VGT

NORTH LAS VEGAS AIRPORT

AIRPORT MASTER PLAN

DRAFT FINAL

DRAFT FINAL

MASTER PLAN

FOR

NORTH LAS VEGAS AIRPORT (VGT)

North Las Vegas, Nevada

PREPARED FOR THE

CLARK COUNTY DEPARTMENT OF AVIATION

Clark County, Nevada

BY

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August 2025

The preparation of this document was supported in part with financial assistance through the Airport Improvement Program from the Federal Aviation Administration as provided under Title 49 USC § 47104. The contents do not necessarily reflect the official views or policy of the FAA. Acceptance of this report by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted therein, nor does it indicate that the proposed development is environmentally acceptable in accordance with appropriate public laws.

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Introduction

Introduction

North Las Vegas Airport (VGT) is one of five airports owned by Clark County, Nevada, and operated by the Clark County Department of Aviation (CCDOA), along with Harry Reid International Airport (LAS), Perkins Field (U08), Jean Airport (0L7), and Henderson Executive Airport (HND). VGT supports the general aviation needs of the City of North Las Vegas and the wider Las Vegas Valley. The airport is part of a larger system of airports which comprise the National Airspace System, connecting people and goods to national and international economic markets.

According to an August 2019 report by Oxford Economics, *The Economic Contribution of the Clark County Airports*, **VGT supports 919 jobs, with an annual payroll of $39,183,400 and a total economic output of $218,032,790**. The CCDOA recognizes the value of the airport, and this master plan is evidence of a desire to support the airport so that it can continue to serve as an economic engine for the community and region.

The CCDOA is responsible for funding capital improvements at VGT, as well as obtaining development grants from the Federal Aviation Administration (FAA). In addition, the CCDOA oversees facility enhancements and infrastructure development conducted by private contractors and consultants at the airport. This master plan is intended to provide guidance for future development and justification for projects for which the airport may receive funding through an updated capital improvement program (CIP) to demonstrate the future investment required by Clark County, as well as the FAA.

ABOUT THE STUDY

WHAT IS A MASTER PLAN?

A master plan provides an evaluation of an airport's aviation demand and an overview of the recommended development, guiding modernization of the airport to meet its aviation demand while considering potential environmental and socioeconomic impacts. The master plan establishes development objectives and provides for a 20-year planning period that details the rationale for various study elements, including airfield configuration, facility development, on-airport land use recommendations, and support facilities. It also serves as a strategic tool for establishing improvement priorities and justifying the need for federal and state funding assistance.

The last master plan for VGT was completed in 1988. The FAA currently recommends that airports update their master plans every seven to 10 years, or periodically to address local changes at the airport. The master plan is tailored to the specific needs of the airport and focuses on the airport's critical issues at the local level. A scope of work developed by the planners and airport sponsor determined the details of the individual master plan elements for VGT, and the CCDOA received an Airport Improvement Program (AIP) grant from the FAA to update the airport master plan.

The airport master plan follows a systematic approach outlined by the FAA to identify airport needs in advance of the actual need for improvement. This is done to ensure the CCDOA can coordinate environmental reviews, project approvals, design, financing, and construction to maintain the facilities at an Air Elite® standard.

An important outcome of the master plan process is a recommended development plan that reserves sufficient areas for future facility needs. Such planning will protect development areas and ensure they will be readily available when required to meet future needs. The intended outcome of this study is a detailed on-airport land use concept that outlines specific uses for all areas of airport property, including strategies for revenue enhancement.

The cost of maintaining an airport is an investment that yields impressive benefits to the local community. With a sound and realistic master plan, the airport can maintain its role as an important link to the regional, state, national, and global air transportation systems. Moreover, the plan will aid in supporting decisions for directing valuable CCDOA resources for future airport development. Some of the common questions regarding what a master plan is or is not are answered in the following graphics.

