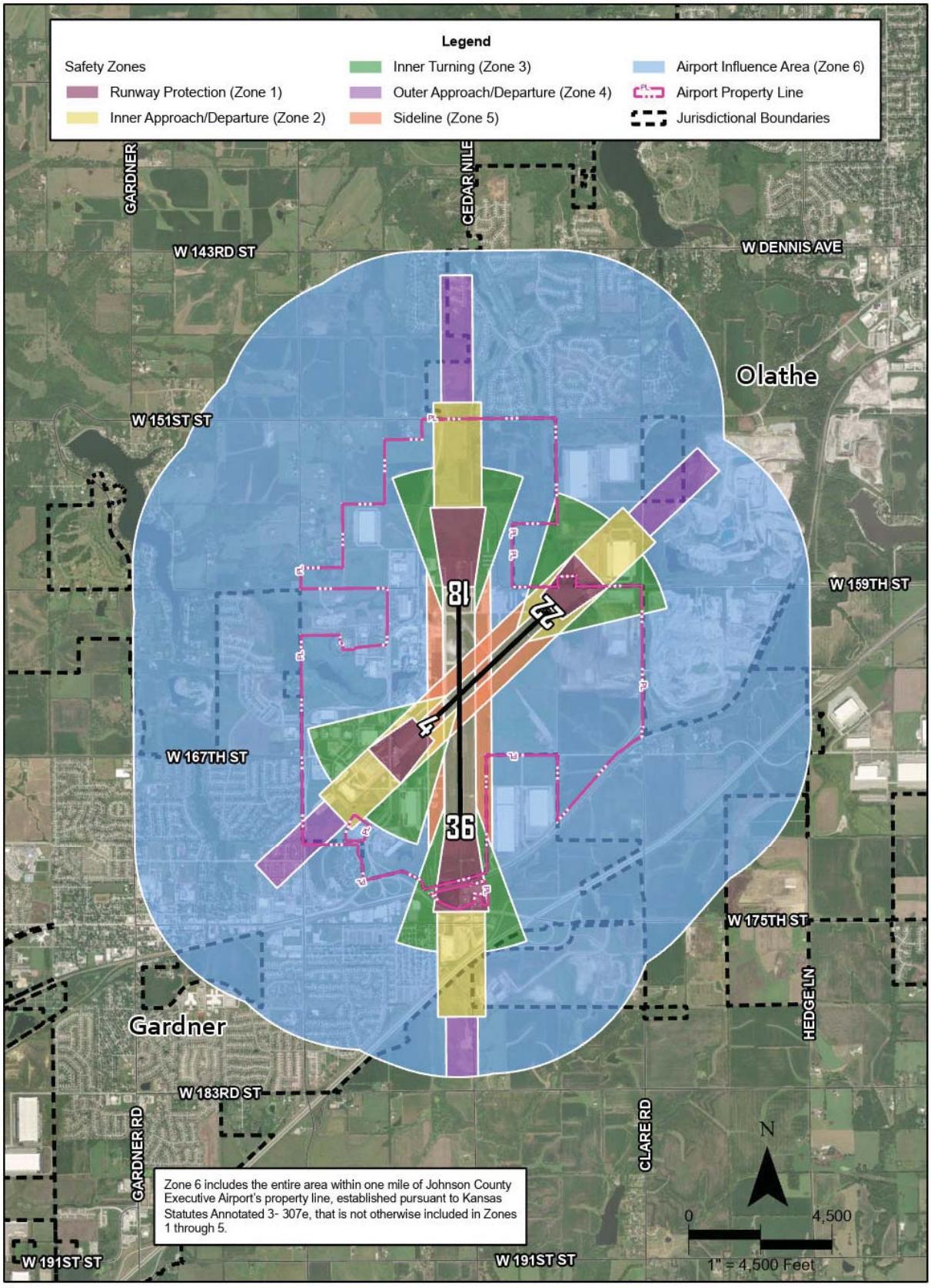
The spatial distribution of physical risk for an aircraft accident is accounted for by the shapes and sizes of safety compatibility zones. FAA Advisory Circular (AC) 150/5190-4B, *Airport Land Use Compatibility Planning*,[1] provides guidance on the application of land use policies in each safety zone. The safety zones and maps included in this Airport Land Use Compatibility Plan (ALUCP) reflect the specific operating characteristics of the airport (type of aircraft activity, runway length, traffic pattern, etc.). Safety zones are depicted on **Exhibit 4A**. The safety compatibility policies of this ALUCP work in tandem with the airspace protection policies described in **Section 4.3.**

There are six safety zones,[2] which include:

Zone 1 – Runway Protection Zone (RPZ): RPZs are trapezoidal areas located at ground level beyond each end of a runway. Ideally, each RPZ should be entirely clear of all objects. The dimensions for the RPZ are taken from the respective airport's airport layout plan (ALP) or diagram and are based on FAA AC 150/5300-13B, *Airport Design*.[3] The accident risk level is considered very high within RPZs, comprising approximately 20 to 21 percent of accidents at general aviation airports.

Zone 2 – Inner Approach/Departure Zone (IADZ): This zone encompasses areas that are overflown at low altitudes, typically only 200 to 400 feet above runway elevation. The accident risk level is considered high within the IADZ, comprising approximately 10 percent of general aviation aircraft accidents.

[1] https://www.faa.gov/documentLibrary/media/Advisory_Circular/150_5190_4b_Land_Use_Compatibility.pdf
[2] For additional information regarding the safety zones, see **Appendix B** and Code of Federal Regulations Title 14 Part 77 – Safe, Efficient Use, and Preservation of the Navigable Airspace: https://www.ecfr.gov/current/title-14/chapter-I/subchapter-E/part-77
[3] https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5300-13B-Airport-Design.pdf



Source:
ALUCP Safety Zones, CALTRANS Airport Land Use Planning Handbook
ESRI Basemap Imagery, 2022

Zone 3 – Inner Turning Zone (ITZ): This zone encompasses locations where aircraft are typically turning from the base to final approach legs of the standard traffic pattern and are descending from traffic pattern altitude. The ITZ also includes the area where a departing aircraft normally completes the transition from takeoff power and flap settings to climb mode and begins to turn to its enroute heading. The accident risk level is considered moderate to high within the ITZ, comprising approximately seven percent of general aviation aircraft accidents.

Zone 4 – Outer Approach/Departure Zone (OADZ): The OADZ is situated along the extended runway centerline beyond the IADZ. Approaching aircraft are usually at less than traffic pattern altitude in the OADZ. The accident risk level is considered moderate within the OADZ, comprising approximately five percent of general aviation aircraft accidents.

Zone 5 – Sideline Zone (SZ): The SZ encompasses the close-in areas lateral to runways. The primary risk in the SZ is from aircraft losing directional control on takeoff. The accident risk level is considered low to moderate within the SZ, comprising approximately five percent of general aviation aircraft accidents.

Zone 6 – Area Within One Mile of Airport Property: Zone 6 includes the entire area within one mile of New Century AirCenter's property line, established pursuant to Kansas Statutes Annotated 3-307e, that is not otherwise included in Zones 1 through 5. The aircraft accident risk level is considered low in Zone 6.

4.2.2 Safety Zone Criteria

The safety zone land use compatibility standards in **Table 4A** define the development of land uses that could pose particular hazards to the public or to vulnerable populations in case of an aircraft accident. **Table 4A** also provides a breakdown of the intensity criteria for the compatibility zones, and **Appendix C, Exhibit C-2**, provides the methodology for calculating land use intensity.

The following definitions are intended to clarify land uses referenced in **Table 4A**:

Agricultural Use[4]**:** The use of land, building(s), or structure(s) for the raising of crops; animal husbandry; dairying; pasturage; general farming; truck farming; cultivation of field crops; orchards; groves; raising fish, birds, or poultry; wholesale tree farms; wholesale shrub farms; wholesale plant nurseries; and accessory uses necessary for the carrying out of farming operations, including structures for storage, processing, and sale of products raised on the premises. For the purposes of these regulations, the processing and sale of products raised on the premises shall not include the following:

1. The operation or maintenance of commercial greenhouses, nurseries, or hydroponic farms operated at retail.
2. Wholesale or retail sales as an accessory use, unless the same are permitted by these regulations.

Day-Care Center[4]**:** An agency, organization, or individual providing daytime care to (i) children not related by blood, marriage, or adoption and not the legal wards or foster children of the attendant adult; or (ii) adults not related by blood or marriage and not the legal wards of the attendant adult.

[4] As defined in Article 2 – Definitions in the Johnson County Zoning & Subdivision Regulations (May 27, 2023)

TABLE 4A | Compatibility Criteria Matrix

Dwelling Units per Acre[1]	Max. Nonresidential Intensity[2]	Allow	Allow With Conditions	Not Recommended[3]	Other Development Conditions[4]
Zone 1: Runway Protection					
• None	• None	• None	• None	• All new structures and residential land uses • Parking lots, streets, roads	• Not Applicable
Zone 2: Inner Approach/Departure					
• 1 d.u. per 10 acres	• 40 persons per acre	• Agriculture; non-group recreational uses • Warehouses, mini-storage • Low-intensity light industrial uses; auto, aircraft, marine repair services	• Nonresidential uses limited to activities that attract few people • Residential uses limited to very low density	• Major shopping centers, theaters, meeting halls, and other assembly facilities • Labor-intensive industrial uses • Children's schools, day-care centers, hospitals, nursing homes • Stadiums, recreation facilities • Storage of combustible materials (e.g., non-aviation aboveground fuel storage greater than 500 gallons)	• Affidavit of Interest and plat notation[4,5] • Locate structures maximum distance from extended runway centerline • Minimum NLR of 45 dB residences (including mobile homes) and office buildings[6] • Airspace review required in accordance with 14 CFR Part 77.9 (FAA Form 7460)[7] • Open Space in accordance with Section 4.2.4
Zone 3: Inner Turning					
• 1 d.u. per 2 acres	• 70 persons per acre	• Uses allowed in Zone 2 (subject to height limitations for airspace protection) • Greenhouses • Light industrial, vehicle repair services	• Residential uses to very low densities • Industrial, office, and other commercial uses to low intensities	• Major shopping centers, theaters, meeting halls, and other assembly facilities • Children's schools, day-care centers, hospitals, nursing homes • Stadiums, recreation facilities • Storage of combustible materials (e.g., non-aviation aboveground fuel storage greater than 500 gallons)	• Affidavit of Interest and plat notation[4,5] • Locate structures maximum distance from extended runway centerline • Minimum NLR of 45 dB residences (including mobile homes) and office buildings[6] • Airspace review required in accordance with 14 CFR Part 77.9 (FAA Form 7460)[7]
Zone 4: Outer Approach/Departure					
• 1 d.u. per 2 acres	• 100 persons per acre	• Uses allowed in Zone 2-3 (subject to height limitations for airspace protection) • Low-intensity restaurants, retail, industrial	• Residential uses to low density • High-intensity retail or office buildings	• Theaters, meeting halls, and other assembly facilities • Children's schools, day-care centers, hospitals, nursing homes • Stadiums , recreation facilities • Storage of combustible materials (e.g., non-aviation aboveground fuel storage greater than 500 gallons)	• Affidavit of Interest and plat notation[4] • Minimum NLR of 45 dB in residences (including mobile homes) and office buildings[6] • Airspace review required in accordance with 14 CFR Part 77.9 (FAA Form 7460)[7] • Open Space in accordance with Section 4.2.4

