

CONTENTS

1	Introduction	1-1
1.1	Project Description	1-1
1.1.1	Purpose and Objectives	1-2
1.1.2	Public Involvement Program.....	1-3
1.2	Airport Background.....	1-5
1.2.1	Location and Service Area.....	1-5
1.2.2	History.....	1-8
1.2.3	Airport Role.....	1-9
1.2.4	Airport Vision	1-10
1.3	Airport Organization	1-10
1.4	Airport Major Tenants	1-11
1.4.1	Airlines	1-11
1.4.2	Fixed Base Operators (FBOs)	1-13
1.4.3	Rental Car Companies.....	1-13
1.5	Review of Existing Studies	1-14
1.5.1	1997 Noise Compatibility Program.....	1-14
1.5.2	1998 CAK Airport Master Plan Update	1-14
1.5.3	2000 Terminal Master Plan.....	1-15
1.5.4	2005 CAK Landside Development Study.....	1-15
1.5.5	2006 Ticketing Wing and Baggage System Expansion Planning Study.....	1-15
2	Inventory of Existing Facilities and Conditions	2-1
2.1	Airfield.....	2-4
2.1.1	Runway System	2-4
2.1.2	Taxiway System.....	2-6
2.1.3	Apron Areas	2-8
2.1.4	Airside Pavement Condition	2-10
2.1.5	Pavement Markings	2-12
2.1.6	Navigational and Lighting Aids.....	2-12
2.1.7	Airfield Signage	2-15
2.1.8	Aircraft Storage.....	2-15
2.2	Passenger Terminal Building.....	2-17
2.2.1	Airline Ticketing Lobby.....	2-17
2.2.2	Baggage Claim	2-18
2.2.3	Passenger Security	2-18
2.2.4	Air Carrier Hold Rooms	2-19
2.2.5	Concessions and Amenities	2-20

2.2.6	Rental Car Counters	2-21
2.2.7	Airport Administrative Offices	2-21
2.2.8	Air Traffic Control Tower	2-22
2.2.9	Terminal Building Functional Areas	2-22
2.3	Parking and Access.....	2-27
2.3.1	Terminal Access Road and Curbside	2-27
2.3.2	Parking	2-30
2.3.3	Landside Pavement Condition	2-34
2.4	Support Facilities.....	2-36
2.4.1	Aircraft Fueling.....	2-36
2.4.2	Aircraft Rescue and Fire Fighting (ARFF)	2-36
2.4.3	Snow and Ice Control	2-37
2.4.4	Aircraft Maintenance	2-38
2.4.5	Additional Airport Facilities	2-38
2.5	Airport Fencing.....	2-38
2.6	Utility Infrastructure	2-38
2.7	Military Facilities	2-39
2.8	Airspace Environment.....	2-39
2.8.1	Airspace Classification	2-39
2.8.2	Aeronautical Charts	2-41
2.8.3	Instrument Approach Capabilities	2-43
2.9	Meteorological Conditions	2-44
2.9.1	Local Climate.....	2-44
2.9.2	Wind Coverage.....	2-44
2.10	Environmental Considerations	2-50
2.11	Financial Structure	2-51
3	Forecasts of Aviation Demand	3-1
3.1	Baseline Forecast Data.....	3-2
3.1.1	Baseline Operations	3-4
3.1.2	Baseline Enplanements.....	3-4
3.1.3	Baseline Based Aircraft	3-6
3.1.4	Applied Forecast Factors.....	3-6
3.2	Socioeconomic Trends Affecting Aviation Demand	3-7
3.2.1	Population	3-9
3.2.2	Per Capita Income.....	3-11
3.2.3	Total Employment.....	3-13
3.2.4	Socioeconomic Conditions Summary	3-14