What an Airport Master Plan is:

- A comprehensive, long-range study of the airport and all air and landside components that describes plans to meet FAA safety standards and future aviation demand.
- Recommended by the FAA to be conducted periodically to ensure plans are up-to-date and reflect current conditions and FAA regulations.
- Funded in part by the FAA through the Airport Improvement Program (AIP). 93.75% of this study is being funded by AIP funds, with the remainder funded by the CCDOA.
- The FAA approves the Aviation Demand Forecasts and the Airport Layout Plan (ALP) drawing set elements.
- An opportunity for airport stakeholders and the general public to engage with airport staff on issues related to the airport and its current and future operations and environmental and socioeconomic impacts. Four (4) public information workshops will be conducted throughout the master plan process to facilitate this public outreach effort.

What an Airport Master Plan is not:

- A guarantee that the airport will proceed with any planned projects. Master plans are guides that help airport staff plan for future airport development; however, the need/demand for certain projects may not ever materialize.
- A guarantee that Clark County, NDOT, or the FAA will fund any planned projects. Project funding is considered on a project-by-project basis requiring appropriate need and demand. Certain projects may require the completion of a benefit-cost analysis.
- Environmental clearance for any planned projects. The master plan includes an environmental overview that identifies potential environmental sensitivities per the National Environmental Policy Act of 1969 (NEPA); however, most planned projects will require a separate NEPA study (Environmental Impact Statement/ Environmental Assessment/Categorical Exclusion) prior to construction.

WHO IS PREPARING THE MASTER PLAN?

Through a qualifications-based selection process, the CCDOA contracted with Coffman Associates, Inc. to undertake the airport master plan. Coffman Associates is an airport consulting firm that specializes in master planning and environmental studies. Coffman Associates led the planning team, with support from HNTB, Lean Engineering, Accretive Consulting, Martinez Geospatial, and GCW Engineers/Surveyors. HNTB is an engineering firm that provided support and insights into development alternatives and estimates of probable costs. Lean Engineering conducted a technical analysis of airspace, instrument procedures, navigational aids (NAVAIDs), and approach lighting. Accretive Consulting assisted with stakeholder engagement and public outreach. Martinez Geospatial provided remote-sensing and photogrammetry services. GCW Engineers/Surveyors evaluated traffic impacts related to overall development recommendations.

The airport master plan update was prepared in accordance with FAA requirements, including Advisory Circular (AC) 150/5300-13B, *Airport Design*, and AC 150/5070-6B, *Airport Master Plans*. The master plan was closely coordinated with other planning studies relevant to the area and with aviation plans developed by the FAA. The plan was also coordinated with the CCDOA, the City of North Las Vegas, and other local and regional agencies as appropriate.

MASTER PLAN GOALS AND OBJECTIVES

The primary goal of this master plan is to provide the framework needed to guide future airport development that will cost-effectively satisfy aviation demand while considering potential environmental and socioeconomic impacts. Additionally, the plan evaluated VGT in relation to the system of airports serving the Las Vegas Valley. Accomplishing this goal required an evaluation of the existing airport to decide what actions should be taken to maintain a safe, adequate, and reliable facility.

Master Plan Objectives

- To research factors likely to affect all air transportation demand segments at VGT over the next 20 years.
- To determine projected needs of the airport users for the next 20 years.
- To recommend improvements that will enhance the airport's ability to satisfy future aviation needs, including the possibility of developing an entirely new general aviation apron and hangar location.
- To analyze the existing airfield system to determine the existing and ultimate runway lengths required to satisfy the airport's critical aircraft.
- To produce updated and accurate base maps of existing and proposed facilities and updated Airport Layout Plan (ALP) drawings consistent with FAA standards.
- To review future use and zoning of airport property and approaches to each runway for future protection.

- To evaluate landside development options to maximize use of available property in order to accommodate forecast demand, increase revenue production, and be sustainable in both approaches.

- To establish a schedule of development priorities and a program for improvements proposed in the master plan, consistent with the FAA's capital improvement program planning.

- To consider sustainability efforts – specifically waste and recycling improvements – as part of updated FAA standards.

Additional Issues Addressed

- Parallel taxiway separation standards and potential shifts to meet standards.

- FAA hot spot designation and other non-standard airfield geometry changes.

- Analysis of the North Las Vegas area's growth in residential and commercial development as it relates to compatible land uses surrounding the airport.

- Airspace analysis to factor and define compatible building heights in the runway approach zones and for extended VGT operations in proximity to Nellis Air Force Base and Harry Reid International Airport to ensure the long-term viability of airfield operations at VGT.