(Continues)

TABLE 4A | Compatibility Criteria Matrix (continued)

Dwelling Units per Acre[1]	Max. Nonresidential Intensity[2]	Allow	Allow With Conditions	Not Recommended[3]	Other Development Conditions[4]
Zone 5: Sideline					
• 1 d.u. per acre	• 70 persons per acre	• Uses allowed in Zone 2-4 (subject to height limitations for airspace protection) • All common aviation-related activities, provided that FAA height limit criteria are met	• Nonresidential uses, similar to Zone 3 • Residential uses limited to very low density	• Stadiums, recreation facilities • Children's schools, daycare centers, hospitals, nursing homes	• Affidavit of Interest and plat notation[4,5] • Uses on airport subject to FAA standards • Airspace review required in accordance with 14 CFR Part 77.9 (FAA Form 7460)[7]
Zone 6: Area Within One Mile of Airport Property					
• No Limit	• 200 persons per acre	• Uses allowed in Zone 2-5 (subject to height limitations for airspace protection) • Residential uses; however, noise and overflight impacts should be considered where ambient noise levels are low	• Children's schools, daycare centers, hospitals, and nursing homes • Outdoor stadiums and similar uses with very high intensities	• None	• Affidavit of Interest and plat notation[4] • Airspace review required in accordance with 14 CFR Part 77.9 (FAA Form 7460)[7]

Notes:

1 Residential development containing more than the indicated number of dwelling units per gross acre (d.u./ac) is not recommended. Clustering of units is encouraged. Gross acreage includes the property at issue plus a share of adjacent roads and any adjacent, permanently dedicated, open lands.

2 Usage intensity calculations include the peak number of people per gross acre (e.g., employees, customers/visitors, etc.) who may be on the property at a single point in time, whether indoors or outside. Gross acreage includes the property at issue plus a share of adjacent roads and any adjacent, permanently dedicated, open lands. See **Appendix C** for more detailed information on calculating usage intensity.

3 The uses listed here are not recommended regardless of whether they meet the intensity criteria, subject to applicable state or federal law. In addition to these uses, other uses that are normally permitted may not be recommended in the respective compatibility zones because they do not meet the usage intensity criteria.

4 Additional resources may be found on the Johnson County Planning Department's website: https://www.jocogov.org/department/planning.

5 As part of certain real estate transactions involving residential property within any compatibility zone (i.e., anywhere within one mile of the airport property line), disclosure of information regarding airport proximity and the existence of aircraft overflights is strongly encouraged. Affidavit of Interest and plat notation requirements indicated for specific compatibility zones apply only to new development and to reuse if discretionary approval is required.

6 NLR = Noise Level Reduction: the outside-to-inside sound level attenuation the structure provides.

7 Information regarding FAA airspace review filing requirements may be found on the FAA's Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) portal: https://oeaaa.faa.gov/oeaaa/external/portal.jsp

8 Established pursuant to Kansas Statutes Annotated 3-307e.

Legend:

RPZ = Runway Protection Zone
IADZ = Inner Approach/Departure Zone
TPZ = Traffic Pattern Zone
SZ = Sideline Safety Zone
ITZ = Inner Turning Zone
OADZ = Outer Approach/Departure Zone

Hospital[5]: An establishment providing physical or mental health services; inpatient or overnight accommodations; and medical or surgical care of the sick or injured. (Includes sanitariums.)

Nursing Home[4]: See *Residential Care Institution.*

Children's School[4]: See *School of General Instruction*.

School of General Instruction[4]: Any public, private, or parochial learning facility including any school commonly referred to as a grammar or elementary school; a junior high or middle school; or a high school and which offers courses in general instructions at least five days per week and seven months per year which is lawfully licensed by the State of Kansas, accredited by the State Board of Education or, where required, certified as a preschool by the Kansas Department of Health and Environment.

Recreation Facility[4]: Any place designed or equipped for the conduct of recreational sports, leisure time activity or other customary and usual recreational activities.

Residential Care Institution[4]: Any residential institution where social and personal care are provided for children, the aged, or special categories of individuals with some limits on ability for self-care, including medical hospices; extended care facilities; convalescence hospitals; nursing homes; and residential institutions for mentally ill individuals who have either not been evaluated by a licensed provider or who have been evaluated by a licensed provider and such provider has determined that the mentally ill individual is dangerous to others, or such provider has determined that the mentally ill individual is unsuitable for group home placement. For the purposes of this definition, a group home shall not be a licensed provider for the purposes of evaluating or approving placement of a mentally ill individual in a group home.

Stadium[5]: A large open or enclosed space that is used for games or major events and is partially or completely surrounded by tiers of seats for spectators.

4.2.3 Infill Development

Where existing development is not in conformance with the criteria for the zone set forth in this ALUCP, additional infill development of similar land uses may be allowed to occur, even if such land uses are restricted elsewhere in the zone.

This exception does not apply within Zone 1 (RPZ). Non-conforming infill development is not recommended in Zone 1 (RPZ).

[4] As defined in Article 2 – Definitions of the Johnson County Zoning & Subdivision Regulations (May 27, 2023)
[5] As defined in A Planner's Dictionary, American Planning Association PAS Report 521/522 by Michael Davidson and Fay Dolnick (April 1, 2004)

A. A parcel can be considered for infill development if it meets all the following criteria, plus the applicable provisions of either subsection (B) or (C) below:

1) The parcel size is no larger than 10.0 acres;

2) At least 65 percent of the site's perimeter is bounded (disregarding roads) by existing uses similar to or more intensive than those proposed; for projects adjacent to an undeveloped parcel, the closest developed lot may be used;

3) The proposed project would not extend the perimeter of the area defined by the surrounding, already developed, incompatible uses;

4) Further increases in the residential density, nonresidential usage intensity, and/or other incompatible design or usage characteristics (e.g., through use permits; density transfers; addition of second units on the same parcel; height variances; or other strategies) are prohibited; and

5) The area to be developed cannot previously have been set aside as open land in accordance with policies contained in this compatibility plan unless replacement open land is provided within the same compatibility zone.

B. For residential development, the average development density (dwelling units per gross acre [d.u./ac]) of the project site shall not exceed the average density represented by all existing lots that lie fully or partially within a distance of 300 feet from the boundary of the parcel to be divided.

C. For nonresidential development, the average land use intensity (the number of people per gross acre) of the site's proposed use shall not exceed the lesser of:

1) The average intensity of all existing uses that lie fully or partially within a distance of 300 feet from the boundary of the proposed development; or

2) Double the intensity permitted in accordance with the criteria for that location, as indicated in the compatibility criteria matrix (**Table 4A**).

D. Infill development on some parcels should not enable additional parcels to then meet the qualifications for infill. The intent is that parcels eligible for infill should be determined just once; thus, in order for the Johnson County Airport Commission (JCAC) to consider proposed development under these infill criteria, the entity having land use authority should first identify the qualifying locations in its future land use plan or other adopted planning document. The burden for demonstrating that a proposed development qualifies as infill rests with the affected land use jurisdiction and/or project proponent.

4.2.4 Open Spaces

New developments should provide Open Spaces in order to achieve the densities supported by this plan.

Open Spaces should be located in Safety Zones 2 and 4 and should be free of abrupt elevation changes and objects – such as structures, overhead lines, and large trees and poles – that might send a plane out of control at the last moment of an emergency landing. Additionally, these areas should be free of uses or facilities that would be gathering spots for children, people with limited mobility, or large groups of people.

Open Spaces may include natural open space areas, such as woodland; floodplain; streamway corridors; parkland (natural or passive recreational areas only); and other open areas that are free of facilities or locations where large groups of people may congregate.

4.2.5 Mixed-Use Projects

For a proposed project with a mix of residential and nonresidential uses, residential density is converted to intensity and the total number of residential occupants is limited to half the maximum nonresidential intensity specified in **Table 4A**. For live/work projects, each dwelling unit is to be counted towards density, and only the square footage devoted to nonresidential use is to be used in the calculation of nonresidential intensity. When converting residential density to intensity, the number of people per household for the jurisdiction – as available from the U.S. Census Bureau – should be used.

4.3 AIRSPACE PROTECTION

The objective of airspace protection is to avoid development of land use conditions that can increase the risk of an accident occurring by posing hazards to flight. The particular hazards of concern are: (1) airspace obstructions; (2) wildlife hazards, particularly bird strikes; and (3) land use characteristics that pose other potential hazards to flight by creating visual or electronic interference with air navigation.

Tall structures, trees, and other objects may constitute hazards to aircraft in flight, particularly when located near airports or on high terrain. Federal regulations establish the criteria for evaluating potential obstructions. These regulations also require that the FAA be notified of proposals for creation of certain objects; the FAA conducts aeronautical studies of these objects and determines if they would be hazards. It is important to note that the FAA does not have the authority to prevent their creation. During this process, the FAA may issue a Determination of No Hazard to Air Navigation, which addresses airport operations only and does not apply to land use decisions. The purpose of compatibility plan airspace protection policies – together with regulations established by local land use jurisdictions and the state government – is to ensure that hazardous obstructions to the navigable airspace do not occur.

