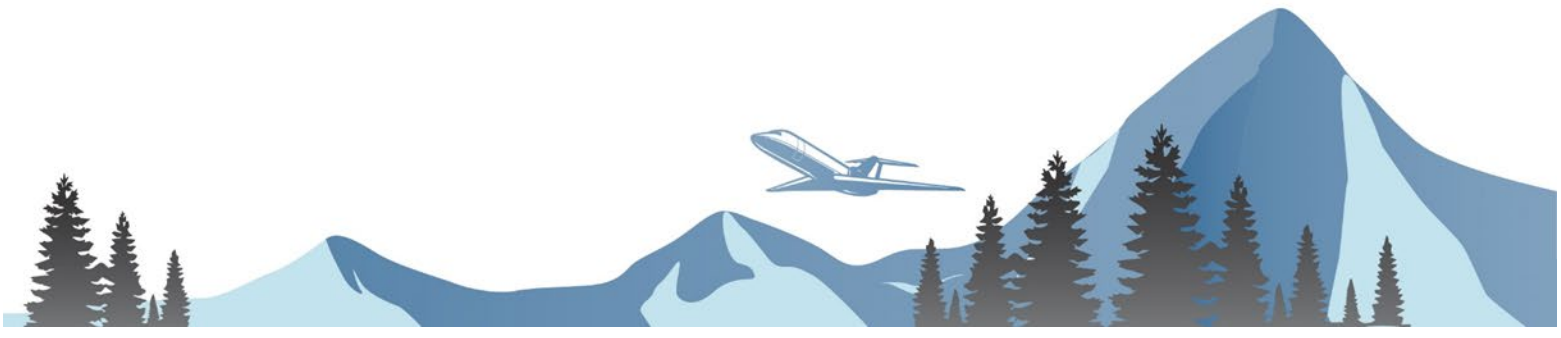
EAGLE COUNTY
Regional Airport

EAGLE COUNTY REGIONAL AIRPORT
MASTER PLAN

CHAPTER 1



1.0 INTRODUCTION

The principal goal of this Airport Master Plan (AMP or Master Plan) is to provide the Eagle County Regional Airport (FAA identifer EGE, or the Airport) a carefully considered, systematic approach to the Airport's overall maintenance, development, and operation over the next 20 years. At its core, this planning effort is designed to identify and then plan for current and future airport activity in advance of the actual demand for new facilities in a manner that considers and incorporates overarching Airport and Eagle County initiatives related to environmental sustainability and resiliency.

An Airport Master Plan documents an airport sponsor's short-, mid-, and long-term strategies for operation and development over a 20-year period.

Proposed development should be driven by the aviation needs of current and future Airport users, allowing the Airport to keep pace with aviation demand in a thoughtful and cost-effective manner. Diligent planning will identify upcoming needs of existing infrastructure and ensure funds are spent appropriately and in the proper timeframe. This plan will help facilitate the Airport future coordination of project approvals, environmental permitting, design, financing, and construction, while avoiding the potentially detrimental effects of inadequate airport facilities.

This Master Plan also assesses the Airport's current conformance with federal and state airport design and operational standards to help ensure safe operation. Note that pilot and passenger safety is paramount for any planning effort. Finally, this plan will also identify and consider important environemental factors with respect to future development as well as to ensure consistency with local sustainability and resiliency goals

1.1 AIRPORT MASTER PLAN AND AIRPORT LAYOUT PLAN

The master planning process produces two documents. The first is the AMP that starts with this chapter, an introduction to the EGE AMP. The rest of the AMP is comprised of numerous chapters and supporting data and analyses. It is structured, and written, linearly, so later sections utilize the context, data, and analysis from earlier chapters. The second document produced within the master planning process is an Airport Layout Plan (ALP): a drawing set that depicts existing Airport conditions and its preferred future development as defined by the AMP. (Note that the Federal Aviation Administration [FAA] formally reviews/approves the ALP and the forecast that is part of the master plan report.)