- Sustainability and environmental best practices.

Baseline Assumptions

A long-range planning study requires several baseline assumptions that will be used throughout this analysis. The baseline assumptions for this study are as follows:

- VGT will continue to accommodate general aviation tenants, as well as itinerant and local aircraft operations by air taxi, general aviation, and military operations.

- The aviation industry will develop through the planning periods as projected by the FAA in their annual Aerospace Forecasts report, the most recent available at the time of writing being the FY 2023-2043 edition.[1]

- The socioeconomic characteristics of the region will generally change as forecasted (see Chapter Two).

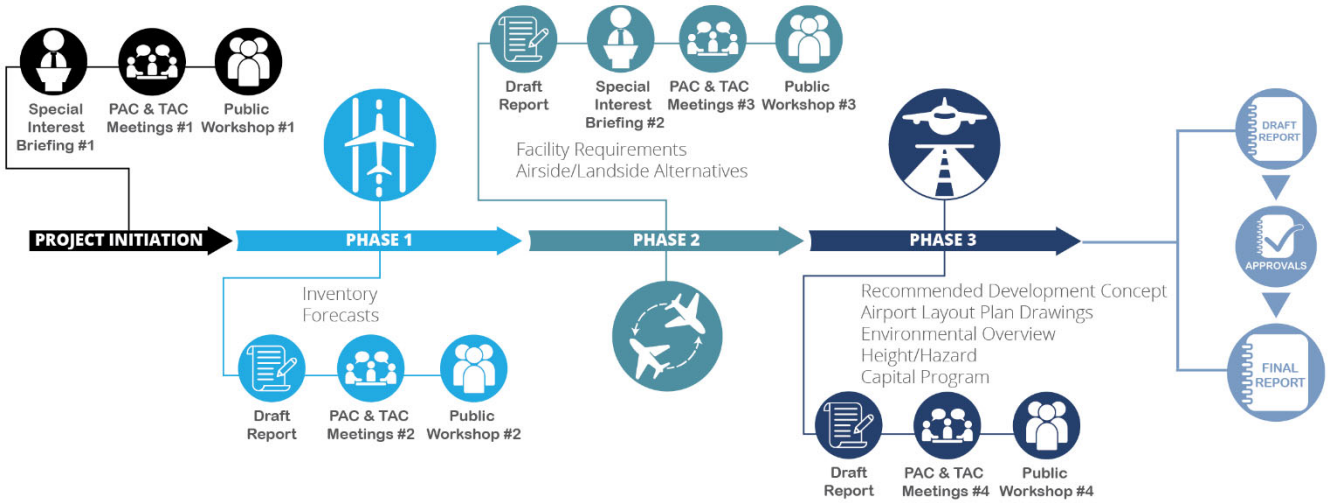
- A federal airport improvement program will be in place through the planning period to assist in funding capital development needs.

[1] https://www.faa.gov/data_research/aviation/aerospace_forecasts

MASTER PLAN ELEMENTS AND PROCESS

The airport master plan is prepared with the appropriate elements determined from the scope of services that has been coordinated with the CCDOA. The study has 12 specific elements that are intended to assist in the identification of future facility needs and which provide the supporting rationale for their implementation. **Figure iA** provides a graphical depiction of the elements and process involved in the study.

Figure iA – *Master Plan Process and Elements*



Element 1 – Study Initiation and Project Administration includes development of the scope of services, schedule, and study website. The purpose of this element is to allow for appropriate time to manage the project, including the website, project updates with the sponsor, team management, and overall quality assurance and quality control (QA/QC).

Element 2 – Coordination and Public Involvement Program is included to qualify and quantify specific levels of public outreach and to establish the Planning Advisory Committee (PAC) and Technical Advisory Committee (TAC). The overall goal of the program is to educate and communicate high-level aviation planning concepts in a manner that is capable of being understood by all key stakeholders. The approach is to be collaborative and direct for those with vested or generalized interests.

Element 3 – Inventory of Existing Conditions involves assembly and organization of information and data pertaining to VGT and the surrounding area. A series of inventory efforts is necessary to collect and organize a variety of specific historical, technical, legal, financial, and planning data that are used to establish a baseline of existing information from which the remainder of the master plan is built.

