MCCALL MUNICIPAL AIRPORT MASTER PLAN

2022

City of McCall

DRAFT

MCCALL MUNICIPAL AIRPORT (MYL)

CITY OF MCCALL, VALLEY COUNTY, IDAHO

AIRPORT MASTER PLAN

AIP 3-16-0023-028-2020

SUBMITTED TO:
FEDERAL AVIATION ADMINISTRATION
HELENA AIRPORTS DISTRICT OFFICE
AND
IDAHO TRANSPORTATION DEPARTMENT,
DIVISION OF AERONAUTICS

SUBMITTED BY:

City of McCall

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T-O ENGINEERS

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Table of Contents

Table of Contents

Table of Contents

Table of Contents

City of McCall

SECTION OVERVIEW

This Airport Master Plan investigated the needs of the McCall Municipal Airport and was completed by T-O Engineers in 2022 on behalf of the City of McCall. This document adheres to all applicable rules, standards, and regulations outlined in the Federal Aviation Administration (FAA) Advisory Circulars (ACs) and Orders.

E.S.1 OVERVIEW AND FINDINGS

This Airport Master Plan commenced in June of 2020, during the lockdowns associated with COVID-19 and amid widespread uncertainty within the aviation industry. In July of 2020, two major construction projects started - a relocation of Taxiway A and a reconstruction of the U.S. Forest Service apron. Consequently, some of the aerial photos of the airport in this Airport Master Plan show the before, during, and after construction configuration. Despite these unprecedented challenges, the Airport Master Plan was completed in less than two years. The main findings from this planning effort are summarized below, and are based on the planning process and public input:

- Future runway length of 6,510 feet is needed to meet FAA minimum runway length recommendation.
- Airfield geometry and nomenclature revisions are needed to meet current standards and enhance safety.
- There are numerous obstructions, mainly by trees and terrain, penetrating the airport's protective surfaces and impacting instrument approach procedures.
- The existing weather station (ASOS) and retention basin impede full hangar development of the infield.
- Snow storage is an extremely important consideration in McCall.
- More open space tie-downs were requested by the airport users.
- Terminal area circulation improvements will enhance safety and efficiency.
- Hangars are generally oversized for the types of aircraft being stored, reducing the number of hangars that can be built.
- The zoning south of the City's Impact Area does not adequately protect the airport from encroachment.
- Demand for hangar space increased during the planning study.
- Fire fighting operations typically overflow to the transient apron, along with their support equipment.
- Pavement condition needs to be addressed.
- Forecasted operations in 2040 are projected to be just over 39,000.
- For this planning horizon, the airport was designed around a medium-sized business jet.
- There was not enough evidence presented during this study to support the addition of passenger airline service at the airport within this Airport Master Plan.

E.S.2 PUBLIC INVOLVEMENT

Traditional public involvement (in-person) during this Airport Master Plan required re-imagining using a blend of virtual, in-person, and hybrid meeting formats and intake of public comments, which was achieved through a series of dedicated public meetings, online comment forms, a Technical Advisory Committee (TAC), and monthly Airport Advisory Committee (AAC) meetings, as described below:

- Kickoff Meeting (virtual), July 2020: Pre-recorded and available on the City of McCall website. Advertised July 22, 2020.
- TAC Meeting (virtual): Held via Teams on October 16, 2020. Discussed existing conditions and forecast.
- Public Meeting (live, virtual): Held via Teams on November 17, 2020. Presented existing conditions and forecast. Advertised November 5 and 12, 2020.
- TAC Meeting (virtual): Held via Teams on February 18, 2021. Discussed facility requirements and proposed development alternatives.
- Public Open House (in-person): Held in Council Chambers on June 2, 2021, for 8 hours. Presented the proposed development alternative drawings. Advertised May 20, 2021.
- Airport Open House (in-person): Held at the airport on June 26, 2021, for 4 hours. Poster boards from the June 2 Open House were displayed at a station with comment forms.
- Monthly AAC Meetings (in-person and virtual): Updates provided by the planning team.
- TAC Meeting (virtual): Held via Teams on December 7, 2021. Discussed the draft chapters and Airport Layout Plan.
- Public Open House (in-person): Held in Council Chambers on March 3, 2022, for 3 hours. Presented the draft Airport Master Plan and Airport Layout Plan. Advertised February 17 and 24.

E.S.3. PROPOSED DEVELOPMENT SUMMARY

Major development proposals from this Airport Master Plan are summarized below. Total improvements are estimated to be over $38.7 million, of which at least $2.2 million is expected to be locally funded.