As with any specialized industry, aviation uses many terms and acronyms rarely heard elsewhere. The glossary in **Appendix A** defines relevant terms and acronyms to assist the reader. Other appendices contain all other required reference material.

The FAA requires that an airport undertake a master plan effort every five to ten years. Funding is provided by a combination of federal, state and local sources.

This Master Plan, along with the accompanying ALP, have been prepared in compliance with the FAA Advisory Circular (AC) 150/5070-6B, *Airport Master Plans*. The previous EGE Airport Master Plan was completed in 2014. This current study has been funded by the FAA, Colorado Department of Transportation (CDOT) Division of Aeronautics, and Eagle County, Colorado (the Airport Sponsor). Technical work has

been conducted by a project team led by Jviation, a Woolpert Company, that includes team members Gensler, and David Evans and Associates.

1.2 AIRPORT MASTER PLAN PURPOSE AND OBJECTIVES

The overall purpose of the Master Plan is to define the Airport Sponsor's approach for long-term Airport development. The framework provided in this AMP will guide future development to satisfy current and future aviation demand in a logical and financially feasible manner, while also considering and incorporating relevant environmental and community factors. Consistent with this purpose, the Airport has established general objectives for the AMP:

An Airport Master Plan is a major component of an airport's overall planning process. To be effective, it must also consider the goals and results of other existing or historical planning efforts.

- Establish a vision for the future of Eagle County Regional Airport and develop an Airport Master Plan which codifies and validates that technically accurate, realistically executable, and financially feasible vision.
- Engage key Airport stakeholders–airport tenants; users; the surrounding community; elected officials; relevant local, state, and federal agencies; and others.
- Guide Airport development so it can continue to provide a safe, efficient, and effective facility designed to meet future aviation demand, changing market conditions, and evolving industry technologies.
- Continue to comply with all appropriate federal and state regulations, obligations, and design standards.
- Ensure consistency with Airport-related goals established by relevant local, state, and federal entities.
- Inventory existing airport facilities to ensure all existing data, including digital base mapping, are accurate.
- Categorize existing environmental resources in anticipation of additional environmental documentation and permitting required for future projects.
- Recognize relevant local, state, and federal sustainability and resiliency initiatives to ensure the Airport continues to be an active and integrated partner.
- Prepare reasonable and defensible aviation activity forecasts to serve as a basis for future airport development.
- Evaluate existing Airport facilities to determine the ability to meet existing and future needs.
- Assess the existing commercial service terminal's functionality, effectiveness, ability to meet current passenger demand, and establish a plan to meet future passenger demands/needs.
- Establish a plan for surface transportation, connectivity, and convenience improvements on and around the Airport, including loop road safety and efficiency improvements.
- Plan for vehicle parking efficiency and capacity enhancements.
- Review and identify potential airfield safety, efficiency, capacity improvements (i.e., including addressing the Airport's lone Hot Spot).

- Identify emerging aviation- and airport-related technologies (e.g., electrification, Advanced Air Mobility [AAM], Urban Air Mobility [UAM], etc.) and plan for their potential future integration into Airport operations.
- Establish and analyze an appropriate range of development alternatives, including No-Build, for major initiatives.
- Identify future capital improvements and prepare a 20-year Capital Improvement Plan (CIP) to assist the Airport meet existing and future needs, while maintaining financial self-sustainability.
- Produce an updated ALP drawing set in a Geographic Information System (GIS) environment both for approval by local, state, and federal agencies; to serve as a baseline for future facility asset management; and for direct integration of the plan into multiple planning-related organizations.
- Provide an updated Exhibit A property map for the Airport.

1.3 FEDERAL AVIATION ADMINISTRATION AND THE COLORADO DEPARTMENT OF TRANSPORTATION

The FAA, part of the United States Department of Transportation, has a defined mission "to provide the safest, most efficient aerospace system in the world."[1] Airports in the United States that receive federal funding need to comply with FAA standards and regulations. From a federal planning and development perspective, EGE falls under the FAA Denver Airport Districts Office (DEN-ADO) which issued the grant for and was involved in this Master Plan process.

