



Chapter 1

Introduction



The City of Forks is preparing an Airport Master Plan Update for Quillayute Airport in cooperation with the Federal Aviation Administration (FAA) to address the Airport’s needs for the next twenty years. The Airport Master Plan will provide specific guidance in making the improvements necessary to maintain a safe and efficient airport that is economically, environmentally, and socially sustainable.

Study Purpose

The purpose of the Airport Master Plan is to define the current, short-term, and long-term needs of the Airport through a comprehensive evaluation of facilities, conditions, and FAA airport planning and design standards. The study will also address elements of local planning (land use, transportation, environmental, economic development, etc.) that have the potential of affecting the planning, development, and operation of the Airport.

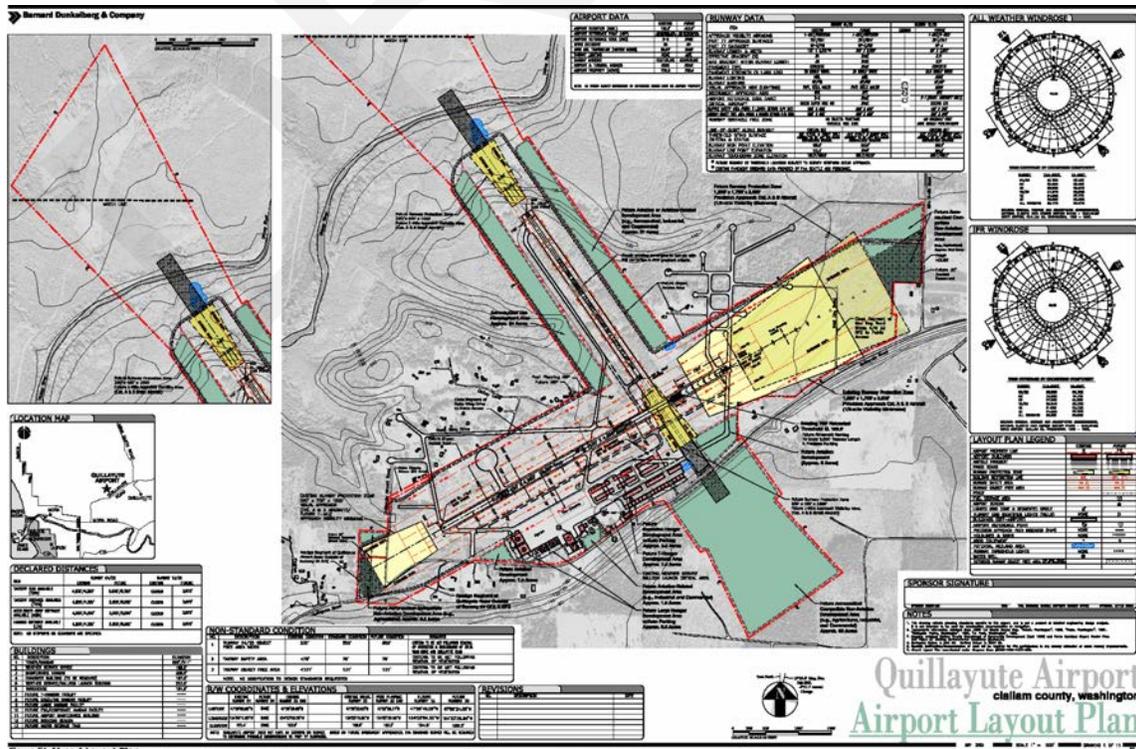


Figure E1: Airport Layout Plan



Project Need

The FAA requires airport sponsors (in this case, the City of Forks) to periodically update their master plans as conditions change in order to maintain current planning. This project replaces the 2003 Airport Master Plan (AMP) and ALP drawing set that guided recent projects, including rehabilitations of runway and taxiway pavement.