3.3	Forecast of Commercial Passenger Activity.....	3-14
3.3.1	Adjusted Commercial Carrier TAF.....	3-15
3.3.2	Enplanement Forecasts	3-16
3.3.3	Preferred Commercial Air Carrier Forecast	3-18
3.3.4	Alternate Forecast Scenarios	3-21
3.4	Commercial Aircraft Fleet Mix.....	3-26
3.4.1	Commercial Air Carrier Fleet Mix.....	3-26
3.4.2	Commercial Air Carrier Capacity.....	3-30
3.4.3	Commercial Air Carrier Load Factors	3-31
3.5	Forecast of Air Cargo Activity.....	3-32
3.5.1	Forecast of Air Cargo Operations.....	3-32
3.5.2	Forecast of Air Cargo Volume	3-35
3.6	Forecast of General Aviation and Military Activity.....	3-40
3.6.1	GA & Military Adjusted FAA TAF Scenario	3-41
3.6.2	GA & Military Market Share Scenario.....	3-43
3.6.3	GA & Military TAF-Based Scenario.....	3-46
3.6.4	Preferred GA & Military Forecast	3-50
3.7	Preferred Forecast Summary	3-50
3.8	Peak Activity Forecast.....	3-54
3.8.1	Peak Month – Average Day.....	3-54
3.8.2	Peak Hour Operations and Enplanements.....	3-58
4	Facility Requirements	4-1
4.1	Planning Factors.....	4-2
4.1.1	Planning Activity Levels (PALs).....	4-2
4.1.2	Aircraft Classification	4-4
4.1.3	Design Aircraft Family	4-6
4.1.4	Airport & Runway Classification	4-7
4.2	Airfield Configuration.....	4-9
4.3	Airfield Capacity	4-10
4.3.1	Capacity Calculation Factors.....	4-10
4.3.2	Hourly Capacity	4-14
4.3.3	Annual Service Volume	4-15
4.3.4	Aircraft Delay	4-18
4.3.5	Conclusion.....	4-18
4.4	Runways	4-19
4.4.1	Runway Design Standards.....	4-19
4.4.2	Runway Length.....	4-23
4.4.3	Runway Protection Zone.....	4-27

4.5	Instrument Approach NAVAIDS and Procedures.....	4-29
4.5.1	ILS Upgrade Potential.....	4-29
4.6	Taxiways.....	4-33
4.6.1	Design Goals.....	4-33
4.6.2	Taxiway Design Standards	4-33
4.6.3	Current System	4-35
4.6.4	Issues and Recommendations	4-36
4.7	Aprons.....	4-44
4.7.1	Terminal Apron	4-45
4.7.2	Remain Overnight (RON) Parking	4-50
4.7.3	General Aviation Aprons.....	4-50
4.7.4	Deicing Aprons	4-52
4.7.5	Ohio Army National Guard Apron.....	4-52
4.7.6	MAPS Apron	4-52
4.8	Airfield Pavement Strength and Condition.....	4-53
4.8.1	Pavement Strength	4-53
4.8.2	Pavement Condition	4-53
4.9	Airfield Lighting and Ground Navigation	4-54
4.9.1	Airfield Lighting	4-54
4.9.2	Signage	4-54
4.9.3	Pavement Markings	4-54
4.10	Passenger Terminal Building.....	4-55
4.10.1	Terminal Planning Factors	4-55
4.10.2	Airline Space.....	4-57
4.10.3	Baggage Services.....	4-62
4.10.4	Public Space	4-64
4.10.5	Concessions.....	4-65
4.10.6	Agency Space	4-67
4.10.7	Terminal Services	4-70
4.10.8	Airport Administration.....	4-71
4.10.9	Terminal Facility Curbside Requirements	4-72
4.10.10	Passenger Terminal Summary	4-76
4.11	Automobile Parking and Access.....	4-78
4.11.1	Airport Parking Supply - Effective	4-78
4.11.2	Public Parking Demand Ratio.....	4-79
4.11.3	Parking User Groups	4-80
4.11.4	Projected Public Parking Demand.....	4-81
4.11.5	Projected Employee Parking Demand	4-83
4.11.6	Projected Rental Car Parking Demand.....	4-84
4.11.7	Projected Taxi Queue and Cell Phone Lot Demand	4-89