FAA objectives with respect to this Master Plan are primarily focused in two areas. First, the AMP must fulfill the broad master planning goals and requirements established by the FAA in AC 150/5070-6B, *Airport Master Plans*[2]. Second, since the Airport receives grants through the FAA's Airport Improvement Program (AIP)[3] - a federal program that provides grants to airport sponsors for airport planning and development - EGE is also obligated to meet a set of 39 grant assurances[4]. These require the sponsor to maintain and operate their airport safely and efficiently and in accordance with specific conditions.

The duration of the assurances depends on the type of recipient, the useful life of the facility being developed, and other conditions stipulated in the assurances. Most assurances have a duration of the useful life of the project, with a 20-year maximum (starting when the funds were accepted by the sponsor). Some assurances last in perpetuity or as long as the airport continues to operate.

Non-compliance with grant assurances can result in withholding of future grants and payments on existing grants as well as other consequences. The current grant assurances are listed in **Table 1-1**.

[1] FAA. https://www.faa.gov/
[2] FAA. Advisory Circulars (ACs) – AC Search (faa.gov)
[3] FAA. Airport Improvement Program (AIP). https://www.faa.gov/airports/aip/
[4] FAA Grant Assurances (Obligations). https://www.faa.gov/airports/aip/grant_assurances

Table 1-1: FAA Grant Assurances

1. General Federal Requirements	21. Compatible Land Use
2. Responsibility and Authority of Sponsor	22. Economic Nondiscrimination
3. Sponsor Fund Availability	23. Exclusive Rights
4. Good Title	24. Fee and Rental Structure
5. Preserving Rights and Powers	25. Airport Revenue
6. Consistency with Local Plans	26. Reports and Inspections
7. Consideration of Local Interest	27. Use by Government Aircraft
8. Consultation with Users	28. Land for Federal Facilities
9. Public Hearings	29. Airport Layout Plan
10. Metropolitan Planning Organization	30. Civil Rights
11. Pavement Preventive Maintenance	31. Disposal of Land
12. Terminal Development Prerequisites	32. Engineering and Design Services
13. Accounting System, Audit and Record Keeping	33. Foreign Market Restrictions
14. Minimum Wage Rate	34. Policies, Standards and Specifications
15. Veterans Preference	35. Relocation and Real Property Acquisition
16. Conformity to Plans and Specifications	36. Access by Intercity Buses
17. Construction Inspection and Approval	37. Disadvantaged Business Enterprises
18. Planning Projects	38. Hangar Construction
19. Operation and Maintenance	39. Competitive Access
20. Hazard Removal and Mitigation	

Source: FAA.

State level aeronautical governmental bodies work in concert with the FAA. In Colorado, CDOT's Division of Aeronautics performs a multitude of services for Colorado airports. CDOT was also involved in and contributed grant funding to this Master Plan. CDOT objectives for this Master Plan align with those of the FAA. The state agency also has specific goals for all airports within the Colorado airport system as defined in the 2020 Colorado Aviation System Plan (CASP):

- Safety and Efficiency: Advance Colorado's airport system by promoting and preserving safe and efficient facilities, on and off airports.
- Access and Mobility: Provide Colorado's airports with infrastructure and sufficient capacity to enable adequate public access and mobility utilizing the aviation system.
- Economic Sustainability: Support sustainable economic growth and development to continue Colorado's existing status as a leader in technology, testing, and aerospace industry.
- System Viability: Preserve airport system assets to promote fiscal responsibility and sustainable, cost-effective investments to ensure the system's long-term viability.

The goals defined by the Airport for this Master Plan within **Section 1.2** are consistent with those defined by the FAA and CDOT. Additionally, the Airport will meet all other federal and state requirements, including grant assurances, as part of this planning process.