- Phased hangar and taxilane development of the infield. Includes provisions for tie-downs and snow storage.
- Installation of a new taxiway connecting Taxiway A to Taxiway E at the south edge of the transient apron.
- Reconstruction and reconfiguration of the transient apron pavement and tie-down spaces.
- Phased scheduled pavement maintenance of the runway, taxiways, and taxilanes.
- Installation of a new fire fighting pad to accommodate large helicopters and support equipment.
- Relocation of the ASOS to the south end of the airport.
- Creation of a new General Aviation Terminal area, with an extension of Krahn Lane onto the airport.
- Airfield geometry improvements to the Runway 16 blast pad and Taxiways B-1, A-1, and B-2.
- Extension of the runway to the south by 402 feet for a new total length of 6,510 feet.
- Placeholders for obstruction removal and Snow Removal Equipment (SRE) purchases.
- Land acquisition to accommodate future development.

1. Airports and Master Plans Introduction

City of McCall

SECTION OVERVIEW

This section provides an introduction to concepts and topics central to the United States aviation system. The information provides an introductory foundation of knowledge to understand and interpret the remainder of this Master Plan.

1.1 HISTORICAL CONTEXT

Aviation has been embedded in the United States for more than a hundred years, starting with the Wright brothers' famous 1903 Flight in Kitty Hawk, North Carolina. It did not take long for government and business to realize the opportunities offered by controlled, powered flight. From military applications to air mail, government requirements grew along with technology. Private business also pushed the development of faster, safer aircraft incorporating new technology into passenger and cargo transport. Through the war effort during World War II, aviation as an industry truly flourished.

In the years following the war, some aviation officials estimated that half of all households would own private aircraft. Although that level of aircraft ownership never materialized, the period from the end of World War II to the early 1980s is considered the pinnacle of general aviation. During this period, community airports were expanded, and new ones built regularly. Often, a community airport that started as a simple grass runway found itself needing to develop paved landing areas to accommodate more demanding aircraft. Some communities realized the economic benefits of a developed "aviation gateway," and invested in full airport facilities.

Since the 1980s, airport use has slowly shifted from private and recreational operations to business and commercial services. Today, the aircraft frequenting airport facilities are more demanding than ever, both in size and speed. This translates to ever-changing needs at airports, including increased runway lengths, stronger pavements, and larger safety areas.

McCall Municipal Airport is no exception to this development. The airport serves the local citizenry as a multifunctional airport through fervent backcountry and recreational flying, charter services, business aviation, as well as hosting one of four U.S. Forest Service Smokejumper bases in the United States. The airport also serves area businesses as an economic engine.

1.2 THE FEDERAL AVIATION ADMINISTRATION

The Civil Aeronautics Authority (CAA) was created in 1938, and was replaced by the Federal Aviation Agency (FAA) in 1958 which acted as an independent agency. When the United States Department of Transportation (U.S. DOT) was created in 1967, the FAA was no longer an independent agency, but now one of the several modal organizations within the DOT.

1. Airports and Master Plans Introduction

The FAA serves as the nation's aviation authority and is responsible for the safety of civil aviation. The FAA is a large agency, employing more than 45,000 people and includes a myriad of divisions and offices across the country. The major roles of the FAA are to regulate civil aviation and promote safety, encourage and develop civil aeronautics to include new aviation technology, develop and maintain an operating system of air traffic control and navigation for both civilian and military aircraft, research and develop the National Airspace System (NAS) and civil aeronautics, develop and carry out programs to control aircraft noise and other environmental effects of aviation, and regulate U.S. commercial space transportation[1]. The FAA is divided into a myriad of divisions, regions, and districts in order to provide comprehensive aviation authority across the nation.

For airport development projects and grant funding, airport sponsors and planning consultants work with the FAA Airports Division (ARP). The ARP is further divided into nine regions, which is again split into Airports District Offices (ADOs). Each ADO is primarily made up of civil engineers and planners. The staff serves as project managers for federally funded projects, and interact daily with airport sponsors, state officials, and consultants to manage and direct project which further the overall goals of the national and state aviation systems.

McCall Municipal Airport is within the Northwest Mountain Region; the Airport Sponsor and consultants work directly with ADO engineers, planners, and environmental specialists for all federally funded projects.