4.11.8	Landside Pavement Conditions.....	4-92
4.12	Cargo Facilities	4-92
4.13	General Aviation (GA) aircraft storage Facilities	4-94
4.14	Military Facilities	4-95
4.15	Support Facilities.....	4-96
4.15.1	Fueling Facilities.....	4-96
4.15.2	Aircraft Rescue and Firefighting (ARFF)	4-96
4.15.3	Customs and Border Patrol.....	4-97
4.15.4	Utility Infrastructure	4-97
4.15.5	Internal Access	4-99
4.16	Airspace Protection.....	4-100
4.16.1	Runway End Siting Requirements.....	4-102
4.16.2	Airspace Analysis.....	4-102
4.17	Summary of Facility Requirements.....	4-104
5	Land Use Planning	5-1
5.1	Regional Setting	5-1
5.1.1	Economic Development.....	5-2
5.1.2	Local Land Use and Zoning.....	5-2
5.2	Typical Land Use Compatibility Concerns.....	5-5
5.2.1	Safety-Related Concerns.....	5-5
5.2.2	Noise-Related Concerns.....	5-5
5.3	Summary of 2014 Part 150 Land Use Evaluation.....	5-8
5.3.1	65 dB DNL Noise Exposure.....	5-8
5.3.2	60 dB DNL Noise Exposure.....	5-9
5.3.3	Airport Overlay Zone (AOZ)	5-11
5.4	On-Airport Land Use	5-13
5.5	Conclusion.....	5-16
6	Development Concepts	6-1
6.1	Concept Evaluation	6-1
6.2	Passenger Terminal Building.....	6-3
6.2.1	Concept 1: Maximize Existing Building	6-5
6.2.2	Concept 2: Replace Terminal Building.....	6-8
6.2.3	Concept 3: Expand into new Terminal Building.....	6-12
6.2.4	Comparison and Preferred Concept	6-16
6.3	Priority Terminal Improvements.....	6-19

6.3.1	CBIS/Outbound Baggage Makeup	6-19
6.3.2	Replacement of the Y Concourse Gates	6-24
6.3.3	Baggage Claim/Inbound Baggage Makeup	6-31
6.4	Automobile Parking	6-36
6.4.1	Concept 1: Expand Surface Parking	6-39
6.4.2	Concept 2: Parking Garage.....	6-39
6.4.3	Comparison and Preferred Concept	6-42
6.5	Automobile Access Road Configuration	6-45
6.6	Taxiway System.....	6-51
6.6.1	West Side Access.....	6-51
6.6.2	Runway 1-19 East Side Parallel Taxiway	6-52
6.6.3	Hot Spot Removal	6-52
6.6.4	Additional Runway 23 Exit Taxiway	6-53
6.7	Commercial Remain Overnight (RON) Apron	6-56
6.8	General Aviation Areas	6-58
6.9	Cargo Area.....	6-61
6.10	Instrument Landing System (ILS) Upgrade	6-66
6.11	Air Traffic Control Tower (ATCT).....	6-67
6.12	Internal Access Road.....	6-69
6.13	Preferred Development Strategy.....	6-70
7	Environmental Overview	7-1
7.1	Preliminary NEPA evaluation	7-1
7.1.1	Air Quality	7-2
7.1.2	Biotic Resources.....	7-4
7.1.3	Coastal Barriers and Coastal Zone Management	7-6
7.1.4	Compatible Land Use	7-6
7.1.5	Construction Impacts.....	7-8
7.1.6	Section 4(f) Resources	7-8
7.1.7	Federally-Listed Threatened and Endangered Species.....	7-11
7.1.8	Energy Supplies, Natural Resources and Sustainable Design.....	7-11
7.1.9	Environmental Justice	7-12
7.1.10	Farmlands.....	7-13
7.1.11	Floodplains	7-14
7.1.12	Hazardous Materials	7-16
7.1.13	Historical Properties	7-24
7.1.14	Induced Socioeconomic Impacts	7-24
7.1.15	Light Emissions and Visual Effects	7-25