*To be effective, an Airport Master Plan must be designed to meet the individual needs of the Airport and its host communities. Federal and State agencies contribute to this process, but **this is ultimately the Airport's plan!***

1.4 AIRPORT MASTER PLAN CONTEXT

A new Airport Master Plan is not conducted in a planning vacuum; rather, it is typically the most recent element of a continuum of multiple planning efforts that have previously been undertaken. While each of those individual planning efforts reflect the immediate circumstances, environment, and goals that existed at the time of their undertaking, when viewed holistically, they should also reflect a relatively consistent development arc of the Airport over time. Those previous efforts can provide important context for the development of a new AMP.

EGE's last AMP was completed in 2014 and generally reflected the Airport's progressive planned development as the region's preeminent commercial service and general aviation airport. The AMP documented EGE's continued growth in aircraft operations and passenger enplanements, which then drove a series of airport facility improvement recommendations to meet the projected increase in demand. These included multiple airfield improvements including the construction of a commercial deicing pad and the initial development of a full-length parallel taxiway (Taxiway B) north of the existing runway. Other recommended improvements included expanding various elements of the commercial air service terminal building and various other general aviation initiatives.

Based on AMP recommendations, EGE subsequently undertook a Terminal Area Planning effort in 2016. This study identified options for the long-term development of the terminal building in addition to other landside improvements associated with terminal area access: automobile parking, rental car operations, among others.

Ultimately, these two most recent planning efforts, in combination with other efforts, resulted in the following improvements at the Airport being undertaken since 2014:

- Construction of the new Army National Guard's High Altitude Aviation Training Site (HAATs) facility
- Reconstruction of the commercial airline apron
- Construction of a Snow Removal Equipment (SRE) facility
- Installation of a runway weather sensor system
- Improvements made to northside utilities
- Construction of northside restroom and gazebo
- Reconstruction of the north general aviation apron
- Implementation of a new hangar development on the northside
- Construction of the commercial deicing pad
- Expansion of the commercial air service terminal building, including construction of a new concourse, hold rooms, security areas, jet bridges, etc.
- Expansion of Vail Valley Jet Center (VVJC) aprons and hangars to the west and east of the terminal building
- Initiation of the construction of the new Taxiway B
- Initiation of the construction of a new customs facility
- Rehabilitation of Taxiway A

Those previous planning efforts successfully identified multiple needs and issues that EGE has either resolved or is in the process of addressing through specific projects. However, other issues have not been addressed by those prior efforts and/or require review and potential revision due to changing industry circumstances, market conditions, and other factors. The current AMP will be conducted with these development gaps in mind. Specifically, this AMP will review previous efforts, compare/contrast applicable goals from those plans to current conditions, revise previous recommendations as appropriate, and establish updated or new goals to be achieved.

1.5 AIRPORT MASTER PLAN COMMUNICATION AND COORDINATION

Public involvement is an integral part of any airport master planning effort. Such participation encourages information sharing and collaboration among the community and the airport stakeholders to generate collective interest in the outcome of the study. Stakeholders typically include airport management, advisory boards or commissions, tenants, users, local businesses and residents, resource agencies, elected and appointed public officials, and interested members of the public. A highly diverse pool of participants requires a variety of forums to enhance the effectiveness of the project coordination effort:

- A Project Management Team (PMT) has been established to provide management and oversight, and to ensure that the AMP is executed within the approved scope of work/budget and on schedule.
- A Planning Advisory Committee (PAC) has been established as a resource to ensure the AMP addresses the key issues facing the Airport and its surrounding community. The PAC will convene three times during the course of the project in conjunction with delivery milestones. PAC membership includes representation from the following groups:
  - Stakeholders
  - Tenants
  - Users
  - Community Leaders
  - FAA and CDOT Division of Aeronautics Representatives
- Focus Group meetings will provide input and feedback about the Airport in general, its services, its facilities, and its future. Participants in the focus group meetings include airport users, tenants, local business owners, and members of the public.
- An online survey of key airport stakeholders (including users, tenants, based aircraft owners/pilots, transient pilots, commercial airline passengers, and airport users at large) has been conducted to solicit feedback regarding a variety of topics. The survey addresses Airport strengths and weaknesses, potential facility and service improvements, the future of the Airport, and the participant's individual activities at the Airport. The survey results guide planning actions documented in **Chapter 4, Airfield Capacity & Facility Requirements.**