4.3.1 Basis for Height Limits

The criteria for limiting the height of structures, trees, and other objects in the vicinity of an airport shall be based upon Title 14 Code of Federal Regulations (14 CFR) Part 77, Subpart C, and applicable airport design standards published by the FAA. Airspace plans depicting the critical areas for airspace protection were depicted previously on **Exhibit 2J**.

4.3.2 JCAC Review of Height of Proposed Objects

The height of all objects shall be limited in accordance with applicable FAA criteria, including 14 CFR Part 77, and/or FAA airport design standards. All proposed construction and alteration projects must demonstrate compliance with the height limitations set forth by FAA criteria, including 14 CFR Part 77. This can be accomplished through utilization of the FAA Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) Notice Criteria Tool to determine if the structure could have an impact on navigable airspace. The OE/AAA tool can be accessed at https://oeaaa.faa.gov/oeaaa/external/portal.jsp.

4.3.3 Other Flight Hazards

New land uses that may cause visual, electronic, or increased bird strike hazards to aircraft in flight shall not be permitted within any airport's influence area. Specific characteristics of land use proposals to be evaluated include:

A. Glare or distracting lights that could be mistaken for airport lights;

B. Sources of dust, steam, or smoke that may impair pilot visibility;

C. Sources of electrical interference with aircraft communications or navigation; and

D. Any proposed use – especially landfills and certain agricultural uses – that creates an increased attraction for large flocks of birds. (Refer to FAA AC 150/5200-33C, *Hazardous Wildlife Attractants On or Near Airports*,[6] and AC 150/5200-34A, *Construction or Establishment of Landfills Near Public Airports*,[7] or the latest versions of these advisory circulars.)

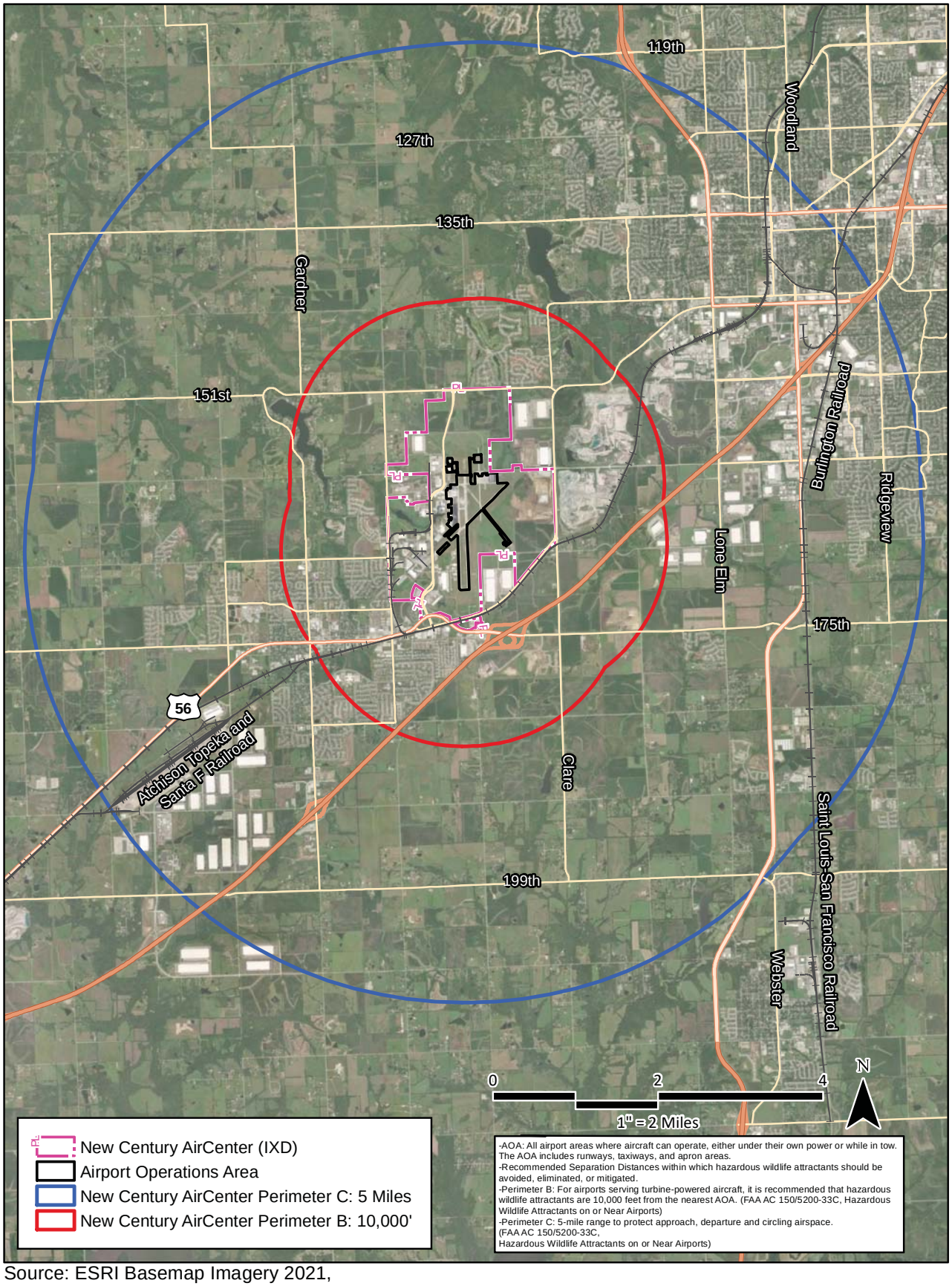
4.3.4 Wildlife Hazard Zone

Wildlife Hazard Maps are depicted on **Exhibit 4B**. The recommended perimeters and separation distances within which hazardous wildlife attractants should be avoided, eliminated, or mitigated are as follows:

- **Perimeter A:** AOA (Air Operations Area). The AOA is defined as "any area of an airport used or intended to be used for landing, takeoff, or surface maneuvering of an aircraft. An air operations area includes such paved areas or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiways, or apron."[8]
- **Perimeter B:** For airports serving turbine-powered aircraft, it is recommended that hazardous wildlife attractants remain 10,000 feet from the nearest AOA.
- **Perimeter C:** A five-mile range to protect approach, departure, and circling airspace.

(Refer to FAA AC 150/5200-33C, *Hazardous Wildlife Attractants On or Near Airports*, or the latest version.)

[6] https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5200-33C.pdf
[7] https://www.faa.gov/documentLibrary/media/Advisory_Circular/150_5200_34a.pdf
[8] Page A-1 of Appendix A, FAA AC 150/5200-33C



Source: ESRI Basemap Imagery 2021,
Johnson County AIMS (accessed 07/2022)

4.3.5 FAA Notification

Proponents of a project involving objects that may exceed a 14 CFR Part 77 surface shall notify the FAA, as required by 14 CFR Part 77, Subpart B. (Notification to the FAA under 14 CFR Part 77, Subpart B, is required, even for certain proposed construction that does not exceed the height limits allowed by Subpart C of the regulations. Refer to **Appendix B** for the specific FAA notification requirements.)

A. Local jurisdictions shall inform project proponents of the requirements for notification to the FAA.

B. FAA review is required for any proposed structure more than 200 feet above the surface level of its site. All such proposals shall also be submitted to the JCAC for review, regardless of where they would be located in the county.

C. Any project submitted to the JCAC for airport land use compatibility review for which FAA notification is required shall include a copy of the 14 CFR Part 77 notification to the FAA, as well as the FAA findings, if available.

In addition, FAA notification is required for owners or operators proposing to site new (or expand existing) municipal solid waste landfills (MSWLFs) within a five-mile radius of any airport runway (CFR 40, Subchapter 1, Part 258, Subpart B, Section 258.10). FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, or other suitable document similar to FAA Form 7460-1, may be used to notify the appropriate FAA Regional Airports Division Office of a planned siting or expansion of a MSWLF, as well as other potential wildlife attractants.

4.4 OVERFLIGHT

Noise from individual operations, especially by comparatively loud aircraft, can be intrusive and annoying in locations beyond the limits of the mapped noise contours. Sensitivity to aircraft overflights varies by person. The purpose of overflight compatibility policies is to help notify people about the presence of overflights near airports so that they can make more informed decisions regarding acquisition or lease of property in the affected areas. Overflight compatibility is particularly important with regard to residential land uses.

4.5 NOTICE OF PROXIMITY TO AIRPORT

As a condition for development approval, the owner of any property proposed for development or subdivision within the airport influence area (AIA) is required to file an affidavit of interest and plat notation in conjunction with recording with the Johnson County Register of Deeds any approved plan or subdivision plat.

The owner of the property shall prepare and record with the Johnson County Register of Deeds a written notice stating that:

A. The property within the subdivision is located within the one-mile AIA of New Century AirCenter, and aircraft operating from New Century AirCenter should be expected to overfly, be visible from, and be heard from the property; and

B. Certain restrictions have been placed on the development and use of property within the one-mile AIA which are in addition to the restrictions contained in the other requirements of these regulations.

Further, a statement providing the same notice shall be placed on the final development plan or subdivision plat. An example of an affidavit of interest is provided in **Appendix C, Exhibit C-1**.

Appendix A
NOISE

The standard methodology for analyzing noise conditions at airports involves the use of a computer simulation model. The Aviation Environmental Design Tool (AEDT) is accepted by the Federal Aviation Administration (FAA) for developing noise exposure contours. The most recent version of the AEDT model, Version 3e, was used to develop noise exposure contours for New Century AirCenter for consideration in this Airport Land Use Compatibility Plan (ALUCP). A variety of user-supplied input data are required to use AEDT. The following sections describe noise modeling inputs for the New Century AirCenter noise exposure contours shown on **Chapter 2, Exhibit 2N**.