7.1.16	Noise	7-25
7.1.17	Social Impacts	7-28
7.1.18	Solid Waste	7-28
7.1.19	Water Quality.....	7-29
7.1.20	Wetlands.....	7-30
7.1.21	Wild and Scenic Rivers	7-32
7.1.22	Cumulative Impacts	7-32
7.2	Stormwater Management Planning	7-33
7.2.1	Stormwater Regulations	7-33
7.2.2	Existing Stormwater Controls at CAK.....	7-35
7.2.3	Future Stormwater Controls at CAK for Quantity and Quality.....	7-38
7.3	Sustainable Management Plan	7-42
7.3.1	Current Sustainable Activities at CAK	7-42
7.3.2	Future Sustainability Actions	7-43
7.3.3	Sustainability and the Master Plan Recommendations.....	7-45
8	Financial Plan	8-1
8.1	Authority’s Financial Structure	8-1
8.2	Capital Improvement Program	8-1
8.2.1	Federal Grants.....	8-4
8.2.2	State Grants	8-7
8.2.3	Passenger Facility Charges	8-7
8.2.4	Third Party Financing	8-8
8.2.5	Customer Facility Charges.....	8-9
8.2.6	Authority Funds	8-9
8.3	Financial Feasibility	8-9
8.3.1	Long-Term Debt	8-9
8.3.2	Operating Expenses	8-11
8.3.3	Operating Revenues.....	8-12
8.3.4	Pro Forma Cash Flow	8-17
8.4	Summary.....	8-18

Appendix A: Airport Layout Plan (ALP) Set

Appendix B: ILS Upgrade Feasibility Study

Appendix C: Utility Layout Plan Set

Appendix D: Airside and Landside Pavement Inventories

Appendix E: Agency Correspondence

Appendix F: Stormwater Management Data

Appendix G: Acronyms and Glossary

FIGURES

Figure 2-1 – Existing Facilities	2-2
Figure 2-2 – Building Diagram.....	2-3
Figure 2-3 – Existing Taxiway Configuration.....	2-6
Figure 2-4 – Apron Areas	2-8
Figure 2-5 – Gate Layout.....	2-9
Figure 2-6 – Airside Pavement Conditions.....	2-11
Figure 2-7 – Terminal – Level One Floor Plan	2-25
Figure 2-8 – Terminal – Level Two Floor Plan.....	2-26
Figure 2-9 – Terminal Access Road and Curbside.....	2-29
Figure 2-10 – On-Airport Public Parking	2-31
Figure 2-11 – Rental Car Facilities.....	2-33
Figure 2-12 – Landside Pavement Conditions	2-35
Figure 2-13 – U.S. Airspace Classification	2-40
Figure 2-14 – Aeronautical Chart.....	2-42
Figure 2-15 – All-Weather Wind Rose	2-47
Figure 2-16 – VFR Wind Rose.....	2-48
Figure 2-17 – IFR Wind Rose	2-49
Figure 3-1 – Akron-Canton Market Area	3-9
Figure 3-2 – Historic and Projected Population Growth Rates.....	3-11
Figure 3-3 – Historic and Projected Per Capita Income.....	3-12
Figure 3-4 – Percent of Population Employed.....	3-14
Figure 3-5 – Comparison of Preferred Enplanement Forecast & Alternate Scenarios.....	3-26
Figure 3-6 – Preferred Forecast vs. TAF Enplanements.....	3-52
Figure 3-7 – Preferred Forecast vs. TAF Total Operations.....	3-53
Figure 4-1 – Enplanement Planning Activity Levels (PALs).....	4-4
Figure 4-2 – Runway Configuration and Utilization.....	4-12
Figure 4-3 – Projected Demand	4-17
Figure 4-4 – Existing Runway Design Standards (RDC C-III).....	4-22
Figure 4-5 – Aircraft Ranges from CAK (8,200 ft. Runway).....	4-25
Figure 4-6 – Runway Protection Zone (RPZ) Recommended Acquisitions.....	4-28
Figure 4-7 – CAT-I and CAT-II/III OFZs.....	4-31
Figure 4-8 – Existing Taxiway Configuration.....	4-36
Figure 4-9 – Taxiway Hot Spots and High-Energy Intersections.....	4-39
Figure 4-10 – Apron Areas	4-44
Figure 4-11 – Existing Gate Configuration	4-45
Figure 4-12 – Apron Space Requirements	4-47
Figure 4-13 – Airspace Concerns – Terminal Apron	4-48
Figure 4-14 – Snow Piling Area	4-49