1.3 NATIONAL PLAN OF INTEGRATED AIRPORT SYSTEMS

The national infrastructure of public use airports form the National Plan of Integrated Airport Systems (NPIAS). The NPIAS is critical to the national transportation system and helps air transportation contribute to a productive national economy and international competitiveness.

To meet the demand for air transportation, airports and the airport system should have the following attributes:

- Airports should be safe and efficient, located where people will use them, and developed and maintained to appropriate standards.
- Airports should be affordable to both users and government, relying primarily on producing self-sustaining revenue, and placing minimal burden on the general revenues of the local, state, and federal governments.
- Airports should be flexible and expandable, able to meet increased demand, and to accommodate new aircraft types.
- Airports should be permanent, with assurance that they will remain open for aeronautical use over the long term.
- Airports should be compatible with surrounding communities, maintaining a balance between the needs of aviation, the environment, and the requirements of residents.
- Airports should be developed in concert with improvements to the air traffic control system and technological advancements.
- The airport system should support a variety of critical national objectives, such as defense, emergency readiness, law enforcement, and postal delivery.
- The airport system should be extensive, providing as many people as possible with convenient access to air transportation, typically by having most of the population within 20 miles of a NPIAS airport.

1. Airports and Master Plans Introduction

According to the 2019-2023 NPIAS Report, there were 3,328 airports in the NPIAS which include 3,321 existing and seven proposed airports. The seven proposed airports are expected to open within five years covered in the report[2]. Airports in the NPIAS are classified as primary or nonprimary, and divided into subcategories under each classification (*Table 1.1*).

Table 1.1 Categories of Airport Activities

Airport Classifications		Hub Type: Percentage of Annual Passenger Enplanements	Common Name
Commercial Service: Publicly owned airports that have at least 2,500 passenger enplanements each calendar year and receive scheduled passenger service	Primary: Have more than 10,000 passenger enplanements each year	Large: 1% or more	Large Hub
		Medium: At least 0.25%, but less than 1%	Medium Hub
		Small: At least 0.05%, but less than 0.25%	Small Hub
		Nonhub: More than 10,000, but less than 0.05%	Nonhub Primary
	Nonprimary	Nonhub: At least 2,500 and no more than 10,000	Nonprimary Commercial Service
Nonprimary (Except Commercial Service)		Not Applicable	Reliever General Aviation

Source: FAA.gov

Figures 1.1 and *1.2* show the distribution of existing nonprimary and primary NPIAS across the nation. To be eligible for federal funding, and Airport must be included in the NPIAS. McCall Municipal Airport is classified as a nonprimary, general aviation airport.

Figure 1.1 NPIAS Nonprimary Airports

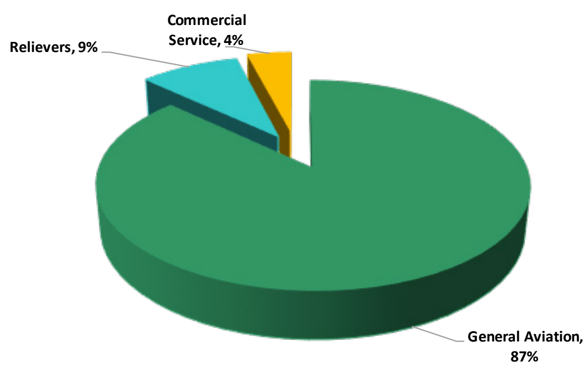
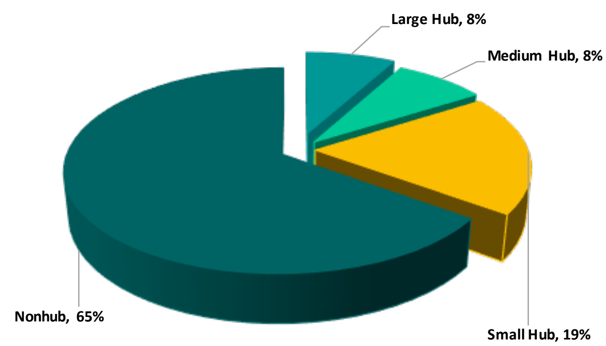