NOISE MODELING ASSUPTIONS

AIRCRAFT OPERATIONS AND FLEET MIX

The noise contours reflect anticipated growth of the airport during the next 20 years. To accurately represent the noise conditions at the airport, the AEDT provides aircraft noise data for many of the aircraft operating in the national fleet. **Table A1** summarizes the existing condition (2022) and future condition (2042) operations for the airport and includes the aircraft types used in the noise model for each condition. Airfield observations, interviews with airport staff, and based aircraft lists were used to determine the types of aircraft that frequently use the airport. The selection of individual aircraft types is important to the modeling process because different aircraft types generate different noise levels.

A variety of general aviation single-engine fixed-pitch propeller aircraft are modeled with the GASEPV and GASEPF aircraft in the AEDT. The GASEPV represents many single-engine general aviation aircraft, including the Mooney M-20; Cessna 172 and 180; and Piper Cherokee Arrow. The general aviation single-engine fixed-pitch propeller model, the GASEPF, also represents several single-engine general aviation aircraft. These include the Cessna 150, Piper Archer, and Piper Tomahawk.

Time-of-Day

The time-of-day during which aircraft operations occur is important as input to the AEDT due to the 10-decibel nighttime (10:00 p.m. to 7:00 a.m.) weighting of flights.

Time-of-day information was estimated based on interviews of airport staff and information collected using Automatic Dependent Surveillance-Broadcast (ADS-B) from November 21 through December 2, 2022. Currently, most operations occur during the daytime hours, with an estimated two percent occurring during nighttime hours.

TABLE A1 | New Century AirCenter Aircraft Fleet Mix and Operations

Operations	AEDT Designator	Existing (2022)	Ultimate (2042)
ITINERANT			
Single-Engine Piston			
Single-Engine, Fixed	GASEPF	12,893	14,273
Single-Engine, Variable	GASEPV	12,893	14,273
	Subtotal	**25,785**	**28,545**
Multi-Engine Piston			
Beech Baron	BEC58P	2,800	3,100
	Subtotal	**2,800**	**3,100**
Turboprop			
King Air 90, 200-350, Piaggio	DHC6	768	800
Pilatus PC-12	Pilatus PC-12	300	364
Piper Malibu Meridian	CNA441	200	200
	Subtotal	**1,268**	**1,364**
Jet			
Beechjet, Hondajet	MU3001	770	900
Lear 35-60, Hawker 800	LEAR35	700	800
Cessna 500+	CNA500	80	50
Cessna CJ2, EMB 545/550	CNA55B	398	400
Cessna CJ3, CJ4	CIT3	540	400
Cessna 560/V/Ultra	CNA560U	780	800
Cessna Sovereign/Lat/Long	CNA680	140	200
Cessna X, Falcon 2000	CNA750	980	1,140
Challenger 300, 600	CL600	490	440
Phenom 100, Eclipse, Cirrus Vision SF50	ECLIPSE500	780	920
Embraer Phenom 300	CNA510	580	640
Gulfstream 150/280	IA1125	150	200
Bombardier Global	BD-700-1A10	50	80
Gulfstream V	GV	100	210
	Subtotal	**6,648**	**7,360**
Helicopter			
Reciprocating	R22	100	100
Turbo	R44	100	100
Chinook	CH47D	200	243
	Subtotal	**400**	**443**
Total Itinerant Operations		**36,901**	**40,812**
LOCAL			
Single-Engine, Fixed	GASEPF	22,859	24,947
Single-Engine, Variable	GASEPV	22,859	24,947
Turboprop	Pilatus PC-12	300	327
Total Local Operations		**46,018**	**50,211**
GRAND TOTAL		**82,919**	**91,033**

Source: Coffman Associates analysis; FAA 5010 Airport Master Record, operations for 12 months ending July 31,2019; FAA Terminal Area Forecast, Fiscal Years 2022-2042, January 2022

Runway Use

Runway usage data are also essential for developing noise exposure contours. Based on a review of regional airport activity, wind conditions, and information collected using ADS-B, the assumptions in **Table A2** were made for runway use.

TABLE A2 | Runway Use Percentages by Aircraft Type – New Century AirCenter

Runway	Arrivals	Departures
18	71%	66%
36	24%	30%
4	0%	3%
22	5%	1%

Sources: Interview with Airport Traffic Control Tower Manager; ADS-B from November 21 through December 2, 2022

Flight Tracks

Flight track information was collected using ADS-B from November 21 through December 2, 2023. The traffic patterns for Runway 36 and Runway 4 are right-hand and the traffic patterns for Runway 18 and Runway 22 are left-hand; therefore, it is assumed that touch-and-go traffic occurs primarily to the east of the airport for Runway 18-36 and to the southeast of the airport for Runway 4-22. Visual representations of the consolidated flight tracks modeled in AEDT are found in **Chapter 2, Exhibits 2K, 2L, and 2M**.

Flight Profiles

The standard arrival profile used in the AEDT program is a three-degree approach. No indication was given by airport staff that there was any variation on this standard procedure for civilian aircraft; therefore, the standard approach was included in the model as representative of local operating conditions.

RESULTS

The objective of noise compatibility criteria is to minimize the number of people exposed to frequent and/or high levels of airport noise capable of disrupting noise-sensitive activities. Note that the land use compatibility concerns regarding noise occur only at 65 DNL (Day-Night Average Sound Level) or higher. As shown in **Chapter 2, Exhibit 2N**, the existing, five-year forecast, and 20-year forecast noise exposure contours for New Century AirCenter remain entirely on airport property; therefore, no impact of airport noise on surrounding land use is considered by this plan.

14 CFR PART 150 GUIDANCE

Exhibit A1 summarizes FAA 14 CFR Part 150 guidance on land use compatibility related to airport noise, incorporated for reference purposes. Residential uses are not considered compatible above 65 DNL.

LAND USE	Yearly Day-Night Average Sound Level (DNL) in Decibels					
	Below 65	65-70	70-75	75-80	80-85	Over 85
Residential						
Residential, other than mobile homes and transient lodgings	Y	N[1]	N[1]	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N[1]	N[1]	N[1]	N	N
Public Use						
Schools	Y	N[1]	N[1]	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Government services	Y	Y	25	30	N	N
Transportation	Y	Y	Y[2]	Y[3]	Y[4]	Y[4]
Parking	Y	Y	Y[2]	Y[3]	Y[4]	N
Commercial Use						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail-building materials, hardware and farm equipment	Y	Y	Y[2]	Y[3]	Y[4]	N
Retail trade-general	Y	Y	25	30	N	N
Utilities	Y	Y	Y[2]	Y[3]	Y[4]	N
Communication	Y	Y	25	30	N	N
Manufacturing and Production						
Manufacturing, general	Y	Y	Y[2]	Y[3]	Y[4]	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y[6]	Y[7]	Y[8]	Y[8]	Y[8]
Livestock farming and breeding	Y	Y[6]	Y[7]	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
Recreational						
Outdoor sports arenas and spectator sports	Y	Y[5]	Y[5]	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts, and camps	Y	Y	Y	N	N	N
Golf courses, riding stables, and water recreation	Y	Y	25	30	N	N

The designations contained in this table do not constitute a federal determination that any use of land covered by the program is acceptable under federal, state, or local law. The responsibility for determining the acceptable and permissible land uses and the 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 other side for notes and key to 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.
25, 30, 35	Land Use and related structures generally compatible; measures to achieve NLR of 25, 30, or 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 outdoor-to-indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB, respectively, should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide an 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. However, the use of NLR criteria will not 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.

7. Residential buildings require an NLR of 30.

8. Residential buildings not permitted.

Source: ***14 CFR Part 150***, Appendix A, Table 1.

Appendix B
SUPPORTING MATERIALS

This appendix includes the following supporting information related to airport land use compatibility planning:

- Title 14 Code of Federal Regulations Part 77 – *Safe, Efficient Use, and Preservation of the Navigable Airspace*
- Safety Supporting Information from the *California Airport Land Use Compatibility Planning Handbook*

TITLE 14 CODE OF FEDERAL REGULATIONS PART 77 – SAFE, EFFICIENT USE, AND PRESERVATION OF THE NAVIGABLE AIRSPACE (TEXT TO FOLLOW)

Title 14 —Aeronautics and Space
Chapter I —Federal Aviation Administration, Department of Transportation
Subchapter E —Airspace

PART 77—SAFE, EFFICIENT USE, AND PRESERVATION OF THE NAVIGABLE AIRSPACE

Authority: 49 U.S.C. 106 (g), 40103, 40113–40114, 44502, 44701, 44718, 46101–46102, 46104.

Source: Docket No. FAA–2006–25002, 75 FR 42303, July 21, 2010, unless otherwise noted.

Subpart A—General

§ 77.1 Purpose.

This part establishes:

(a) The requirements to provide notice to the FAA of certain proposed construction, or the alteration of existing structures;

(b) The standards used to determine obstructions to air navigation, and navigational and communication facilities;

(c) The process for aeronautical studies of obstructions to air navigation or navigational facilities to determine the effect on the safe and efficient use of navigable airspace, air navigation facilities or equipment; and

(d) The process to petition the FAA for discretionary review of determinations, revisions, and extensions of determinations.

§ 77.3 Definitions.

For the purpose of this part:

Non-precision instrument runway means 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 non-precision instrument approach procedure has been approved, or planned, and for which no precision approach facilities are planned, or indicated on an FAA planning document or military service military airport planning document.

Planned or proposed airport is an airport that is the subject of at least one of the following documents received by the FAA:

(1) Airport proposals submitted under 14 CFR part 157.

(2) Airport Improvement Program requests for aid.

(3) Notices of existing airports where prior notice of the airport construction or alteration was not provided as required by 14 CFR part 157.

(4) Airport layout plans.

(5) DOD proposals for airports used only by the U.S. Armed Forces.

(6) DOD proposals on joint-use (civil-military) airports.

(7) Completed airport site selection feasibility study.

Precision instrument runway means a runway having an existing instrument approach procedure utilizing an Instrument Landing System (ILS), or a Precision Approach Radar (PAR). It also means a runway for which a precision approach system is planned and is so indicated by an FAA-approved airport layout plan; a military service approved military airport layout plan; any other FAA planning document, or military service military airport planning document.