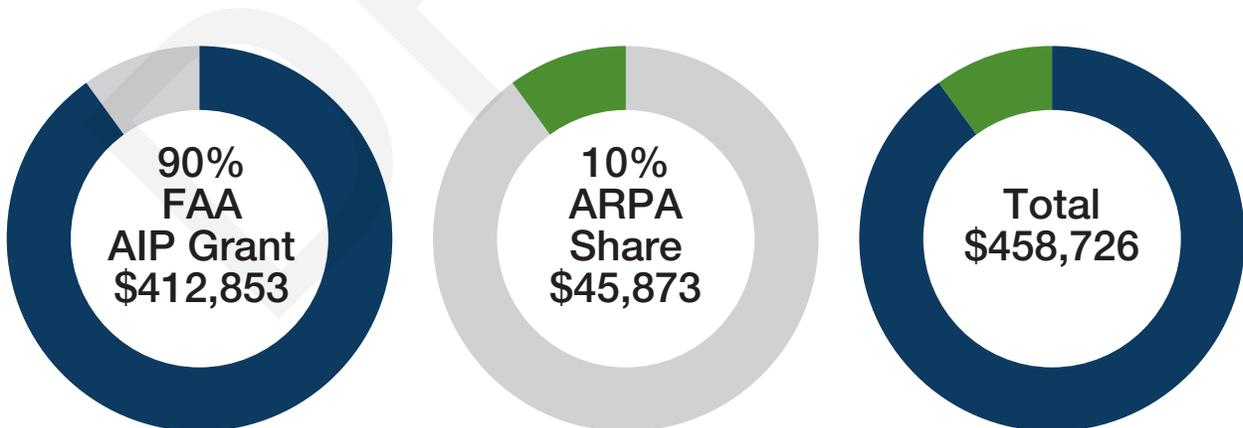
Although most of the 46 projects (\$23.2 million) included in the 2003 AMP twenty-year capital improvement program (CIP) have not been implemented, time-driven changes in both local conditions and FAA planning and design guidance, suggest a clear need to reexamine previous planning and recalibrate the Airport’s development program moving forward. This project also includes an Airport GIS (AGIS) survey, now required by FAA to perform the technical evaluations for instrument procedure development. Completion of the AGIS survey will allow the City of Forks to realize its long-established goal of obtaining an instrument approach to the Airport.

The master plan update will reevaluate the development concepts presented in the previous planning effort, and address new facility needs. The updated plan will reflect changing local conditions, updated FAA standards, and current trends within the aviation industry.

The 2003 AMP Report will serve as a primary source for inventory data. More recent information provided by the City, published FAA data, and data obtained from on-site airfield inspections will be reflected in the AMP and ALP updates.

Project Funding

The 2021-2041 AMP for Quillayute Airport is being fully funded at the federal level. This includes an FAA Airport Improvement Program (AIP) grant of \$412,853 to cover the usual 90% FAA project funding share, and \$45,873 of additional FAA funding under the American Rescue Plan Act (ARPA) to cover the usual 10% local sponsor match. The AIP is a dedicated fund administered by FAA with the specific purpose of maintaining and improving the nation’s public use airports. The AIP is funded exclusively through fees paid by users of general and commercial aviation.





Goals of the Master Plan

The primary goal of the master plan is to provide the framework and vision needed to guide future development at Quillayute Airport. The FAA sets goals and objectives that each master plan should meet to ensure future development will cost-effectively satisfy aviation demand and also consider potential environmental and socioeconomic impacts.

Goal 1: Define the vision for the Airport to effectively serve the community, airport users, and the region. Assess known issues including airspace, runway-taxiway system configuration and condition, airfield lighting, and utility services/extensions required to support economically-feasible tenant development.

Goal 2: Document existing activity, condition of airfield facilities, and policies that impact airport operations and development opportunities.

Goal 3: Forecast future activity based on accepted methodology.

Goal 4: Evaluate facilities and conformance with applicable local, state, and FAA standards.

Goal 5: Identify facility improvements to address conformance issues and accommodate demand.