Figure 4-15 – Overnight Occupancy (March 2011)..... 4-79

Figure 4-16 – Projected Public Parking Supply and Demand..... 4-82

Figure 4-17 – Projected Employee Parking Supply and Demand 4-84

Figure 4-18 – Projected Ready/Return Parking Supply and Demand..... 4-87

Figure 4-19 - Projected Total Rental Car Facility Area Supply and Demand 4-88

Figure 4-20 – Conceptual Consolidated Air Cargo Facility..... 4-94

Figure 4-21 – Part 77 Surfaces at CAK..... 4-101

Figure 4-22 – Airspace Analysis – Areas of Concern..... 4-103

Figure 5-1 – Surrounding Land Use..... 5-4

Figure 5-2 – Off-Airport Parcels within 65 dB DNL 5-10

Figure 5-3 – Properties within 60 dB DNL / Recommended Overlay Zone 5-12

Figure 5-4 – GA Activity Areas 5-13

Figure 5-5 – On-Airport Land Use Plan 5-15

Figure 6-1 – Terminal Concept 1..... 6-6

Figure 6-2 – Terminal Concept 1 (Interior) 6-7

Figure 6-3 – Terminal Concept 2..... 6-10

Figure 6-4 – Terminal Concept 2 (Interior) 6-11

Figure 6-5 – Terminal Concept 3..... 6-14

Figure 6-6 – Terminal Concept 3 (Interior) 6-15

Figure 6-7 – CBIS Concept 1 6-20

Figure 6-8 – CBIS Concept 2 6-21

Figure 6-9 – CBIS Concept 3 6-22

Figure 6-10 – Gate Replacement Concept 1 6-25

Figure 6-11 – Gate Replacement Concept 2 6-26

Figure 6-12 – Gate Replacement Concept 3 6-27

Figure 6-13 – Inbound Baggage Concept 1 6-32

Figure 6-14 – Inbound Baggage Concept 2 6-33

Figure 6-15 – Inbound Baggage Concept 3 6-34

Figure 6-16 – Inbound Baggage Concept 4 6-35

Figure 6-17 – Existing Parking Facilities 6-37

Figure 6-18 – Parking Concept 1: Expand Surface Parking 6-40

Figure 6-19 – Parking Concept 2: Parking Garage 6-41

Figure 6-20 – Parking Concept Economic Analysis 6-43

Figure 6-21 – Access Concept 1: Maintain Existing Road 6-46

Figure 6-22 – Access Concept 2: Modified Ring Road 6-47

Figure 6-23 – Access Concept 3: New Ring Road..... 6-48

Figure 6-24 – Taxiway Configuration Strategy..... 6-55

Figure 6-25 – Runway 5-23 Potential Acute-Angled Exit Taxiway Configurations 6-56