Element 4 – Aviation Demand Forecasts examines the estimates of future levels of air traffic and based aircraft at VGT using industry-accepted forecasting methods. These forecasts considered factors such as historical demand and use, socioeconomic characteristics, and FAA projections to estimate future demand at VGT over a 20-year period. An existing and ultimate critical design aircraft based on AC 150/5000-17, *Critical Aircraft and Regular Use Determination*, will be established to determine future

planning design standards. The results of this effort are used to determine the types and sizes of facilities that will be required to meet the projected aviation demand at the airport through the planning period. The forecasts were submitted to the FAA for review and approval.

Element 5 – Demand/Capacity and Facility Requirements analyzes and assesses the available capacities of various facilities at VGT, including their conformance or non-conformance with FAA standards, and identifies the facilities that will be needed to meet compliance requirements or projected demand over the next 20 years.

Element 6 – Sustainability Planning includes the development of a recycling plan by evaluating the feasibility of solid waste recycling, minimizing the generation of waste, identifying operations and maintenance requirements, reviewing waste management contracts, and identifying the potential for cost savings or revenue generation. Other sustainability initiatives will also be included, such as solar and improved or expanded electrical facilities that may be needed as aircraft electrification becomes more common.

Element 7 – Alternatives Analysis and Recommended Development Plan considers a variety of solutions to accommodate projected facility needs through the long-term planning period. An analysis is completed to identify the strengths and weaknesses of each proposed development alternative, with the intention of determining a single feasible direction for development.

Element 8 – Environmental Considerations identifies potential issues associated with the airport development alternatives and recommended development concept, including mitigation measures that may be needed for proposed projects. Using operational forecasts prepared in Element 4, conceptual aircraft noise exposure contours are developed as part of the master plan for informational purposes. These will be prepared using FAA's Airport Environmental Design Tool (AEDT) for the existing and future conditions. The conceptual noise contours provide a basic understanding of noise exposure at the airport but do not rise to the level of Airport Noise Compatibility Planning, which would need to be studied separately from the master plan as outlined within 14 CFR Part 150. An evaluation of compatible land use is also detailed. Projects that will require further analysis under the *National Environmental Policy Act* (NEPA) are identified.

Element 9 – Facility Implementation Phasing Plan analyzes benefits and costs that may be associated with the recommended plan. This element also determines and sets out the assumptions, terms, and conditions by which agreed-upon capital improvement programs can be financially implemented for VGT.

Element 10 – Airport Plans involves the development of the Airport Layout Plan (ALP) drawing set. The ALP will meet the FAA's Standard Operating Procedure (SOP), *Standard Procedure for FAA Review and Approval of Airport Layout Plans (ALPs),* effective October 1, 2013. The updated ALP set will be included as an appendix to the master plan and submitted to the FAA for review and approval.

Element 11 – Airspace Analysis and Modeling is a complete data collection of the airport environment that was conducted to assist in the development of the ALP and the analysis of Part 77 surfaces.

Element 12 – Final Reports provides documents that depict the findings of the study effort and present the study and its recommendations to appropriate local organizations. The final document incorporates the revisions to previous working papers, prepared under earlier elements, into a usable master plan document.

COORDINATION AND OUTREACH

The airport master plan is of interest to many within the local community and region, including local citizens, local businesses, local governmental agencies, community organizations, county officials, airport users, airport tenants, and aviation organizations. As a component of the regional, state, and national aviation systems, the master plan is of importance to both state and federal agencies responsible for overseeing the air transportation system.

To assist in the development of the airport master plan, the CCDOA assembled a Planning Advisory Committee (PAC) and Technical Advisory Committee (TAC), which consist of a group of stakeholders – including government representatives, airport users and tenants, and local community leaders – who acted in an advisory role in the development of the master plan. Members of the PAC and TAC met four times at designated points during the master plan study to review study materials and provide comments to help ensure that a realistic, viable plan is developed. Two additional CCDOA-hosted PAC and TAC workshops were conducted to review/refine development alternatives. **Table i** on the following page provides a list of those entities that are represented on the PAC and TAC.

Draft working paper materials were prepared at various milestones in the planning process. The working paper process allows for timely input and review during each step within the master plan to ensure that all issues are fully addressed as the recommended program develops.