Public use airport is an airport available for use by the general public without a requirement for prior approval of the airport owner or operator.

Seaplane base is considered to be an airport only if its sea lanes are outlined by visual markers.

Utility runway means a runway that is constructed for and intended to be used by propeller driven aircraft of 12,500 pounds maximum gross weight and less.

Visual runway means a runway intended solely for the operation of aircraft using visual approach procedures, with no straight-in instrument approach procedure and no instrument designation indicated on an FAA-approved airport layout plan, a military service approved military airport layout plan, or by any planning document submitted to the FAA by competent authority.

Subpart B—Notice Requirements

§ 77.5 Applicability.

(a) If you propose any construction or alteration described in § 77.9, you must provide adequate notice to the FAA of that construction or alteration.

(b) If requested by the FAA, you must also file supplemental notice before the start date and upon completion of certain construction or alterations that are described in § 77.9.

(c) Notice received by the FAA under this subpart is used to:

(1) Evaluate the effect of the proposed construction or alteration on safety in air commerce and the efficient use and preservation of the navigable airspace and of airport traffic capacity at public use airports;

(2) Determine whether the effect of proposed construction or alteration is a hazard to air navigation;

(3) Determine appropriate marking and lighting recommendations, using FAA Advisory Circular 70/7460–1, Obstruction Marking and Lighting;

(4) Determine other appropriate measures to be applied for continued safety of air navigation; and

(5) Notify the aviation community of the construction or alteration of objects that affect the navigable airspace, including the revision of charts, when necessary.

§ 77.7 Form and time of notice.

(a) If you are required to file notice under § 77.9, you must submit to the FAA a completed FAA Form 7460–1, Notice of Proposed Construction or Alteration. FAA Form 7460–1 is available at FAA regional offices and on the Internet.

(b) You must submit this form at least 45 days before the start date of the proposed construction or alteration or the date an application for a construction permit is filed, whichever is earliest.

(c) If you propose construction or alteration that is also subject to the licensing requirements of the Federal Communications Commission (FCC), you must submit notice to the FAA on or before the date that the application is filed with the FCC.

(d) If you propose construction or alteration to an existing structure that exceeds 2,000 ft. in height above ground level (AGL), the FAA presumes it to be a hazard to air navigation that results in an inefficient use of airspace. You must include details explaining both why the proposal would not constitute a hazard to air navigation and why it would not cause an inefficient use of airspace.

(e) The 45-day advance notice requirement is waived if immediate construction or alteration is required because of an emergency involving essential public services, public health, or public safety. You may provide notice to the FAA by any available, expeditious means. You must file a completed FAA Form 7460–1 within 5 days of the initial notice to the FAA. Outside normal business hours, the nearest flight service station will accept emergency notices.

§ 77.9 Construction or alteration requiring notice.

If requested by the FAA, or if you propose any of the following types of construction or alteration, you must file notice with the FAA of:

(a) Any construction or alteration that is more than 200 ft. AGL at its site.

(b) Any construction or alteration that exceeds an imaginary surface extending outward and upward at any of the following slopes:

(1) 100 to 1 for a horizontal distance of 20,000 ft. from the nearest point of the nearest runway of each airport described in paragraph (d) of this section with its longest runway more than 3,200 ft. in actual length, excluding heliports.

(2) 50 to 1 for a horizontal distance of 10,000 ft. from the nearest point of the nearest runway of each airport described in paragraph (d) of this section with its longest runway no more than 3,200 ft. in actual length, excluding heliports.

(3) 25 to 1 for a horizontal distance of 5,000 ft. from the nearest point of the nearest landing and takeoff area of each heliport described in paragraph (d) of this section.

(c) Any highway, railroad, or other traverse way for mobile objects, of a height which, if adjusted upward 17 feet for an Interstate Highway that is part of the National System of Military and Interstate Highways where overcrossings are designed for a minimum of 17 feet vertical distance, 15 feet for any other public roadway, 10 feet or the height of the highest mobile object that would normally traverse the road, whichever is greater, for a private road, 23 feet for a railroad, and for a waterway or any other traverse way not previously mentioned, an amount equal to the height of the highest mobile object that would normally traverse it, would exceed a standard of paragraph (a) or (b) of this section.

(d) Any construction or alteration on any of the following airports and heliports:

(1) A public use airport listed in the Airport/Facility Directory, Alaska Supplement, or Pacific Chart Supplement of the U.S. Government Flight Information Publications;

(2) A military airport under construction, or an airport under construction that will be available for public use;

(3) An airport operated by a Federal agency or the DOD.

(4) An airport or heliport with at least one FAA-approved instrument approach procedure.

(e) You do not need to file notice for construction or alteration of:

(1) Any object that will be shielded by existing structures of a permanent and substantial nature or by natural terrain or topographic features of equal or greater height, and will be located in the congested area of a city, town, or settlement where the shielded structure will not adversely affect safety in air navigation;

(2) Any air navigation facility, airport visual approach or landing aid, aircraft arresting device, or meteorological device meeting FAA-approved siting criteria or an appropriate military service siting criteria on military airports, the location and height of which are fixed by its functional purpose;

(3) Any construction or alteration for which notice is required by any other FAA regulation.

(4) Any antenna structure of 20 feet or less in height, except one that would increase the height of another antenna structure.

§ 77.11 Supplemental notice requirements.

(a) You must file supplemental notice with the FAA when:

(1) The construction or alteration is more than 200 feet in height AGL at its site; or

(2) Requested by the FAA.

(b) You must file supplemental notice on a prescribed FAA form to be received within the time limits specified in the FAA determination. If no time limit has been specified, you must submit supplemental notice of construction to the FAA within 5 days after the structure reaches its greatest height.

(c) If you abandon a construction or alteration proposal that requires supplemental notice, you must submit notice to the FAA within 5 days after the project is abandoned.

(d) If the construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

Subpart C—Standards for Determining Obstructions to Air Navigation or Navigational Aids or Facilities

§ 77.13 Applicability.

This subpart describes the standards used for determining obstructions to air navigation, navigational aids, or navigational facilities. These standards apply to the following:

(a) Any object of natural growth, terrain, or permanent or temporary construction or alteration, including equipment or materials used and any permanent or temporary apparatus.

(b) The alteration of any permanent or temporary existing structure by a change in its height, including appurtenances, or lateral dimensions, including equipment or material used therein.

§ 77.15 Scope.

(a) This subpart describes standards used to determine obstructions to air navigation that may affect the safe and efficient use of navigable airspace and the operation of planned or existing air navigation and communication facilities. Such facilities include air navigation aids, communication equipment, airports, Federal airways, instrument approach or departure procedures, and approved off-airway routes.

(b) Objects that are considered obstructions under the standards described in this subpart are presumed hazards to air navigation unless further aeronautical study concludes that the object is not a hazard. Once further aeronautical study has been initiated, the FAA will use the standards in this subpart, along with FAA policy and guidance material, to determine if the object is a hazard to air navigation.

(c) The FAA will apply these standards with reference to an existing airport facility, and airport proposals received by the FAA, or the appropriate military service, before it issues a final determination.

(d) For airports having defined runways with specially prepared hard surfaces, the primary surface for each runway extends 200 feet beyond each end of the runway. For airports having defined strips or pathways used regularly for aircraft takeoffs and landings, and designated runways, without specially prepared hard surfaces, each end of the primary surface for each such runway shall coincide with the corresponding end of the runway. At airports, excluding seaplane bases, having a defined landing and takeoff area with no defined pathways for aircraft takeoffs and landings, a determination must be made as to which portions of the landing and takeoff area are regularly used as landing and takeoff pathways. Those determined pathways must be considered runways, and an appropriate primary surface as defined in § 77.19 will be considered as longitudinally centered on each such runway. Each end of that primary surface must coincide with the corresponding end of that runway.

(e) The standards in this subpart apply to construction or alteration proposals on an airport (including heliports and seaplane bases with marked lanes) if that airport is one of the following before the issuance of the final determination:

(1) Available for public use and is listed in the Airport/Facility Directory, Supplement Alaska, or Supplement Pacific of the U.S. Government Flight Information Publications; or

(2) A planned or proposed airport or an airport under construction of which the FAA has received actual notice, except DOD airports, where there is a clear indication the airport will be available for public use; or,

(3) An airport operated by a Federal agency or the DOD; or,

(4) An airport that has at least one FAA-approved instrument approach.

§ 77.17 Obstruction standards.

(a) An existing object, including a mobile object, is, and a future object would be an obstruction to air navigation if it is of greater height than any of the following heights or surfaces:

(1) A height of 499 feet AGL at the site of the object.

(2) A height that is 200 feet AGL, or above the established airport elevation, whichever is higher, within 3 nautical miles of the established reference point of an airport, excluding heliports, with its longest runway more than 3,200 feet in actual length, and that height increases in the proportion of 100 feet for each additional nautical mile from the airport up to a maximum of 499 feet.

(3) A height within a terminal obstacle clearance area, including an initial approach segment, a departure area, and a circling approach area, which would result in the vertical distance between any point on the object and an established minimum instrument flight altitude within that area or segment to be less than the required obstacle clearance.

(4) A height within an en route obstacle clearance area, including turn and termination areas, of a Federal Airway or approved off-airway route, that would increase the minimum obstacle clearance altitude.

(5) The surface of a takeoff and landing area of an airport or any imaginary surface established under § 77.19, 77.21, or 77.23. However, no part of the takeoff or landing area itself will be considered an obstruction.

(b) Except for traverse ways on or near an airport with an operative ground traffic control service furnished by an airport traffic control tower or by the airport management and coordinated with the air traffic control service, the standards of paragraph (a) of this section apply to traverse ways used or to be used for the passage of mobile objects only after the heights of these traverse ways are increased by:

(1) 17 feet for an Interstate Highway that is part of the National System of Military and Interstate Highways where overcrossings are designed for a minimum of 17 feet vertical distance.

(2) 15 feet for any other public roadway.

(3) 10 feet or the height of the highest mobile object that would normally traverse the road, whichever is greater, for a private road.

(4) 23 feet for a railroad.

(5) For a waterway or any other traverse way not previously mentioned, an amount equal to the height of the highest mobile object that would normally traverse it.

