

Foreword

City Master Plans provide planning for the delivery and funding of city services, programs, and facilities. The city's comprehensive plan, sub-community plans, and the long-range Financial Plan provide the overall policy direction for the plans.

The Boulder Valley Comprehensive Plan provides the overall policy framework for future development in the Boulder Valley. The city's master plans are developed consistent with the policies, plans, and population and employment projects provided by the comprehensive plan. They provide planning for the delivery and funding of specific services, facilities and programs, and identify the costs associated with current deficiencies and replacement needs, and those associated with growth. The master plans establish the policies, priorities, service standards, and facility and system needs for the delivery of specific services. The facility and service priorities and funding plan established through the master planning process provide the basis for capital improvement programming and annual budgeting. Following completion of master plans, revised policies, a master plan summary and update maps are incorporated into the comprehensive plan.

The purpose of master plans is to:

- Provide consistency of facility and service planning with overall city policies and plans;
- Provide financial and programmatic planning for facility and service provision;
- Provide integration and coordination of service provision between departments;
- Guide capital improvement programming and city budgeting; and
- Identify costs associated with current system deficiencies and replacement needs, and growth-related costs.

It should also be noted that the Federal Aviation Administration (FAA) administers the Airport Improvement Program (AIP) which provides grants to airport sponsors for airport development, airport planning, and noise compatibility programs. In order to receive a grant from the AIP or an earlier federal program, the airport sponsor must

provide a written grant assurance (i.e., a contract) to comply with the current 37 individual grant assurances and all applicable federal statutes, executive orders, federal regulations, and Office of Management and Budget (OMB) circulars. The majority of the grant assurances are tied directly to requirements in Federal law and have been developed to ensure that the investments made with both federal and local funding are able to be utilized by the public and airport users. In general, the assurance specifies that the airport will remain open, be maintained for public use, and reserve the use of airport property and revenues for the benefit of aviation.

Contents

Foreword	<i>i</i>
Contents	<i>iii</i>
Tables	<i>vi</i>
Illustrations	<i>viii</i>
Inventory	
Introduction	A.1
Airport History	A.3
Airport Role and Facilities	A.5
Airport System/Navigation and Communication Aids	A.10
Airport Environs	A.19
Financial Inventory	A.26
Airport Lease Review	A.28
Evaluation of Rates, Fees, and Charges	A.29
Issues Inventory	A.31
Forecasts of Aviation Activity	
Introduction	B.1
Historical and Existing Aviation Activity	B.8
Aviation Activity Forecast	B.12
Based Aircraft Forecast	B.18
Summary	B.20
Capacity Analysis and Facility Requirements	
Introduction	C.1
Airfield Capacity Methodology	C.1
Airfield Capacity Analysis	C.11
Ground Access Capacity	C.13
Capacity Summary	C.14
Facility Requirements	C.14

Capacity Analysis and Facility Requirements (Cont.)	
Landside Requirements	C.26
Planning Issues Identification/Verification	C.29
Summary	C.33
Planning Concepts and Alternatives Analysis	
Introduction	D.1
Planning Goals	D.1
Airside Planning Alternatives	D.3
Landside Development Concepts	D.14
Summary	D.20
Airport Plans	
Introduction	E.1
Airport Sponsor Grant Assurances	E.2
Airport Layout Plan	E.3
Airspace Plan	E.8
Inner Portion of the Approach Surface Plans	E.11
Landside Area Plan	E.15
Airport Property Map	E.19
Land Use Drawing	E.21
General Aviation Security	E.24
Airport Management Plan	E.25
Environmental Overview	
Introduction	F.1
Existing Conditions Summary	F.1
Environmental Analysis	F.3
Planning Program	
Introduction	G.1
Implementation Schedule and Project List	G.1
Cost Estimates	G.5

Planning Program (Cont.)	
Capital Improvement Program (CIP)	G.5
Financial Plan	G.7
Summary - Master Plan Capital Improvement Program Financial Implications	G.9
Appendix One	
Glossary of Common Terms and Acronyms	---
Appendix Two	
National Center for Atmospheric Research (NCAR) Wind Data	---
Appendix Three	
Annual Service Volume (ASV) Worksheets	---
Appendix Four	
2003 Pavement Management Plan Summary	---
Appendix Five	
Integrated Noise Model (INM) Echo Reports	---
Appendix Six	
State and Federal Agency Coordination Letters	---
Appendix Seven	
2005 Base Year Aviation Activity Forecast Addendum	---