Figure 6-26 – Phased RON Apron Development..... 6-57

Figure 6-27 – Existing GA Areas 6-58

Figure 6-28 – Northwest GA Area Expansion Envelope..... 6-60

Figure 6-29 – Northwest GA Area Development Concept..... 6-61

Figure 6-30 – Possible Consolidated Air Cargo Facility Locations 6-62

Figure 6-31 – Potential Air Cargo Configuration – Site 1 6-63

Figure 6-32 – Potential Air Cargo Configuration – Site 2 6-64

Figure 6-33 – Potential Air Cargo Configuration – Site 3 6-65

Figure 6-34 – Potential ATC Tower Sites..... 6-68

Figure 6-35 – Conceptual Internal Access Road 6-69

Figure 6-36 – Development Strategy Timeline 6-70

Figure 6-37 – Preferred Development Strategy (Near-Term)..... 6-74

Figure 6-38 – Preferred Development Strategy (Future) 6-75

Figure 6-39 – Preferred Development Strategy (Long-Term)..... 6-76

Figure 6-40 – Preferred Development Strategy (Ultimate) 6-77

Figure 7-1 – Section 4(f) Map / Historical Properties Map..... 7-10

Figure 7-2 – Floodplains..... 7-15

Figure 7-3 – 65 DNL Noise Contours..... 7-27

Figure 7-4 – Wetlands 7-31

Figure 7-5 – Existing Drainage Areas 7-37

Figure 7-6 – Proposed BMPs 7-41

TABLES

Table 2-1 – Existing Runway Specifications	2-5
Table 2-2 – Existing Taxiway Specifications	2-7
Table 2-3 – Navigational Aids and Airfield Lighting	2-12
Table 2-4 – Aircraft Hangar Facilities	2-16
Table 2-5 – Bag Claim Device Assignments.....	2-18
Table 2-6 – Air Carrier Gate Assignments.....	2-20
Table 2-7 – Terminal Concessions and Amenities	2-21
Table 2-8 – Terminal Functional Areas	2-23
Table 2-9 – Existing Terminal Curbside Length.....	2-27
Table 2-10 – Existing Curbside Vehicle Classification and Dwell Times	2-28
Table 2-11 – On-Airport Parking Inventory	2-30
Table 2-12 – ARFF Index Requirements	2-37
Table 2-13 – Instrument Approach Procedures.....	2-43
Table 2-14 – Standard Crosswind Components.....	2-45
Table 2-15 – Weather Classification Criteria	2-45
Table 2-16 – CAK Wind Coverage	2-46
Table 3-1 – CAK Terminal Area Forecast.....	3-3
Table 3-2 – 2011 Baseline Operations	3-4
Table 3-3 – Historic CAK Enplanements by Month.....	3-5
Table 3-4 – CAK Enplaned and Deplaned Passenger Difference	3-5
Table 3-5 – 2011 Based Aircraft.....	3-6
Table 3-6 – Population Growth (Historic and Projected)	3-10
Table 3-7 – Per Capita Income Trend (Historic and Projected)	3-12
Table 3-8 – Employment Growth Levels (Historic and Projected).....	3-13
Table 3-9 – CAK TAF with Adjusted Air Carrier Operations	3-16
Table 3-10 – Enplanement Forecast Summary.....	3-18
Table 3-11 – Preferred Commercial Air Carrier Forecast	3-21
Table 3-12 – Preferred Commercial Air Carrier Forecast vs. TAF	3-21
Table 3-13 –International Traffic Gain Scenario	3-22
Table 3-14 –International Traffic Gain Scenario vs. Preferred Forecast	3-23
Table 3-15 – Domestic High-Growth Scenario.....	3-23
Table 3-16 – Domestic High-Growth vs. Preferred Forecast	3-24
Table 3-17 – Static Market Share Scenario.....	3-25
Table 3-18 – Static Market Share vs. Preferred Forecast	3-25
Table 3-19 – Commercial Carrier Fleet Mix: Annual Departures by Aircraft Type	3-29
Table 3-20 – Commercial Carrier Fleet Mix: Percent of Annual Departures by Aircraft Type ..	3-30
Table 3-21 – Commercial Carrier Capacity: Available Seats by Aircraft	3-31
Table 3-22 – Commercial Carrier Capacity: Percent of Seats by Type	3-31
Table 3-23 – Commercial Carrier Capacity: Percent of Seats by Type	3-32

