



WHAT IS A MASTER PLAN?

The Federal Aviation Administration (FAA) recommends that airports update their long-term planning documents every seven to 10 years, or as necessary, to address local changes at the airport. The last master plan update for Mesquite Metro Airport (HQZ) was completed in 2006. The City of Mesquite, which is the sponsor of the airport, has received a grant from the Texas Department of Transportation (TxDOT) – Aviation Division to update the airport master plan.

The city is responsible for funding capital improvements at HQZ, as well as obtaining FAA and TxDOT development grants. The master plan is intended to provide **a true vision for how HQZ is developed, 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 investments required by the City of Mesquite, TxDOT, and the FAA.

The airport master plan follows a systematic approach outlined by the FAA to identify airport needs in advance of the actual need for improvements. This is done to ensure that the city can coordinate environmental reviews, project approvals, design, financing, and construction to minimize the negative effects of maintaining and operating inadequate or insufficient facilities. An important outcome of the master plan process is a recommended development plan, which 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 preparation of this master plan is evidence that the city recognizes the importance of the airport and the associated challenges inherent in providing for its unique operating and improvement needs. The cost of maintaining an airport is an investment which 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 limited and valuable city resources for future airport development. Continued investment in the airport will ultimately allow the City of Mesquite to reap the economic benefits.

Some common questions regarding what a master plan is / is not are answered in the graphic below.

What an Airport Master Plan is:

- A comprehensive, long-range study of the airport and all airside and landside components that describes plans to meet FAA safety standards and future aviation demand.
- Recommended by the FAA to be conducted every 7-10 years to ensure plans are up to date and reflect current conditions and FAA regulations. The last master plan for HQZ was completed in 2006.
- Funded by the FAA through the Airport Improvement Program (AIP), which provides 90% of the total project costs. The remaining 10% is funded by the City of Mesquite.
- A City of Mesquite document that will ultimately be presented to the city council for approval to the city council. FAA approves only two elements of the master plan: the aviation demand forecasts and the airport layout plan (ALP drawing set).
- An opportunity for airport stakeholders and the general public to engage with airport staff regarding issues related to the airport, its current and future operations, and its environmental and socioeconomic impacts. Up to two (2) public information workshops will be conducted during 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 materialize.
- A guarantee that the City of Mesquite or the AIP will fund any planned projects. Project funding is considered on a project-by-project basis and requires appropriate need and demand. Certain projects may require the completion of a benefit-cost analysis.
- Environmental clearance for specific projects. The master plan includes an environmental overview which identifies potential environmental sensitivities per *National Environmental Policy Act (NEPA) of 1969* guidelines. 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?

The City of Mesquite has contracted with Coffman Associates, Inc. to undertake the airport master plan. Coffman Associates is an airport planning and consulting firm that specializes in master planning and environmental studies. Coffman Associates will lead the planning team with support from Martinez Geospatial for aerial photography, field survey, and airspace obstacle evaluation needs.

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

GOALS, OBJECTIVES, AND ASSUMPTIONS

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. Accomplishing this goal requires an evaluation of the existing airport to decide what actions should be taken to maintain a safe, adequate, and reliable facility. A long-range planning study also requires several baseline assumptions that will be used throughout the analysis. Specific objectives and assumptions for this study are as follows:

STUDY OBJECTIVES

Aviation Demand Forecasts

- To research factors that are likely to affect all air transportation demand segments in the City of Mesquite and the greater Dallas-Fort Worth Metroplex over the next 20 years. The analysis will include the development of forecasts of potential general aviation and air taxi activity elements.
- To determine the airport's current and future critical design aircraft per FAA AC 150/5300-17, *Critical Aircraft and Regular Use Determination*.

Facility Requirements

- To analyze the existing airfield system to determine the existing and ultimate runway length required to satisfy the airport's critical aircraft now and into the future.
- To conduct a demand capacity analysis to evaluate the need for capacity enhancements.

Development Alternatives

- To evaluate the highest and best uses of airport property.
- To recommend landside improvements that satisfy the anticipated operational growth, including fixed-base operator (FBO), specialty aviation operator (SASO), and other aviation services.

Capital Improvement Program

- To develop a 20-year demand-based capital improvement plan (CIP), including a recommended phasing plan.

Airport Layout Plan (ALP) Update

- To produce accurate base maps of existing and proposed facilities, as well as updated airport layout plan (ALP) drawings consistent with FAA Standard Operating Procedures (SOPs) No. 2.00 and 3.00.
- To review future use and zoning of airport property, instrument approach areas, and nearby developments to ensure flight safety and land use compatibility. This will involve the development of new noise exposure contours utilizing the FAA's Aviation Environmental Design Tool (AEDT); application of current land use compatibility guidelines; review of local land use controls and plans; and analysis of land use management techniques.
- To analyze all opportunities and develop strategies for incompatible land use encroachments.

BASELINE ASSUMPTIONS

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

- HQZ will continue to accommodate general aviation tenants – as well as itinerant and local aircraft operations by air taxi, general aviation, and military operators – through the 20-year planning period.
- The aviation industry will develop through the planning period as projected by the FAA. Specifics of projected changes in national aviation industries are described in Chapter Two – Aviation Demand Forecasts.
- The socioeconomic characteristics of the region will generally change as forecast (Chapter Two).
- A federal and state airport improvement program will be in place through the planning period to assist in funding future capital development needs.

MASTER PLAN ELEMENTS AND PROCESS

The master plan has 10 elements that are intended to assist in the evaluation of future facility needs and provide the supporting rationale for their implementation. **Figure IA** provides a graphical depiction of the process involved with the study.