Goal 6: Identify potential environmental and land use requirements that may impact development.

Goal 7: Explore alternatives to address facility needs. Work collaboratively with all stakeholders to develop workable solutions to address needs.

Goal 8: Develop a detailed five-year work program to define key projects with an implementation schedule and funding strategy within the overall 20-year Capital Improvement Program (CIP). Develop long-term financial strategy for the Airport's maintenance & operations (M&O) and capital development needs.

Goal 9: Develop an Airport Layout Plan to graphically depict proposed improvements consistent with FAA standards as a road map to future development.

Goal 10: Review land use and zoning affecting the Airport and its immediate surroundings to ensure effective County oversight and to remove barriers to appropriate growth at the Airport.

Goal 11: Summarize the collective vision and plan for the Airport in the AMP.

THE FAA ROLE IN THE AIRPORT MASTER PLAN

FAA Advisory Circular 150/5070-6B Airport Master Plans defines the specific requirements and evaluation methods established by FAA for the study. The guidance in this AC covers planning requirements for all airports, regardless of size, complexity, or role. However, each planning study must focus on the specific needs of the airport for which a plan is being prepared.

The recommendations contained in an airport master plan represent the views, policies and development plans of the airport sponsor and do not necessarily represent the views of the FAA. Acceptance of the plan by the FAA does not constitute a commitment on the part of the United States to participate in any development depicted in the plan, nor does it indicate that the proposed development is environmentally acceptable in accordance with appropriate public law. The FAA reviews all elements of the plan to ensure that sound planning techniques have been applied. However, the FAA only approves the Aviation Activity Forecasts and Airport Layout Plan (ALP) drawings.



Planning Process

The three phase planning process is designed to provide multiple feedback loops intended to maintain the flow of information and ideas among the community and project stakeholders and ultimately maximize public involvement.

DEVELOP UNDERSTANDING

A comprehensive understanding of the issues and opportunities, existing conditions, and an identified level of future aviation activity that would mandate facility improvements required to satisfy future demand.

Analysis

- Develop Scope of Work
- Public Involvement Strategy
- AGIS Survey
- Existing Conditions Analysis
- Aviation Activity Forecasts

Project Meetings

- Bi-Weekly Planning Team Meetings
- Project Kick-off Meeting
- Planning Advisory Committee (PAC) Meetings

Work Product

- Introduction
- Existing Conditions
- Aviation Activity Forecasts

EXPLORE SOLUTIONS

A collaborative exploration of local Airport needs, goals, and facility requirements in sequence with the development of community generated ideas, solutions, and development alternatives.

Analysis

- Define Updated Airfield Design Standards
- Perform Demand/Capacity Analysis
- Define Facility Goals and Requirements
- Identify & Prepare Development Alternatives
- Evaluate Development Alternatives

Project Meetings

- Bi-Weekly Planning Team Meetings
- Planning Advisory Committee (PAC) Meetings
- Public Open House

Work Product

- Facility Goals & Requirements
- Airport Development Alternatives

IMPLEMENTATION

An implementation program with recommended strategies and actions for future land use, transportation, and environmental requirements; a realistic and workable CIP; and current ALP drawings that graphically depict existing conditions at the airport as well as proposed development projects.