Table 3-24 – 2011 Baseline Air Cargo Operations	3-33
Table 3-25 – Static Market Share Air Cargo Operations Scenario	3-34
Table 3-26 – High-Growth Air Cargo Operations Scenario	3-36
Table 3-27 – 2011 Baseline Cargo Volume	3-36
Table 3-28 – 2011 Total Volume Share.....	3-37
Table 3-29 - Static Market Share Air Cargo Volume Scenario (tons).....	3-38
Table 3-30 – High-Growth Cargo Volume Scenario (tons).....	3-39
Table 3-31 – 2011 Based Aircraft Fleet Mix.....	3-41
Table 3-32 – 2010 Adjusted GA & Military TAF	3-42
Table 3-33 – National GA Fleet Growth Rates	3-43
Table 3-34 – Based Aircraft: Market Share Scenario	3-44
Table 3-35 – GA & Military Operations Market Share Scenario.....	3-45
Table 3-36 – Market Share Scenario vs. TAF	3-46
Table 3-37 – Based Aircraft: TAF-Based Growth Scenario.....	3-47
Table 3-38 – GA & Military Operations: TAF-Based Growth Scenario	3-49
Table 3-39 – GA & Military TAF-Based Scenario vs. FAA TAF	3-50
Table 3-40 – Preferred Forecast Summary	3-51
Table 3-41 – Air Carrier Enplanements and Total Operations vs. CAK TAF	3-52
Table 3-42 – Based Aircraft Preferred Forecast.....	3-53
Table 3-43 – Based Aircraft: Preferred Forecast vs. CAK TAF	3-54
Table 3-44 – Peak Month Enplanements: 2007-2011	3-55
Table 3-45 – Peak Month Average Day Enplanement Forecast	3-56
Table 3-46 – Peak Month Commercial Carrier Operations: 2007-2011	3-57
Table 3-47 – Peak Month Total Airport Operations: 2007-2011	3-57
Table 3-48 – Peak Month Average Day Commercial Carrier Operations	3-58
Table 3-49 – Peak Month Average Day Airport Operations Forecast	3-58
Table 3-50 – Projected Peak Hour Operations and Enplanements	3-59
Table 4-1 – Planning Activity Levels (PALs).....	4-3
Table 4-2 – Aircraft Classification Criteria	4-5
Table 4-3 – Applicability of Aircraft Classifications.....	4-6
Table 4-4 – Design Aircraft Family	4-7
Table 4-5 – Instrument Approach Visibility Minimums	4-8
Table 4-6 – Aircraft Capacity Classifications	4-11
Table 4-7 – Runway Usage	4-12
Table 4-8 – Calculated Capacity Parameters	4-14
Table 4-9 – Calculation of Hourly Capacity	4-15
Table 4-10 – Demand Ratios	4-16
Table 4-11 – Annual Service Volume	4-17
Table 4-12 – Aircraft Delay	4-18
Table 4-13 – FAA Runway Design Standards	4-21
Table 4-14 – Existing Takeoff (TO) Length Requirements	4-24
Table 4-15 – Potential Future Destinations	4-26

Table 4-16 – Instrument Approach Procedures.....	4-29
Table 4-17 – Weather Conditions at CAK (2000 – 2009)	4-30
Table 4-18 – Taxiway Design Standards based on Airplane Design Group (ADG).....	4-35
Table 4-19 – Taxiway Design Standards based on Taxiway Design Group (TDG).....	4-35
Table 4-20 – ADG/TDG Upgrade Requirements	4-37
Table 4-21 – Exit Taxiway Cumulative Utilization Percent	4-42
Table 4-22 – GA Itinerant Aircraft Parked on the Apron	4-51
Table 4-23 – Transient Apron Space Requirement.....	4-51
Table 4-24 – Passenger Activity Levels	4-56
Table 4-25 – Design Aircraft Summary	4-57
Table 4-26 – Passenger Check-in Assumptions	4-58
Table 4-27 – Total Gate Requirements.....	4-60
Table 4-28 – Airline Space Requirements.....	4-62
Table 4-29 – Baggage Service Space Requirements	4-64
Table 4-30 – Public Space Requirements.....	4-65
Table 4-31 – Concessions Space Requirements.....	4-67
Table 4-32 – Agency Space Requirements.....	4-70
Table 4-33 – Terminal Services Space Requirements.....	4-71
Table 4-34 – Airport Administration Space Requirements.....	4-71
Table 4-35 – Existing Curbside Lengths	4-72
Table 4-36 – Vehicle Dwell Time by Curb	4-73
Table 4-37 – Curbside Demand Requirements.....	4-74
Table 4-38 – Terminal Area Requirements.....	4-77
Table 4-39 – Airport Parking Supply	4-78
Table 4-40 – Parkers per Facility Summary (2011)	4-81
Table 4-41 – Projected Public Parking Surplus and Deficit.....	4-81
Table 4-42 – Historical Employee Parking Supply and Occupancy	4-83
Table 4-43 – Projected Employee Parking Surplus and Deficit.....	4-83
Table 4-44 – Comparison/Benchmark – RAC Revenue versus Acres	4-85
Table 4-45 – Ready/Return Comparison/Benchmark – Similar Airports (RAC Revenue).....	4-86
Table 4-46 – Projected Ready and Return Parking Surplus and Deficit.....	4-86
Table 4-47 – Projected Total Rental Car Facility Area Surplus and Deficit	4-88
Table 4-48 – Taxi Queue Comparison/Benchmark - Similar Size Airports.....	4-89
Table 4-49 - Cell Phone Lot Comparison/Benchmark – Similar Size Airports.....	4-90
Table 4-50 – Cell Phone Lot Supply and Occupancy – Historical.....	4-91
Table 4-51 – Projected Taxi Queue/Cell Phone Lot Surplus and Deficit.....	4-91
Table 5-1 – Land Use Compatibility Guidelines	5-7
Table 5-2 – Residential Land Uses within 2014 and 2019 60 dB DNL Contour	5-9
Table 5-3 – Existing Land Uses	5-14
Table 6-1 – Evaluation Criteria.....	6-2
Table 6-2 – Order-of-Magnitude Cost Estimates (Terminal Building Concepts)	6-4