Figure 1.2 NPIAS Primary Airports



Source: FAA.gov

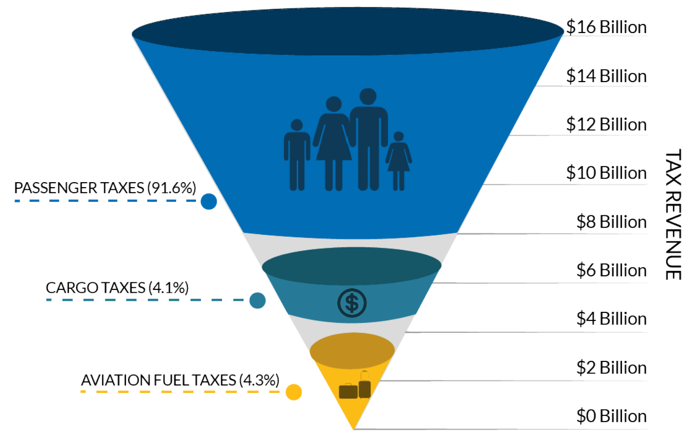
1.4 FUNDING AIRPORT PROJECTS

The Airport Improvement Program (AIP) was established by the Airport and Airway Improvement Act of 1982 to provide funding to airports on a priority needed basis. The FAA coordinates this program. The AIP is a user-funded program and is not funded by federal income tax dollars. The AIP is primarily funded through the Airport and Airway Trust Fund (AATF). While some of the funds are used for FAA overhead costs, the majority of the money is distributed to community airports through grants. Eligible airports range from small community facilities to the largest commercial airports in the national system. The AATF is funded by three components: passengers (tax on ticket sales), cargo (tax on shipping fees), and fuel (tax on fuels used by aircraft).

Eligible projects include improvements which enhance airport safety, capacity, security, and address environmental concerns, and aviation demand at the airport must justify the projects. Eligible projects include pavement maintenance, runway construction, airfield lighting, land acquisition, planning studies, and automated weather observation stations (AWOS).

Ineligible projects include such things as landscaping, marketing plans, improvements for commercial enterprises, and maintenance or repairs of buildings.

Figure 1.3 Airport and Airway Trust Fund (2019)



Source: FAA.gov

Nonprimary entitlements are funds that are apportioned by formula to airports and may generally be used for any eligible airport improvement or planning project. Under the current legislation, a nonprimary entitlement of up to $150,000 per year is granted to smaller general aviation airports, such as McCall Municipal Airport. The nonprimary entitlement can be saved for up to three years for larger projects. If a project exceeds that amount, it may be eligible for state apportionment funds (money set aside for the state through the AIP program). If the project exceeds both the nonprimary and state apportionment funds available, or is a high priority, it can compete on a regional level for discretionary funds through the AIP program[3].

The Idaho Transportation Department, Division of Aeronautics (ITD Aeronautics) also contributes to airport development projects. Generally speaking, ITD Aeronautics funds are allocated to pavement maintenance projects and projects at nonprimary airports. Additionally, the state and local communities typically provide matching funds for eligible projects, while also supporting the airport with an operations and maintenance budget.

1.5 THE IMPORTANCE OF GENERAL AVIATION

General aviation (GA) includes the manufacturing and operation of any type of aircraft that has been issued an airworthiness certificate by the FAA, other than aircraft used for scheduled commercial air service (airlines) or the U.S. Military. GA aircraft enable people, especially those in smaller communities and remote areas, to access the aviation system in order to move quickly and efficiently across the country for business and pleasure. General aviation is extremely important because it touches many sectors of the economy from medical evacuations and patient transport to corporate jets and business use, as well as outdoor enthusiasts and recreational hobbyists.

The Regional Input-Output Modeling System (RIMS-II), is a regional economic model created by the US Bureau of Economic Analysis. It is a tool used by investors, planners, and elected officials to objectively assess the potential economic impacts of various projects. This model produces multipliers used in economic impact studies to estimate the total impact of a project on a region. Based on RIMS-II, every $1.00 generated on a general aviation airport results in an average of $2.53 generated in the community it serves. This is a cascading effect, creating local jobs and payroll. Many airports with fewer than 10,000 annual operations produce economic impacts exceeding the amount of money necessary to operate and maintain their facilities. An operation is the landing, take off, or touch-and-go procedure by an aircraft on a runway at an airport. The general aviation industry, as a whole, generated a total of 1,179,200 jobs, $76.7 billion in payroll, and $246.8 billion in economic output in 2018[4].

The United States is home to more than 19,000 airports, seaplane bases, heliports, and other landing facilities developed to provide communities with access to a safe and adequate public system of GA airports. Together these airports create a transportation infrastructure, providing local communities with access, goods, and services. AIP funding permits communities to have services which would be otherwise too costly to provide.

