

# NEW CENTURY AirCenter



**JC**  
**AC** Johnson County  
Airport Commission



Airport  
Master Plan

**NEW CENTURY AIRCENTER  
Johnson County, Kansas**

**AIRPORT MASTER PLAN**

**FINAL**

*Prepared By  
Coffman Associates  
Airport Consultants*

“The contents of these documents reflect the views of Coffman Associates, Inc., which is responsible for the parts and accuracy of the data contained herein. The contents do not necessarily reflect the official views or policy of the FAA. Acceptance of these documents by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted herein nor does it indicate that the proposed development is environmentally acceptable in accordance with Public Laws 90-495, 91-190, 91-258, 94-343, and/or 100-223.”

Approved by Johnson County  
Board of County Commissioners

November 30, 2006



---

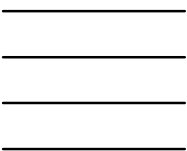
## TABLE OF CONTENTS

# **CONTENTS**

## **NEW CENTURY AIRCENTER Johnson County, Kansas AIRPORT MASTER PLAN**

### **Chapter One INVENTORY**

AIRPORT SETTING .....	1-1
Airport Location .....	1-2
Surface Transportation Network .....	1-2
Regional Climate .....	1-2
Area Land Use and Control.....	1-3
AIRPORT SYSTEM PLANNING ROLE .....	1-6
AIRPORT HISTORY .....	1-7
Airport Administration .....	1-8
Economic Impacts .....	1-8
AIRPORT FACILITIES.....	1-9
Airside Facilities .....	1-9
LANDSIDE FACILITIES.....	1-19
Fixed Base Operators .....	1-19
Aircraft Parking Apron.....	1-20
Aircraft Hangar Facilities .....	1-20
Automobile Parking.....	1-21
Fuel Facilities .....	1-21
Aircraft Rescue and Firefighting (ARFF) .....	1-22
Utilities.....	1-22



## **Chapter One (Continued)**

SOCIOECONOMIC CHARACTERISTICS .....	1-22
Population .....	1-23
Employment .....	1-24
Income .....	1-26
SUMMARY .....	1-26
DOCUMENT SOURCES.....	1-27

## **Chapter Two**

### **AVIATION DEMAND FORECASTS**

FORECASTING APPROACH.....	2-2
NATIONAL AVIATION TRENDS.....	2-3
General Aviation.....	2-4
AIRPORT SERVICE AREA .....	2-6
Regional Airports .....	2-7
Service Area Summary .....	2-9
COMMERCIAL AVIATION CONSIDERATIONS.....	2-10
Passenger Airline Service Potential.....	2-11
Commercial Cargo Potential .....	2-12
SOCIOECONOMIC PROJECTIONS .....	2-13
Population .....	2-13
Employment .....	2-14
Per Capita Personal Income (PCPI).....	2-14
GENERAL AVIATION FORECASTS .....	2-15
Johnson County Registered Aircraft Forecast.....	2-15
Based Aircraft Forecasts .....	2-17
Based Aircraft Fleet Mix Projection.....	2-21
ANNUAL OPERATIONS .....	2-22
General Aviation Operations.....	2-23
Air Taxi Operations .....	2-26
Military Operations .....	2-26
Annual Instrument Approaches (AIAs) .....	2-27
SUMMARY .....	2-28

## **Chapter Three**

### **AIRPORT FACILITY REQUIREMENTS**

PLANNING HORIZONS.....	3-2
Peaking Characteristics.....	3-2

## **Chapter Three (Continued)**

CRITICAL AIRCRAFT .....	3-4
Operational Fleet Mix .....	3-5
Critical Aircraft Conclusion.....	3-6
AIRFIELD REQUIREMENTS.....	3-7
Airfield Capacity .....	3-7
Runways .....	3-8
Taxiways .....	3-12
Safety Area Design Standards .....	3-13
Navigational and Approach Aids .....	3-15
Airfield Lighting and Marking.....	3-18
LANDSIDE REQUIREMENTS .....	3-19
Hangars .....	3-19
Aircraft Parking Apron.....	3-21
General Aviation Terminal Facilities .....	3-22
Airport Traffic Control Tower (ATCT) .....	3-23
SUPPORT REQUIREMENTS .....	3-23
Automobile Parking .....	3-24
Fuel Storage .....	3-24
Aircraft Rescue and Firefighting (ARFF) .....	3-26
SUMMARY .....	3-26

## **Chapter Four ALTERNATIVES**

REVIEW OF PREVIOUS PLANNING.....	4-2
NON-DEVELOPMENT ALTERNATIVES.....	4-3
“Do Nothing” Alternative .....	4-3
Transfer Aviation Services .....	4-4
Construction of a New Airport Site.....	4-5
AIRFIELD ISSUES .....	4-6
Runway Length.....	4-6
Taxiways .....	4-7
Parallel Runway .....	4-8
Instrument Approaches .....	4-9
LANDSIDE ISSUES .....	4-9
ALTERNATIVES.....	4-11
Airport Alternative 1 .....	4-11
Airport Alternative 2 .....	4-14
Airport Alternative 3 .....	4-16

## **Chapter Four (Continued)**

### **AIRPORT TRAFFIC CONTROL TOWER**

SITING CRITERIA .....	4-17
Line-of-Sight.....	4-19
Minimum Cab Eye Elevation Analysis.....	4-19
Siting Analysis .....	4-20
Site A .....	4-20
Site B.....	4-21
Site C .....	4-22
SUMMARY .....	4-23