§ 77.19 Civil airport imaginary surfaces.

The following civil airport imaginary surfaces are established with relation to the airport and to each runway. The size of each such imaginary surface is based on the category of each runway according to the type of approach available or planned for that runway. The slope and dimensions of the approach surface applied to each end of a runway are determined by the most precise approach procedure existing or planned for that runway end.

(a) ***Horizontal surface.*** A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of a specified radii from the center of each end of the primary surface of each runway of each airport and connecting the adjacent arcs by lines tangent to those arcs. The radius of each arc is:

(1) 5,000 feet for all runways designated as utility or visual;

(2) 10,000 feet for all other runways. The radius of the arc specified for each end of a runway will have the same arithmetical value. That value will be the highest determined for either end of the runway. When a 5,000-foot arc is encompassed by tangents connecting two adjacent 10,000-foot arcs, the 5,000-foot arc shall be disregarded on the construction of the perimeter of the horizontal surface.

(b) ***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.

(c) ***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; but when the runway has no specially prepared 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:

(1) 250 feet for utility runways having only visual approaches.

(2) 500 feet for utility runways having non-precision instrument approaches.

(3) For other than utility runways, the width is:

(i) 500 feet for visual runways having only visual approaches.

(ii) 500 feet for non-precision instrument runways having visibility minimums greater than three-fourths statute mile.

(iii) 1,000 feet for a non-precision instrument runway having a non-precision instrument approach with visibility minimums as low as three-fourths of a statute mile, and for precision instrument runways.

(iv) The width of the primary surface of a runway will be that width prescribed in this section for the most precise approach existing or planned for either end of that runway.

(d) ***Approach surface.*** A surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. An approach surface is applied to each end of each runway based upon the type of approach available or planned for that runway end.

(1) The inner edge of the approach surface is the same width as the primary surface and it expands uniformly to a width of:

(i) 1,250 feet for that end of a utility runway with only visual approaches;

(ii) 1,500 feet for that end of a runway other than a utility runway with only visual approaches;

(iii) 2,000 feet for that end of a utility runway with a non-precision instrument approach;

(iv) 3,500 feet for that end of a non-precision instrument runway other than utility, having visibility minimums greater that three-fourths of a statute mile;

(v) 4,000 feet for that end of a non-precision instrument runway, other than utility, having a non-precision instrument approach with visibility minimums as low as three-fourths statute mile; and

(vi) 16,000 feet for precision instrument runways.

(2) The approach surface extends for a horizontal distance of:

(i) 5,000 feet at a slope of 20 to 1 for all utility and visual runways;

(ii) 10,000 feet at a slope of 34 to 1 for all non-precision instrument runways other than utility; and

(iii) 10,000 feet at a slope of 50 to 1 with an additional 40,000 feet at a slope of 40 to 1 for all precision instrument runways.

(3) The outer width of an approach surface to an end of a runway will be that width prescribed in this subsection for the most precise approach existing or planned for that runway end.

(e) ***Transitional surface.*** These surfaces extend 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. Transitional surfaces for those portions of the precision approach surface which project through and beyond the limits of the conical surface, extend a distance of 5,000 feet measured horizontally from the edge of the approach surface and at right angles to the runway centerline.

§ 77.21 Department of Defense (DOD) airport imaginary surfaces.

(a) ***Related to airport reference points.*** These surfaces apply to all military airports. For the purposes of this section, a military airport is any airport operated by the DOD.

(1) ***Inner horizontal surface.*** A plane that is oval in shape at a height of 150 feet above the established airfield elevation. The plane is constructed by scribing an arc with a radius of 7,500 feet about the centerline at the end of each runway and interconnecting these arcs with tangents.

(2) ***Conical surface.*** A surface extending from the periphery of the inner horizontal surface outward and upward at a slope of 20 to 1 for a horizontal distance of 7,000 feet to a height of 500 feet above the established airfield elevation.

(3) ***Outer horizontal surface.*** A plane, located 500 feet above the established airfield elevation, extending outward from the outer periphery of the conical surface for a horizontal distance of 30,000 feet.

(b) ***Related to runways.*** These surfaces apply to all military airports.

(1) ***Primary surface.*** A surface located on the ground or water longitudinally centered on each runway with the same length as the runway. The width of the primary surface for runways is 2,000 feet. However, at established bases where substantial construction has taken place in accordance with a previous lateral clearance criteria, the 2,000-foot width may be reduced to the former criteria.

(2) ***Clear zone surface.*** A surface located on the ground or water at each end of the primary surface, with a length of 1,000 feet and the same width as the primary surface.

(3) ***Approach clearance surface.*** An inclined plane, symmetrical about the runway centerline extended, beginning 200 feet beyond each end of the primary surface at the centerline elevation of the runway end and extending for 50,000 feet. The slope of the approach clearance surface is 50 to 1 along the runway centerline extended until it reaches an elevation of 500 feet above the established airport elevation. It then continues horizontally at this elevation to a point 50,000 feet from the point of beginning. The width of this surface at the runway end is the same as the primary surface, it flares uniformly, and the width at 50,000 is 16,000 feet.

(4) ***Transitional surfaces.*** These surfaces connect the primary surfaces, the first 200 feet of the clear zone surfaces, and the approach clearance surfaces to the inner horizontal surface, conical surface, outer horizontal surface or other transitional surfaces. The slope of the transitional surface is 7 to 1 outward and upward at right angles to the runway centerline.

§ 77.23 Heliport imaginary surfaces.

(a) ***Primary surface.*** The area of the primary surface coincides in size and shape with the designated take-off and landing area. This surface is a horizontal plane at the elevation of the established heliport elevation.

(b) ***Approach surface.*** The approach surface begins at each end of the heliport primary surface with the same width as the primary surface, and extends outward and upward for a horizontal distance of 4,000 feet where its width is 500 feet. The slope of the approach surface is 8 to 1 for civil heliports and 10 to 1 for military heliports.

(c) ***Transitional surfaces.*** These surfaces extend outward and upward from the lateral boundaries of the primary surface and from the approach surfaces at a slope of 2 to 1 for a distance of 250 feet measured horizontally from the centerline of the primary and approach surfaces.

Subpart D—Aeronautical Studies and Determinations

§ 77.25 Applicability.

(a) This subpart applies to any aeronautical study of a proposed construction or alteration for which notice to the FAA is required under § 77.9.

(b) The purpose of an aeronautical study is to determine whether the aeronautical effects of the specific proposal and, where appropriate, the cumulative impact resulting from the proposed construction or alteration when combined with the effects of other existing or proposed structures, would constitute a hazard to air navigation.

(c) The obstruction standards in subpart C of this part are supplemented by other manuals and directives used in determining the effect on the navigable airspace of a proposed construction or alteration. When the FAA needs additional information, it may circulate a study to interested parties for comment.

§ 77.27 Initiation of studies.

The FAA will conduct an aeronautical study when:

(a) Requested by the sponsor of any proposed construction or alteration for which a notice is submitted; or

(b) The FAA determines a study is necessary.

§ 77.29 Evaluating aeronautical effect.

(a) The FAA conducts an aeronautical study to determine the impact of a proposed structure, an existing structure that has not yet been studied by the FAA, or an alteration of an existing structure on aeronautical operations, procedures, and the safety of flight. These studies include evaluating:

(1) The impact on arrival, departure, and en route procedures for aircraft operating under visual flight rules;

(2) The impact on arrival, departure, and en route procedures for aircraft operating under instrument flight rules;

(3) The impact on existing and planned public use airports;

(4) Airport traffic capacity of existing public use airports and public use airport development plans received before the issuance of the final determination;

(5) Minimum obstacle clearance altitudes, minimum instrument flight rules altitudes, approved or planned instrument approach procedures, and departure procedures;

(6) The potential effect on ATC radar, direction finders, ATC tower line-of-sight visibility, and physical or electromagnetic effects on air navigation, communication facilities, and other surveillance systems;

(7) The aeronautical effects resulting from the cumulative impact of a proposed construction or alteration of a structure when combined with the effects of other existing or proposed structures.

(b) If you withdraw the proposed construction or alteration or revise it so that it is no longer identified as an obstruction, or if no further aeronautical study is necessary, the FAA may terminate the study.

§ 77.31 Determinations.

(a) The FAA will issue a determination stating whether the proposed construction or alteration would be a hazard to air navigation, and will advise all known interested persons.

(b) The FAA will make determinations based on the aeronautical study findings and will identify the following:

(1) The effects on VFR/IFR aeronautical departure/arrival operations, air traffic procedures, minimum flight altitudes, and existing, planned, or proposed airports listed in § 77.15(e) of which the FAA has received actual notice prior to issuance of a final determination.

(2) The extent of the physical and/or electromagnetic effect on the operation of existing or proposed air navigation facilities, communication aids, or surveillance systems.

(c) The FAA will issue a Determination of Hazard to Air Navigation when the aeronautical study concludes that the proposed construction or alteration will exceed an obstruction standard and would have a substantial aeronautical impact.

(d) A Determination of No Hazard to Air Navigation will be issued when the aeronautical study concludes that the proposed construction or alteration will exceed an obstruction standard but would not have a substantial aeronautical impact to air navigation. A Determination of No Hazard to Air Navigation may include the following:

(1) Conditional provisions of a determination.

(2) Limitations necessary to minimize potential problems, such as the use of temporary construction equipment.

(3) Supplemental notice requirements, when required.

(4) Marking and lighting recommendations, as appropriate.

(e) The FAA will issue a Determination of No Hazard to Air Navigation when a proposed structure does not exceed any of the obstruction standards and would not be a hazard to air navigation.

§ 77.33 Effective period of determinations.

(a) The effective date of a determination not subject to discretionary review under 77.37(b) is the date of issuance. The effective date of all other determinations for a proposed or existing structure is 40 days from the date of issuance, provided a valid petition for review has not been received by the FAA. If a valid petition for review is filed, the determination will not become final, pending disposition of the petition.

(b) Unless extended, revised, or terminated, each Determination of No Hazard to Air Navigation issued under this subpart expires 18 months after the effective date of the determination, or on the date the proposed construction or alteration is abandoned, whichever is earlier.