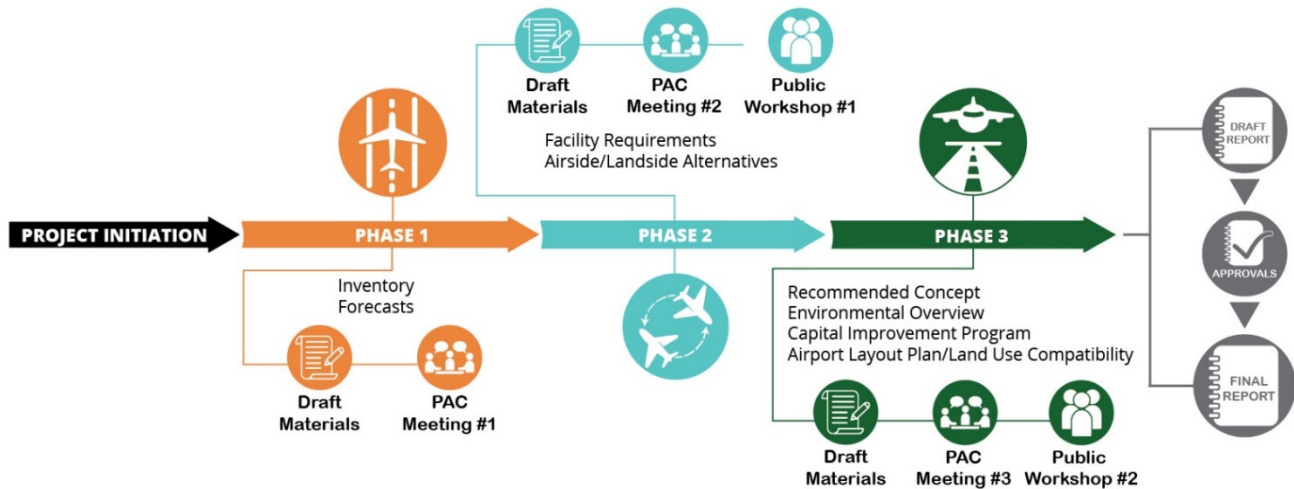


Figure IA – Project Workflow

Element 1 – Study Initiation and Organization includes the development of the scope of services, schedule, and study website. Study materials will be assembled in a workbook format. General background information will be established that includes outlining the goals and objectives to be accomplished during the master plan.

Element 2 – Inventory of Existing Conditions is focused on collecting and assembling relevant data pertaining to the airport and the area it serves. Information regarding existing facilities and operations is collected. Local economic and demographic data are collected to define the local growth trends, and environmental information is gathered to identify potential environmental sensitivities that might affect future improvements. Planning studies that may be relevant to the master plan are also collected.

Element 3 – Aviation Demand Forecasts examines the potential aviation demand at HQZ. The analysis utilizes local socioeconomic information and national air transportation trends to quantify the levels of aviation activity that can reasonably be expected to occur at HQZ over a 20-year period. An existing and ultimate critical design aircraft – based upon AC 150/5000-17, *Critical Aircraft and Regular Use Determination* – is also 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. This element is one of two elements that are submitted to TxDOT for approval.

Element 4 – Facility Requirements determines the available capacities of various facilities at the airport, whether they conform with FAA standards, and what facility updates or new facilities will be needed to comply with FAA requirements and/or projected 20-year demand.

Element 5 – Airport Development Alternatives considers a variety of solutions to accommodate projected airside and landside 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 direction for development.

Element 6 – Airport Plans/Land Use Compatibility involves coordination with airport staff and the planning advisory committee (see Element 9) to result in the selection of a recommended development concept. Airport layout plans will be developed to depict the recommended development concept. The drawings will meet the requirements of FAA SOP No. 2.00, *Standard Procedure for FAA Review and Approval of Airport Layout Plans (ALPs)* (effective date October 1, 2013). The updated ALP set will be included as an appendix to this study. The airport’s noise exposure and land use compatibility will also be evaluated. An environmental overview will identify any potential environmental concerns that must be addressed prior to the implementation of the recommended development program.

Element 7 – Financial Management and Development Program analyzes the benefits and costs associated with the recommended plan. Specific project costs are established for the development of a capital improvement program (CIP) that ensures logical staging of improvements.

Element 8 – Final Reports produces the draft final report and ALP drawings in print and digital form. These materials will be presented to the City of Mesquite, TxDOT, and the FAA for review and approval. Once approved, a final report will be prepared and made available in print and digital formats.

Element 9 – PAC Meeting and Public Outreach includes tasks related to the establishment of a planning advisory committee (PAC) for the master plan and the conducting of periodic public information workshops with the aim of engaging the community in the study process. The study materials and notices of public meetings will be distributed on the study website.

Element 10 – Obstruction Survey and Mapping includes the development of new aerial mapping (topographic/planimetric) of the airport and surroundings environs. Based on the data received, an obstacle action plan (OAP) will be developed which includes mitigative actions for obstacles that could impede safe air navigation.

COORDINATION AND OUTREACH

This study is of interest to many within the local community and region, including local citizens, local businesses, community organizations, city officials, airport users/tenants, and aviation organizations. As a component of the regional, state, and national aviation systems, HQZ is of importance to both state and federal agencies responsible for overseeing the air transportation system.

To assist in the development of the master plan, a PAC has been established to act in an advisory role. PAC members will meet up to three times at designated points during the study to review study materials and provide comments to help ensure that a realistic, viable plan is developed.

Draft working paper materials will be 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 two open-house public information workshops is also planned as part of the study coordination and outreach efforts. Workshops are designed to allow all interested persons to become informed and provide input concerning the master plan process. Notices of meeting times and locations are advertised through local media outlets. All draft working papers, reports, meeting notices, and materials will be made available to the public on a study-specific website: mesquite.airportstudy.net