A series of public information workshops were also conducted as part of the study coordination effort. These workshops were designed to allow any and all interested persons to receive information and provide input concerning the master plan process. Notices of meeting times and locations were advertised through local media outlets. Draft working papers and other information related to the master plan are available to the public via a website dedicated to the study: https://vgt.airportstudy.net. Outreach to the public included notices posted to social media and published by newspaper.

TABLE i | PAC and TAC Representatives

Representing	Name	Title
Planning Advisory Committee		
AJB General Contractor	Alan Jeskey	Owner
Beauty Society	Jeannie Lorin & Dan Chapman	Owners
CCDOA	Majed Khater	Airport Senior Manager, ERP / GIS
CCDOA	Erika Hanuscin	Aviation Affairs Manager
CCDOA	Tony Perkins	Land Use & Noise Manager
City of North Las Vegas	Timothy Reesman	City Traffic Engineer
City of North Las Vegas	Brittany West	Economic Development Specialist
City of North Las Vegas	Riezl Pe Benito	Special Assistant to the Mayor & Council
City of North Las Vegas	Marco Velotta	Chief Sustainability Officer
CNLV	Jeff Alpert	Community Representative
Las Vegas Chamber of Commerce	Mary Beth Sewald	President & CEO
Panattoni Development Company	Michael Argier	Senior Development Manager
Technical Advisory Committee		
702 Helicopter/Air Tour SASO Representative	Brian & Bianca Lorenz	Owners
AirSmart/Charter SASO Representative	Tommy Suell	CEO / Director of Operations
West Air/Aircraft Rental SASO Representative	Mellisa Brewer	Manager
DAC/Hangar Leasing SASO Representative	Gerald Haan	Manager
Lone Mountain/Aircraft Maintenance SASO Representative	Kenny Scherado	President
ATP/Flight School SASO Representative	Amber Gaines	Training Support Manager
ATP/Flight School SASO Representative	Mark Butler	Director of Planning and Development
ATP/Flight School SASO Representative	Thomas Salmon	Facilities Manager
Cheyenne Air Center	Michael Black	Vice President
Airport Tenant Representative	David Edwards	Hangar Owner
Airport Tenant Representative	Ted Barney	Hangar Owner
CCDOA	Terry Ferrell	Airport Program Administrator, Airspace
CCDOA	Raul Valdez	Airport Senior Civil Engineer
CCDOA	Chris Fenton	Airport Senior Manager, Construction Design
FAA – AZ/NV Engineer	Ricky Sanchez	Civil Engineer
FAA – Flight Standard District Office (FSDO)	Terri Wolcott	FAAST Program Manager
FAA – VGT ATCT Manager	Adrienne Brown	Air Traffic Manager
NDOT – State Aviation Manager	Kurt Haukohl	State Aviation Manager
NDOT – State Aviation Manager	Christopher Yarrow	Transportation Planner
NDOT – State Aviation Manager	Natasha Ashby	Transportation Planner
Savage Aviation	Nic Sacco	CEO
Both – PAC & TAC		
Accretive Consulting	Kami Dempsey-Goudie	President
CCDOA	Bruce Daughtery	Airport Manager, General Aviation (HND)
CCDOA	Karina Tarnowska	Airport Manager, General Aviation (VGT)
CCDOA	SundayLee Cabrera	Airport Manager, Real Estate & Land Use
CCDOA	Ben Czyzewski	Managing Director, General Aviation
CCDOA	Bryant Holt	Managing Director, Planning
CCDOA	Jim Chrisley	Senior Director
CCDOA	Christa Schueler	Senior Planner
CCDOA	Tiffany Vaughn	Management Analyst II
CCDOA	Michael Mercado	Management Analyst – Airport Noise
Coffman Associates	Mike Dmyterko	President
Coffman Associates	Eric Pfeifer	Principal
FAA – AZ/NV ADO	Mike Williams	Manager
FAA – AZ/NV ADO	Kyler Erhard	Assistant Manager
FAA	Alan McKinney	Program Manager
FAA – Las Vegas FSDO	James Brownell	Manager
HNTB	Justin Bychek	Group Director, Aviation Planning & Environmental

Source: Clark County Department of Aviation