- Various public outreach materials have been created, and methods employed to generate public awareness of the AMP. Such materials and outreach programs serve as important sources of information for interested parties to keep them informed of the planning process, solicit input, and facilitate decision-making during the process. Outreach materials include a project website, press releases for local media, meeting advertisements, and social media campaigns.
- Additional forms of public involvement include public briefings to the Eagle County Commission that coincide with the PAC meetings, two commercial terminal design workshops, two briefings to other area governmental organizations, and two community information meetings/workshops. The workshops provide an opportunity to engage the public in meaningful conversation about the Airport and the AMP. Other additional briefings and technical meetings include those with key agencies, stakeholders, and public officials as required. Presentations associated with these meetings are included in the appendices.

1.6 STUDY ELEMENTS

The EGE AMP has been prepared consistent with the guidance provided in FAA AC 150/5070-6B, *Airport Master Plans*, and other industry-accepted principles and practices. Specifically, this Master Plan's chapters are designed to identify future facility requirements and provide the supporting rationale for their implementation.

Chapter 1, Study Overview provides background on the purpose and intent of the AMP, including objectives, work products, and the overall structure of the project.

Chapter 2, Inventory establishes a foundation for development of core components of the AMP. The inventory compiles essential data related to the physical, operational, and functional characteristics of the Airport. The Airport's environmental setting and corresponding impact is considered and weighed throughout the master planning process, beginning with this chapter.

Chapter 3, Aviation Activity Forecast serves as an operational baseline for gauging existing airport functions and developing future airport systems. The forecast utilizes local socioeconomic information and national air transportation trends to project the levels of aviation activity that can be reasonably expected at the Airport over the 20-year planning period. Because many of the proposals and recommendations in the AMP are based on the aviation activity demand forecasts, it is critical that the forecasts are reasonable and defensible. ***Note that the aviation forecasts must be officially reviewed and accepted by the FAA***.

While an Airport Master Plan must follow the federally defined airport planning process, the FAA only approves the aviation activity forecasts and the Airport Layout Plan.

Chapter 4, Airfield Capacity & Facility Requirements utilizes the results of Chapter 3 to assess the ability of existing airside and landside facilities to meet the projected level of demand for the five-, ten-, and twenty-year planning horizons. This analysis defines requirements for additional facilities, expansion of existing facilities, and determines whether the facilities will meet the forecasted demand over the 20-year planning period. Beyond this, airport facilities are examined with respect to potential improvements that may be needed to safely serve the type of aircraft expected to operate at the Airport in the future. This includes compliance with FAA airport design

standards, airspace clearance requirements, facility improvements, as well as possible navigational aids to enhance the safety and efficiency of aircraft operations.

Chapter 5, Development Alternatives & Recommended Plan considers a variety of solutions to accommodate the anticipated facility needs identified within Chapter 4. Through this process, various facility and site plan alternatives are proposed and weighed with respect to their ability to meet the projected facility needs. This analysis ultimately results in a preferred development alternative deemed to best meet the Airport's facility requirements and its long-term goals in an efficient and appropriate manner. As a tool for the alternatives review and evaluation, matrices are employed to help identify the strengths and weaknesses of each proposed development alternative to determine a single direction for development. This evaluation method focuses on several key criteria including cost, efficiency, feasibility, and operational effectiveness, among others. An environmental screening of the preferred development plan is also included in this chapter.

Chapter 6, Airport Layout Plan provides both a graphic and narrative description of the recommended plan for the use, development, and operation of the Airport. ***Note that the Airport Layout Plan set must be officially reviewed, approved, and signed by the Airport Sponsor, CDOT Division of Aeronautics, and the FAA.***

To secure federal and state grant funding, all potential Airport development must be reflected on an approved and signed Airport Layout Plan (ALP).

Chapter 7, Financial Plan focuses on the capital improvement program which defines the schedules, costs, and funding sources for the recommended development plan. It is important that the development program is practical, reasonable, and capable of enhancing the economic viability of the Airport.