Analysis

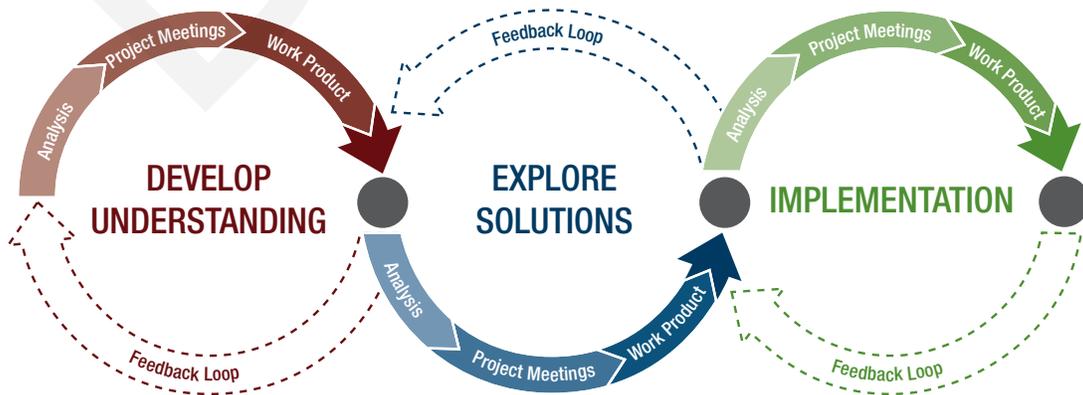
- Develop Strategies & Actions
- Develop CIP/Phasing/Financial Plan
- Develop ALP Drawing Set

Project Meetings

- Bi-Weekly Planning Team Meetings
- Planning Advisory Committee (PAC) Meetings

Work Product

- Strategies & Actions
- Financial Plan (CIP/Phasing)
- ALP Drawing Set
- Draft AMP Report
- Final AMP Report





Public Involvement Process

A comprehensive and engaging public involvement process is a key element to a successful airport master plan. For this project, numerous opportunities for public input are built in to the process. These include Planning Advisory Committee (PAC) meetings, a Public Open House for the project, and ongoing access to the project website that will include draft work products and project updates. Additional coordination meetings involving the FAA, City staff and the project planning team will be conducted over the course of the project, and reported out at the public meetings.

PLANNING ADVISORY COMMITTEE (PAC) MEETINGS

The PAC will provide input and allow for public dissemination of data. PAC members may consist of airport users, tenants, pilots, local and regional economic development interests, neighbors of the Airport, and staff/representatives of the City and County. The FAA Seattle Airports District Office (ADO) project manager will interact with the project team throughout the project, and may attend one or more of the PAC meetings. The FAA has primary responsibility for technical review, comment, and approval of forecasts and ALP.

The proposed PAC meeting schedule may be in-person, remote (video conferences), or a combination thereof depending on the current pandemic climate, and directions provided by state and local government.

PAC Meeting #1

The Consultant will summarize the goals and objectives of an AMP, and also present the existing conditions of the Airport, community, and aviation industry; as well as the preliminary aviation activity forecasts that will be submitted to FAA for formal review and approval.

PAC Meeting #2 / Public Open House

PAC Meeting #2 is an interactive discussion with the PAC that focuses on the airport's facility needs to meet FAA standards, future growth, as well as the goals of the City and its users. The Consultant will present a series of preliminary alternative concepts capable of satisfying future demand and any non-standard conditions and seek input from the PAC and public. Aligned with the PAC meeting will be a public open house, that provides another opportunity to engage the community, seek input, and answer questions about the planning project.

PAC Meeting #3

The input provided in PAC #2 and Public Open House is used to refine the concepts, and based on technical evaluations, public input and coordination with the City, a preferred alternative will be presented to the PAC. The Consultant will present an implementation program with recommended strategies and actions for future land use, transportation, and environmental requirements; a realistic and workable CIP; and current ALP drawings that graphically depict existing conditions at the Airport.

PAC Meeting #4

The Consultant will present an implementation program with recommended strategies and actions for future land use, transportation, and environmental requirements; a realistic and workable CIP; and current ALP drawings that graphically depict existing conditions at the Airport.



Known Issues & Opportunities

At the outset of the master plan there were several known issues and opportunities identified by the FAA, City, and planning team. The issues and opportunities identified below are anticipated focus areas for the master plan; other areas of emphasis may be identified during the project. Addressing these areas will ensure a comprehensive and thorough assessment that supports the proposed solutions and methods of implementation.