## **Chapter Five**

### **AIRPORT PLANS**

RECOMMENDED CONCEPT .....	5-2
Airfield Design Standards .....	5-2
Airside Planning Recommendations .....	5-3
Landside Planning Recommendations.....	5-6
AIRPORT LAYOUT PLAN SET .....	5-8
Airport Layout Plan.....	5-9
Terminal Area Plan .....	5-9
Airport Land Use Plan .....	5-9
Inner Portion of the Approach Surface Plan .....	5-12
Property Map .....	5-12
SUMMARY .....	5-13

## **Chapter Six**

### **FINANCIAL PLAN**

#### **AIRPORT DEVELOPMENT SCHEDULES**

AND COST SUMMARIES .....	6-1
Short Term Improvements .....	6-3
Intermediate Term Improvements.....	6-5
Long Term Improvements .....	6-6
Capital Improvement Summary .....	6-6
CAPITAL IMPROVEMENTS FUNDING .....	6-7
Federal Grants.....	6-7
State Funding Program.....	6-8
FAA Facilities and Equipment Program .....	6-8
Airport Revenues .....	6-9

## Chapter Six (Continued)

FINANCING OF DEVELOPMENT PROGRAM .....	6-10
Operating Revenues.....	6-10
Operating Expenses.....	6-11
Future Cash Flow .....	6-12
SUMMARY .....	6-15

## EXHIBITS

1A	LOCATION MAP .....	after page 1-2
1B	EXISTING LAND USE .....	after page 1-4
1C	FUTURE LAND USE .....	after page 1-4
1D	AIRSIDE FACILITIES .....	after page 1-10
1E	AIRSPACE CLASSIFICATION .....	after page 1-14
1F	VICINITY AIRSPACE.....	after page 1-16
1G	LANDSIDE FACILITIES.....	after page 1-20
2A	U.S. ACTIVE GENERAL AVIATION AIRCRAFT FORECASTS.....	after page 2-6
2B	GENERALIZED AIRPORT SERVICE AREA .....	after page 2-8
2C	REGISTERED AIRCRAFT FORECASTS .....	after page 2-18
2D	BASED AIRCRAFT .....	after page 2-20
2E	AIRCRAFT DISTRIBUTION .....	after page 2-20
2F	LOCAL & ITINERANT OPERATIONS FORECAST .....	after page 2-26
2G	FORECAST SUMMARY.....	after page 2-28
3A	AIRPORT REFERENCE CODES .....	after page 3-4
3B	WINDROSE .....	after page 3-8
3C	SAFETY AREAS.....	after page 3-14
3D	AIRFIELD FACILITY REQUIREMENTS .....	after page 3-26
3E	LANDSIDE FACILITY REQUIREMENTS.....	after page 3-26
4A	PREVIOUS MASTER PLAN CONCEPT .....	after page 4-2
4B	DEVELOPMENT CONSIDERATIONS.....	after page 4-6
4C	ALTERNATIVE 1 .....	after page 4-12
4D	ALTERNATIVE 2 .....	after page 4-14
4E	ALTERNATIVE 3 .....	after page 4-16



## **EXHIBITS (Continued)**

5A	MASTER PLAN CONCEPT .....	after page 5-2
5B	EXISTING NOISE EXPOSURE CONTOURS .....	after page 5-12
5C	2025 NOISE EXPOSURE CONTOURS .....	after page 5-12

### *AIRPORT LAYOUT PLANS COVER*

AIRPORT LAYOUT DRAWING .....	after page 5-13	
AIRPORT AIRSPACE DRAWING I .....	after page 5-12	
AIRPORT AIRSPACE DRAWING II .....	after page 5-12	
AIRPORT AIRSPACE DRAWING III .....	after page 5-12	
RUNWAY 18R-36L PROFILE DRAWING .....	after page 5-12	
RUNWAY 18L-36R PROFILE DRAWING .....	after page 5-12	
RUNWAY 4-22 PROFILE DRAWING .....	after page 5-12	
RUNWAY 18R INNER PORTION OF APPROACH SURFACE DRAWING .....	after page 5-12	
RUNWAY 36L INNER PORTION OF APPROACH SURFACE DRAWING .....	after page 5-12	
RUNWAY 18L INNER PORTION OF APPROACH SURFACE DRAWING .....	after page 5-12	
RUNWAY 36R INNER PORTION OF APPROACH SURFACE DRAWING .....	after page 5-12	
INNER PORTION OF RUNWAY 4 APPROACH SURFACE DRAWING .....	after page 5-12	
INNER PORTION OF RUNWAY 22 APPROACH SURFACE DRAWING .....	after page 5-12	
TERMINAL AREA DRAWING I .....	after page 5-12	
TERMINAL AREA DRAWING II .....	after page 5-12	
AIRPORT LAND USE DRAWING .....	after page 5-12	
AIRPORT PROPERTY MAP .....	after page 5-12	
6A	CAPITAL IMPROVEMENT PROGRAM .....	after page 6-4
6B	SHORT TERM DEVELOPMENT STAGING .....	after page 6-6
6C	INTERMEDIATE AND LONG TERM DEVELOPMENT STAGING .....	after page 6-6

## **Appendix A GLOSSARY OF TERMS**