(c) A Determination of Hazard to Air Navigation has no expiration date.

[Doc. No. FAA–2006–25002, 75 FR 42303, July 21, 2010, as amended by Amdt. 77–13–A, 76 FR 2802, Jan. 18, 2011]

§ 77.35 Extensions, terminations, revisions and corrections.

(a) You may petition the FAA official that issued the Determination of No Hazard to Air Navigation to revise or reconsider the determination based on new facts or to extend the effective period of the determination, provided that:

(1) Actual structural work of the proposed construction or alteration, such as the laying of a foundation, but not including excavation, has not been started; and

(2) The petition is submitted at least 15 days before the expiration date of the Determination of No Hazard to Air Navigation.

(b) A Determination of No Hazard to Air Navigation issued for those construction or alteration proposals not requiring an FCC construction permit may be extended by the FAA one time for a period not to exceed 18 months.

(c) A Determination of No Hazard to Air Navigation issued for a proposal requiring an FCC construction permit may be granted extensions for up to 18 months, provided that:

(1) You submit evidence that an application for a construction permit/license was filed with the FCC for the associated site within 6 months of issuance of the determination; and

(2) You submit evidence that additional time is warranted because of FCC requirements; and

(3) Where the FCC issues a construction permit, a final Determination of No Hazard to Air Navigation is effective until the date prescribed by the FCC for completion of the construction. If an extension of the original FCC completion date is needed, an extension of the FAA determination must be requested from the Obstruction Evaluation Service (OES).

(4) If the Commission refuses to issue a construction permit, the final determination expires on the date of its refusal.

Subpart E—Petitions for Discretionary Review

§ 77.37 General.

(a) If you are the sponsor, provided a substantive aeronautical comment on a proposal in an aeronautical study, or have a substantive aeronautical comment on the proposal but were not given an opportunity to state it, you may petition the FAA for a discretionary review of a determination, revision, or extension of a determination issued by the FAA.

(b) You may not file a petition for discretionary review for a Determination of No Hazard that is issued for a temporary structure, marking and lighting recommendation, or when a proposed structure or alteration does not exceed obstruction standards contained in subpart C of this part.

§ 77.39 Contents of a petition.

(a) You must file a petition for discretionary review in writing and it must be received by the FAA within 30 days after the issuance of a determination under § 77.31, or a revision or extension of the determination under § 77.35.

(b) The petition must contain a full statement of the aeronautical basis on which the petition is made, and must include new information or facts not previously considered or presented during the aeronautical study, including valid aeronautical reasons why the determination, revisions, or extension made by the FAA should be reviewed.

(c) In the event that the last day of the 30-day filing period falls on a weekend or a day the Federal government is closed, the last day of the filing period is the next day that the government is open.

(d) The FAA will inform the petitioner or sponsor (if other than the petitioner) and the FCC (whenever an FCC-related proposal is involved) of the filing of the petition and that the determination is not final pending disposition of the petition.

§ 77.41 Discretionary review results.

(a) If discretionary review is granted, the FAA will inform the petitioner and the sponsor (if other than the petitioner) of the issues to be studied and reviewed. The review may include a request for comments and a review of all records from the initial aeronautical study.

(b) If discretionary review is denied, the FAA will notify the petitioner and the sponsor (if other than the petitioner), and the FCC, whenever a FCC-related proposal is involved, of the basis for the denial along with a statement that the determination is final.

(c) After concluding the discretionary review process, the FAA will revise, affirm, or reverse the determination.

SAFETY SUPPORTING INFORMATION FROM THE *CALIFORNIA AIRPORT LAND USE COMPATIBILITY PLANNING HANDBOOK*

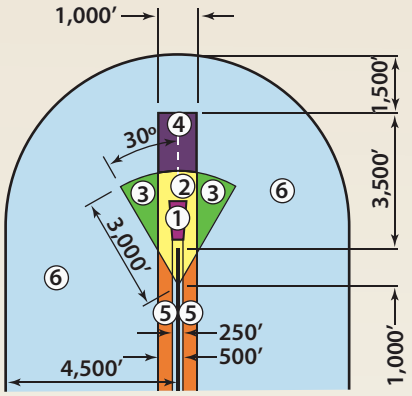
The *California Airport Land Use Planning Handbook* (Handbook) provides guidance for establishing safety zones for airports. The example zones – as described in the Handbook and shown on **Exhibit B1** – are based on mathematical analyses of National Transportation Safety Board (NTSB) aircraft accident data and aircraft flight characteristics. The purpose of the zones is to delineate areas with relatively uniform risk levels. **Table M1** provides the Handbook's analysis of the safety zones, including the distribution of accident data points within each zone.

Safety zones at commercial service and general aviation airports can be differentiated by runway length and airport activity.

TABLE M1
Analysis of Safety Zone Examples

	% of Points	Acres	% / Acres
Primary Surface	15%	-	-
Zone 1: Runway Protection Zone	21%	49	0.40
Zone 2: Inner Approach/Departure Zone	10%	101	0.10
Zone 3: Inner Turning Zone	7%	151	0.05
Zone 4: Outer Approach/Departure Zone	5%	69	0.07
Zone 5: Sideline Zone	5%	-	-
Zone 6: Traffic Pattern Zone	23%	-	-
Total Zones 1-6 + Primary Surface	85%	-	-

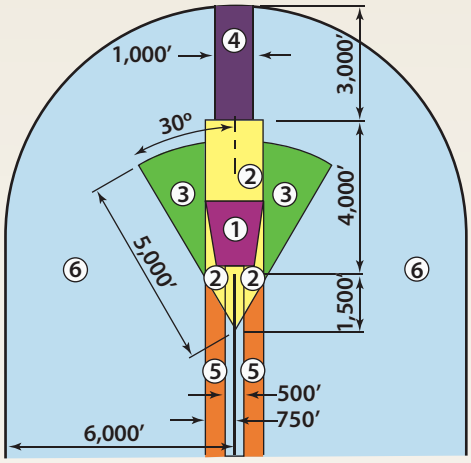
Source: *California Airport Land Use Planning Handbook* (2011), Table 3B, Example 2



SHORT GENERAL AVIATION RUNWAY

Assumptions:

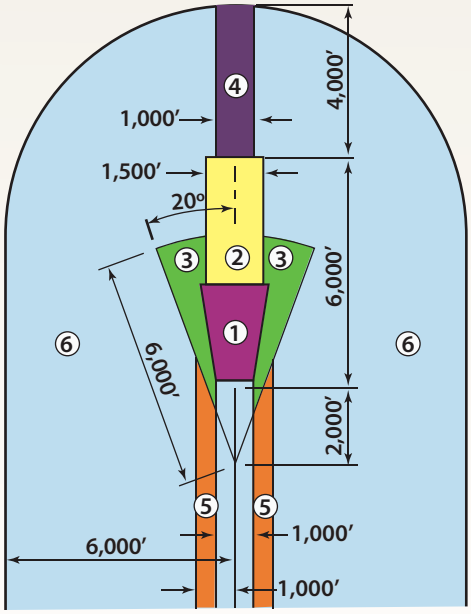
- Length less than 4,000 feet
- Approach visibility minimums ≥ 1 mile or visual approach only
- Zone 1 = 250′ x 450′ x 1,000′



MEDIUM GENERAL AVIATION RUNWAY

Assumptions:

- Length 4,000 to 5,999 feet
- Approach visibility minimums ≥ ¾ mile and < 1 mile
- Zone 1 = 1,000′ x 1,510′ x 1,700



LONG GENERAL AVIATION RUNWAY

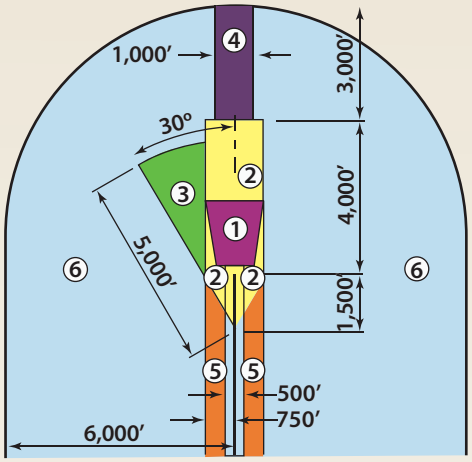
Assumptions:

- Length 6,000 or more
- Approach visibility minimums < ¾ mile
- Zone 1 = 1,000′ x 1,750′ x 2,500

LEGEND

① Runway Protection Zone	③ Inner Turning Zone	⑤ Sideline Zone
② Inner Approach/Departure Zone	④ Outer Approach/Departure Zone	⑥ Traffic Pattern Zone

Source: California Airport Land Use Planning Handbook, 2011.

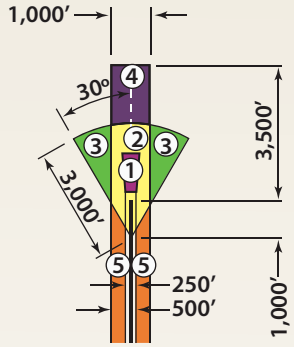


GENERAL AVIATION RUNWAY WITH SINGLE-SIDED TRAFFIC PATTERN

Assumptions:

- **Length 4,000 to 5,999 feet**
- **Approach visibility minimums ≥ ¾ mile and < 1 mile**
- **Zone 1 = 1,000′ x 1,510′ x 1,700**

See Note.

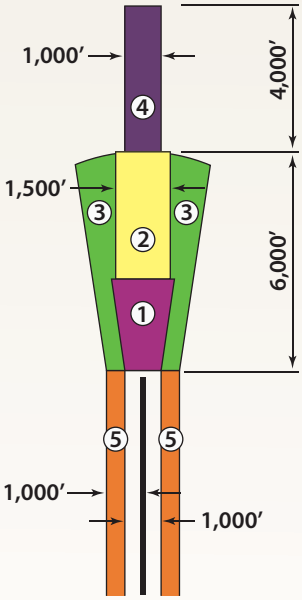


LOW ACTIVITY GENERAL AVIATION RUNWAY

Assumptions:

- **Less than 2,000 takeoffs and landings per year at individual runway end.**
- **Length less than 4,000 feet**
- **Approach visibility minimums ≥ 1 mile or visual approach only**

See Note.