Tables

Table	A1	Revenue and Expense Summary, 1999-2002	A.27
Table	A2	Summary of Existing Airport Fees	A.30
Table	B1	Population Projections, 2000-2025	B.3
Table	B2	Airports within 30-Mile Radius	B.5
Table	B3	Historical Aviation Activity, 1990-2003	B.8
Table	B4	Existing Operations by Aircraft Type, 2003	B.10
Table	B5	Summary of Based Aircraft, 1990-2003	B.11
Table	B6	General Aviation Operations Forecast Scenarios, 2003-2023	B.15
Table	B7	Summary of Operations by Aircraft Type, 2003-2023	B.16
Table	B8	Summary of Local and Itinerant Operations Forecast, 2003-2023	B.17
Table	B9	Peak Period Aircraft Operations, 2003-2023	B.18
Table	B10	Based Aircraft Forecast, 2003-2023	B.19
Table	B11	Based Aircraft Forecast by Type, 2003-2023	B.20
Table	B12	Summary of Aviation Activity Forecasts, 2003-2023	B.21
Table	B13	Summary of Operations by Airport Reference Code, 2003-2023	B.22
Table	C1	All Weather Wind Coverage Summary	C.5
Table	C2	IFR Wind Coverage Summary	C.7
Table	C3	Aircraft Class Mix Forecast, 2002-2023	C.9
Table	C4	Airfield Capacity Forecast Summary, 2003-2023	C.13
Table	C5	ARC B-II Dimensional Standards For Runway 8/26 (In Feet)	C.16
Table	C6	ARC B-I Small Aircraft Only Dimensional Standards For Runway 8G/ 26G (In Feet)	C.17
Table	C7	Runway Takeoff Length Requirements	C.21
Table	C8	Runway Protection Zone Dimensions	C.25
Table	C9	General Aviation Facility Requirements, 2003-2023	C.28
Table	C10	Fuel Storage Requirements, 2003-2023	C.29
Table	C11	Facility Requirements Summary, 2003-2023	C.34
Table	D1	Airside Planning Alternatives Summary	D.14
Table	F1	Existing and Future Operations by Aircraft Type, 2003 & 2023	F.4
Table	F2	Comparative Noise Levels	F.5
Table	G1	Phase I (Short-Term) Airport Plan Project Costs	G.2
Table	G2	Phase II (Mid-Term) Airport Plan Project Costs	G.3

Table	G3	Phase III (Long-Term) Airport Plan Project Costs	G.4
Table	G4	Capital Improvement Expenditures by Phase	G.10

Illustrations

Figure	A1	Airport Location Map	A.2
Figure	A2	Airport Vicinity Map	A.7
Figure	A3	Existing Airport Layout	A.8
Figure	A4	Airspace/NAVAIDS Summary	A.12
Figure	A5	Airport Traffic Patterns	A.16
Figure	A6	Seasonal Raptor Closure Areas	A.18
Figure	A7	Airport Influence Overlay Zone Map	A.20
Figure	A8	Generalized Existing Zoning Map	A.22
Figure	A9	Generalized Future Land Use Map	A.24
Figure	C1	All Weather Wind Rose: 13 & 10.5-Knot Crosswind Components	C.6
Figure	C2	IFR Weather Wind Rose: 13 & 10.5-Knot Crosswind Components	C.8
Figure	C3	Existing Runway Dimensional Criteria Map	C.18
Figure	C4	Airport Planning Issues Map	C.31
Figure	C5	Existing Airport East Flow Traffic Patterns Map	C.32
Figure	D1	Alternative One	D.4
Figure	D2	Alternative Two	D.10
Figure	D3	Optional Airport East Flow Traffic Pattern Map	D.17
Figure	E1	Airport Layout Plan	E.4
Figure	E2	Airport Airspace Drawing/Plan View Conical Surface	E.9
Figure	E3	Runway 8/26 & Runway 8G/26G Profile Views	E.10
Figure	E4	Inner Approach Surface Drawing/Runway 8 Plan & Profile	E.12
Figure	E5	Inner Approach Surface Drawing/Runway 26 Plan & Profile	E.13
Figure	E6	Inner Approach Surface Drawing/Runway 8G & 26G Plan & Profile	E.14
Figure	E7	Terminal Area Plan	E.16
Figure	E8	Airport Property Map	E.20
Figure	E9	Land Use Drawing	E.22
Figure	E10	Airport Influence Overlay Zone Map with Flight Tracks	E.23
Figure	F1	Land Use Compatibility Matrix	F.8
Figure	F2	2003 Existing DNL Noise Contours with Generalized Existing Land Use	F.9

Figure	F3	2023 Future DNL Noise Contours with Generalized Existing Land Use	F.10
Figure	G1	Phasing Plan	G.6