Table 6-3 – Terminal Concept 1 Cost Estimate.....	6-5
Table 6-4 – Terminal Concept 2 Cost Estimate.....	6-9
Table 6-5 – Terminal Concept 3 Cost Estimate.....	6-13
Table 6-6 – Terminal Building Concept Cost Comparison	6-17
Table 6-7 – Terminal Building Concept Scoring Matrix	6-18
Table 6-8 – CBIS / Outbound Baggage Concept Cost Comparison	6-23
Table 6-9 – CBIS/Outbound Baggage Concept Scoring Matrix.....	6-24
Table 6-10 – Gate Replacement Concept Cost Comparison.....	6-29
Table 6-11 – Gate Replacement Concept Scoring Matrix.....	6-30
Table 6-12 – Airport Parking Supply	6-36
Table 6-13 – Parking Concept Cost Estimate	6-42
Table 6-14 – Parking Concept Scoring Matrix.....	6-44
Table 6-15 – Access Road Concept Cost Estimate	6-49
Table 6-16 – Access Road Concept Scoring Matrix.....	6-50
Table 6-17 – GA Area Facility Summary.....	6-59
Table 6-18 – Preferred Development Strategy by Phase	6-73
Table 7-1 – State-Listed Species	7-5
Table 7-2 – Minority and Low-Income Population Groups by Census Tract	7-12
Table 7-3 – Air Facility System	7-16
Table 7-4 – Hazardous Waste Report (Biennial Report).....	7-16
Table 7-5 – Permit Compliance System/Integrated Compliance Information System.....	7-17
Table 7-6 – RCRA Info Facilities.....	7-18
Table 7-7 – Toxics Release Inventory.....	7-19
Table 7-8 – Enforcement and Compliance History Online	7-19
Table 7-9 – Registered Underground Storage Tank Facilities.....	7-21
Table 7-10 – Facilities with Active Releases.....	7-21
Table 7-11 – Inactive Underground Storage Tanks	7-22
Table 7-12 – Ohio EPA Air Permits.....	7-23
Table 7-13 – Sustainability Focus Areas and Objectives.....	7-44
Table 8-1 – CIP	8-2
Table 8-2 – CIP Funding Sources.....	8-4
Table 8-3 – AIP Entitlement Calculation	8-5
Table 8-4 – Application of Federal Grants	8-6
Table 8-5 – Application of PFCs	8-8
Table 8-6 – Long-Term Debt	8-11
Table 8-7 – Operating Expenses	8-11
Table 8-8 – Major Non-Airline Tenants.....	8-13
Table 8-9 – Airline Rates and Charges	8-14
Table 8-10 – Operating Revenues.....	8-15
Table 8-11 – Net Income.....	8-17