LARGE AIR CARRIER RUNWAY

Assumptions:

- **Minimal light-aircraft general aviation activity**
- **Predominately straight-in and straight-out flight routes**
- **Approach visibility minimums < ¾ mile**

See Note.

Note:
RPZ (Zone 1) size in each example is as indicated by FAA criteria for the approach type assumed. Adjustment may be necessary if the Approach type differs.

These examples are intended to provide general guidance for establishment of airport safety compatibility zones. They do not represent California Department of Transportation standards of policy.

LEGEND

① Runway Protection Zone	③ Inner Turning Zone	⑤ Sideline Zone
② Inner Approach/Departure Zone	④ Outer Approach/Departure Zone	⑥ Traffic Pattern Zone

Source: California Airport Land Use Planning Handbook, 2011.

Appendix C
IMPLEMENTATION MATERIALS

This appendix includes the following supporting information related to airport land use compatibility planning:

- **Exhibit C-1:** Sample Affidavit of Interest
- **Exhibit C-2:** Guidance for Calculating Land Use Intensity

EXHIBIT C-1

AFFIDAVIT OF INTEREST

Notice is hereby given by the filing of this affidavit of interest that the property addressed as _____and legally described as:

is located within the Airport Influence Area of New Century AirCenter as described in the *New Century AirCenter Airport Land Use Compatibility Plan* adopted by Johnson County, Kansas. Pursuant to the property's close proximity to the New Century AirCenter, aircraft operating from New Century AirCenter should be expected to overfly, be visible from, and be heard from the property on a regular basis.

EXHIBIT C-2

GUIDANCE FOR CALCULATING LAND USE INTENSITY

The following contains guidance on how to calculate the intensity of land uses (the number of people per acre) based on *Methods for Determining Concentrations of People*, Appendix G of the *California Airport Land Use Planning Handbook* from 2011 (hereafter referred to as Handbook)[1].

As stated on page G-1 in Appendix G of the Handbook, "the most difficult part about making a people-per-acre determination is estimating the number of people likely to use a particular facility. There are several methods which can be utilized, depending upon the nature of the proposed use:

- **Parking Ordinance:** The number of people present in a given area can be calculated based upon the number of parking spaces provided. Traffic studies can be used to develop an assumption regarding the number of people per vehicle. The number of people-per-acre can then be calculated by dividing the number of people on-site by the size of the parcel in acres. This approach is appropriate where the use is expected to be dependent upon access by vehicles. Depending upon the specific assumptions utilized, this methodology typically results in a number in the low end of the likely intensity for a given land use.

- **Maximum Occupancy:** The International Building Code (IBC) can be used as a standard for determining the maximum occupancy of certain uses. The chart provided as **Table D1** indicates the required number of square feet per occupant. The number of people on the site can be calculated by dividing the total floor area of a proposed use by the minimum square feet per occupant requirement listed in the table. The maximum occupancy can then be divided by the size of the parcel in acres to determine the number of people-per-acre. Surveys of actual occupancy levels conducted by various agencies have indicated that many retail and office uses are generally occupied at no more than 50 percent of their maximum occupancy levels, even at the busiest times of day. Therefore, the number of people calculated for office and retail uses should usually be adjusted (50%) to reflect the actual occupancy levels before making the final people-per-acre determination. Even with this adjustment, the IBC-based methodology typically produces intensities at the high end of the likely range."[2]

- **Survey of Similar Uses:** Certain uses may require an estimate based on a survey of similar uses. This approach is more difficult, but is appropriate for uses that cannot be reasonably estimated based on parking or square footage because of the nature of the use.

[1] https://dot.ca.gov/-/media/dot-media/programs/aeronautics/documents/californiaairportlanduseplanninghandbook-a11y.pdf
[2] Page G-1, Appendix G of the California Airport Land Use Planning Handbook (2011)

TABLE D1: 1004.5 | Maximum Floor Area Allowances per Occupant

Function of Space	Floor Area in Square Feet per Occupant
Accessory storage areas, mechanical equipment room	300 gross
Agricultural building	300 gross
Aircraft hangars	500 gross
Airport terminal	
Baggage claim	20 gross
Baggage handling	300 gross
Waiting areas	15 gross
Assembly	
Gaming floors (keno, slots, etc.)	11 gross
Exhibit gallery and museum	30 net
Assembly with fixed seats	See Section 1004.6
Assembly without fixed seats	
Concentrated (chairs only – not fixed)	7 net
Standing space	5 net
Unconcentrated (tables and chairs)	15 net
Bowling centers (allow five persons for each lane, including 15 feet of runway, and for additional areas)	7 net
Business areas	150 gross
Courtrooms – other than fixed seating areas	40 net
Daycare	35 net
Dormitories	50 gross
Educational	
Classroom area	20 net
Shops and other vocational room areas	50 net
Exercise rooms	50 gross
H-5 fabrication and manufacturing areas	200 gross
Industrial areas	100 gross
Institutional areas	
Inpatient treatment areas	240 gross
Outpatient areas	100 gross
Sleeping areas	120 gross
Kitchens, commercial	200 gross
Library	
Reading rooms	50 net
Stack area	100 gross
Locker rooms	50 gross
Mercantile	60 gross
Storage, stock, shipping areas	300 gross
Parking garages	200 gross
Residential	200 gross
Skating rinks, swimming pools	
Rink and pool	50 gross
Decks	15 gross
Stages and platforms	15 net
Warehouses	500 gross
1 square foot = 0.0929 m^2	

Source: International Building Code (2018) (Note: A more current version of the IBC table may be used when available.)

IBC SECTION 1004.6 FIXED SEATING

Below is the relevant IBC section for calculating occupant load of assembly with fixed seats uses, as referenced in **Table D1**.

"For areas having *fixed seats* and *aisles*, the *occupant load* shall be determined by the number of *fixed seats* installed therein. The *occupant load* for areas in which *fixed seating* is not installed, such as waiting spaces, shall be determined in accordance with Section 1004.5 and added to the number of *fixed seats*.

The *occupant load* of *wheelchair spaces* and the associated companion seat shall be based on one occupant for each *wheelchair space* and one occupant for the associated companion seat provided in accordance with Section 1109.2.3.

For areas having *fixed seating* without dividing arms, the *occupant load* shall be not less than the number of seats based on one person for each 18 inches (457 mm) of seating length.

The *occupant load* of seating booths shall be based on one person for each 24 inches (610 mm) of booth seat length measured at the backrest of the seating booth."[3]

EXAMPLE CALCULATIONS

The following examples are adapted from the Handbook and reflect current Unincorporated Johnson County parking space requirements for illustrative purposes. Implementation of intensity guidance will require calculation by local agency planning staff and use of the most up-to-date development standards.

EXAMPLE 1

Proposed Development: Single-floor, 24,000-square-foot furniture store

A. Calculation Based on Parking Space Requirements

Assume local code requires one parking space per 250 square feet (sf) of use area for a furniture store. Next, assume 1.5 people per automobile for this type of use.

The usage intensity would be:

1) 24,000-sf building / 250 sf (1.0 parking space per 250 sf) = 96 required parking spaces

2) 96 parking spaces x 1.5 people per space = 144 people maximum on site

3) 24,000-sf building footprint / 43,560 sf per acre = 0.52-acre building footprint

[3] Section 1004, Occupant Load, Subsection 1004.6, Fixed seating of the International Building Code (2018)

4) Assuming a relatively balanced occupancy throughout the building and minimal outdoor uses, the usage intensity for a single acre is estimated to be:

    a) Building footprint < 1.0 acre; therefore, maximum people in one acre = building occupancy = 144 people expected per single acre

B. Calculation Based on International Building Code

For the purposes of the IBC-based methodology, the furniture store is assumed to consist of 50 percent retail sales floor (at 60 sf per occupant) and 50 percent warehouse (at 500 sf per occupant); therefore, usage intensities would be estimated as follows:

1) 12,000-sf retail floor area / 60 sf per occupant = 200-person maximum occupancy in retail area

2) 12,000-sf warehouse floor area / 500 sf per occupant = 24-person maximum occupancy in warehouse area

3) Maximum occupancy under IBC assumptions = 200 + 20 = 224 people maximum

4) Assuming typical peak occupancy is 50 percent of IBC numbers = 112 people

5) 112 people / 1 acre gross site size = 112 people expected per single acre

The two methods produce similar results.

EXAMPLE 2

Proposed Development: Single-floor industrial building containing a 95,000-sf warehouse area and 5,000-sf office

A. Calculation Based on Parking Space Requirements

Assume local code requires one parking space per 1,000 sf of use area for industrial businesses and one parking space per 250-sf office. Next, assume one person per automobile for this type of use.

The usage intensity would be:

1) 100,000-sf warehouse / 1,000 sf (1.0 parking space per 1,000 sf) = 100 required parking spaces

2) 5,000-sf office / 250 sf (1.0 parking space per 250 sf) = 20 required parking spaces

3) Maximum required parking spaces under local code = 100 warehouse + 20 office = 120 total parking spaces

4) 120 parking spaces x 1 person per space = 120 people maximum on site

5) 105,000-sf building footprint / 43,560 sf per acre = 2.41-acre building footprint

6) 120 people on site / 2.41-acre footprint = 48 people expected per single acre

B. Calculation Based on International Building Code

For the purposes of the IBC-based methodology, intensities would be estimated as follows:

1) 100,000-sf industrial area / 100sf per occupant = 1,000 people maximum occupancy in warehouse area

2) 5,000-sf business area / 150 sf per occupant = 33 people maximum occupancy in office area

3) Maximum occupancy under IBC assumptions = 1,000 + 33 = 1,033 people maximum

4) Assuming typical peak occupancy is 50 percent of IBC numbers = 517 people

5) 517 people / 2.41 acres gross site size = 214 people expected per single acre

In this instance, the two methods produce very different results. The occupancy estimate of 100 square feet per person is likely low for an industrial facility, even after the 50% adjustment. The 48 people-per-acre estimate using the parking requirement methodology is probably more realistic. The Airport Land Use Commission and local jurisdiction should decide which methodology or combination of methods to use in reviewing development proposals.

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