TARGETED FACILITY NEEDS – CREATE A REALISTIC PLAN FOR IMPLEMENTATION

The AMP will create a detailed development program that identifies critical tasks required for completion of each priority project. A focused approach will be used for a small number of priority projects that can be completed or significant progress made within the next five years. The program will include clear project definitions, detailed engineering cost estimates, financial strategy elements, the required sequence of actions for successful implementation.

INSTRUMENT APPROACH AND DEPARTURE

The AGIS survey was initiated at the outset of the AMP with an aerial photography flight in August, 2021 to capture full leaf-on conditions. Preliminary field work was also conducted in the early fall to allow the obstruction data to be collected and analyzed. Contact with the FAA Air Traffic Office (ATO) is being established early in the AMP to include a request for procedure feasibility that can be refined with AGIS data, when it becomes available. The goal is to obtain an FAA finding of technical feasibility that can be incorporated into the airfield alternatives analysis, then move into the procedure design phase. The process of formal FAA procedure design and approval will extend beyond the AMP, but these steps will facilitate the most efficient process and shortest development period possible.

RUNWAY LIGHTING, PAPI, BEACON

Upgrades in airfield lighting will be critical elements for instrument procedure development. The AMP will verify the FAA's minimum system requirements for publishing new instrument procedures at the Airport. The identification and phasing of lighting systems as critical path items required for instrumentation will be a main focus in the first five years of the CIP. A review of available FAA-approved lighting technologies will be performed to develop accurate estimates of cost.

UTILITIES – AIRPORT SYSTEM ASSESSMENT

An updated evaluation of existing utility services and on-airport distribution systems will be conducted to identify service gaps that may limit current or future development on the Airport. The analysis will address availability, capacity, and quality of water, sanitary sewer, electric, and communication (broadband/internet) service from existing providers/sources. Natural gas service is not available in Forks. The utilities assessment will include order-of-magnitude costs for service improvements, which will then be used to gauge overall project feasibility for the City of Forks.

The evaluation of water will also address potential operational factors such as fire flow distribution or water storage required to serve existing/future tenants from the existing water source (well). A review of any planned utility service upgrades for the area along Quillayute Road will be conducted to identify potential opportunities for the service extensions or upgrades at the Airport.



AVIATION ACTIVITY FORECASTS

New aviation activity forecasts will be developed for the Airport. By all appearances, the 2003 AMP twenty-year forecast has not been realized (2021: 15 based aircraft; 19,088 aircraft operations). There are currently no based aircraft at the Airport. The previous master plan assumptions about Forks Municipal Airport will be reexamined and revised, as needed. An updated estimate of (transient) aircraft activity will be prepared and will include medevac operators, flight training providers, and military aircraft. A review of the Airport Reference Code (ARC), which is directly tied to the forecast (critical aircraft), is also required to meet FAA requirements. The activity assessment will also identify the range of users that rely on the Airport to provide critical emergency and natural disaster response capabilities.

MASTER PLAN NEEDS TO SUPPORT NON-AERONAUTICAL LAND USE

The definition of aeronautical and non-aeronautical land use areas on the Airport will provide clear guidance on future revenue-generating activities, including periodic timber sales and use of airport land to support local and regional economic development activities. Identification of developable non-aeronautical areas of the airport will include surface access and utilities assessments to determine overall feasibility of development.

AIRFIELD PAVEMENT

An updated evaluation of airfield pavement needs will be performed based on the most recent WSDOT Aviation pavement data (2018) and the engineering analysis performed on the most recent runway/taxiway rehabilitation projects. The 2018-2025 PCI ratings indicate that the main apron and west taxiway pavements will require rehabilitation during the current twenty year planning period.

The evaluation of existing airfield pavements will also examine the pavement areas that are required to meet the applicable FAA design standard. As a former military facility, many existing pavement sections are oversized and may not be eligible for future FAA funding without modification. The main apron will be evaluated for optimal configuration and ongoing cost of maintenance. The previous recommendation to rehabilitate the closed runway (12/30) will be evaluated to determine cost, benefit and potential funding sources.