In addition to the economic benefits, there are many qualitative benefits contributing to the overall value of airports. These qualitative benefits include activities for which dollar values cannot be readily assigned but are nonetheless valuable to the community by enhancing the quality of life, health, welfare, and safety of its citizens. For example, medical evacuation flights typically use general aviation airports because they are faster, easier on the patient, and less expensive. Helicopters are often used for aeromedical flights, however some of these flights, specifically, for neonatal patients, can only be conducted via fixed-wing aircraft due to the equipment needs. GA airports also provide a support network for disaster relief, and search and rescue efforts. For example, following the wake of Hurricane Katrina in the southern United States, general aviation airports served as staging areas for the Red Cross, National Guard, and other organizations providing disaster relief.

In 2009, operators using general aviation airports accounted for an estimated 27 million flights for emergency medical services, aerial firefighting, law enforcement and border control, agricultural functions, flight training, time-sensitive air cargo services, business travel, and scheduled services. Overall, airports grant access to greater markets and provide unique and critical support to the local communities, businesses, and citizens[5].

1.6 PILOT CERTIFICATES

There are different types of pilot certificates which are earned based on a defined FAA standard of knowledge and performance competency. A pilot certificate, which is often referred to as a pilot's license, grants the holder privileges and sets limitations appropriate to the type of certificate earned. There are six types of certificates which can be obtained in the U.S.

1. Student Pilot – This is the first step in earning any other certificate, and requires the holder to be at least 16 years of age, and have completed a physical examination which deemed the holder medically cleared to fly. Student pilot privileges are minimal, but with appropriate training and experience may fly the aircraft solo strictly to accomplish training requirements.

2. Sport Pilot – This certificate limits the user to light sport aircraft which is not defined on the certificate, but is an endorsement in the holder's logbook received after appropriate training (e.g. airplane, rotorcraft, glider). Sport pilots are limited to a single passenger, flights during the day when visibility is greater than three miles, may not fly above 2,000 feet above the ground, or in any controlled airspace without training and an appropriate logbook endorsement.

3. Recreational Pilot – This certificate offers slightly more privileges than a sport pilot certificate in regard to the types of aircraft which can be flown, but still limits when and where the holder can fly.

4. Private Pilot – This is the most common pilot certificate for basic hobbyist flying or personal business without compensation. The training requirements are more intensive than that of the recreational or sport pilot, but with the associated increase of privileges. Private pilots are allowed to fly at night and in controlled airspace. Private pilots, like recreational and sport pilots, are not allowed to fly for commercial purposes and must not be compensated for pilot services, though passengers can pay a pro-rated share of flight costs.

5. Commercial Pilot – This certificate allows a pilot to be paid for their flying services, though compensation is still regulatory in nature. Commercial pilots must learn to fly complex aircraft, which by definition have a retractable landing gear, flaps, and a controllable-pitch propeller. Commercial flight training demands more precision and knowledge about professional flight operations; therefore this certificate reflects the pilot's increase in aircraft knowledge, flying skills, and overall airmanship competency.

6. Airline Transport Pilot (ATP) – This is the most advanced pilot certificate that can be obtained and is necessary for those who want to fly charter or for a commercial operator. This certificate demands the highest level of piloting ability both in knowledge and practical competency. To be eligible for an ATP certificate, a pilot must have logged a minimum of 1,500 hours and be at least 23 years old.

Figure 1.4 Pilot Certificate

Source: Epic Flight Academy

Pilot certificates should not be confused with ratings or endorsements, which are additional skill sets requiring training and performance competencies. Each pilot certificate has an accompanying category (e.g., airplane, rotorcraft, glider, etc.) and class (e.g., single-engine land, multi-engine land etc.) which further define the pilot's flying capabilities. Additional ratings include, multi-engine, seaplane, helicopter, instrument, and flight instructor, to name a few.

A logbook endorsement is a legal record of training, experience, and activity. An endorsement is received from a Certified Flight Instructor (CFI) as validation a pilot has met requirements and competency for a particular skill. Endorsements include specific aircraft types like tailwheel and experimental, as well as performance-based skills such as spins and acrobatics, and additionally include knowledge based competencies and flight review information. In short, a certificate identifies legal privileges and limitations of the holder, ratings identify aircraft and specific skill-sets, and endorsements are a supplemental record of training and skills.

Understanding the different types of pilot certificates, ratings, and endorsements aids in understanding the varying needs of airport users. These needs influence aviation demand, which in turn impact the facility requirements necessary to meet this demand.

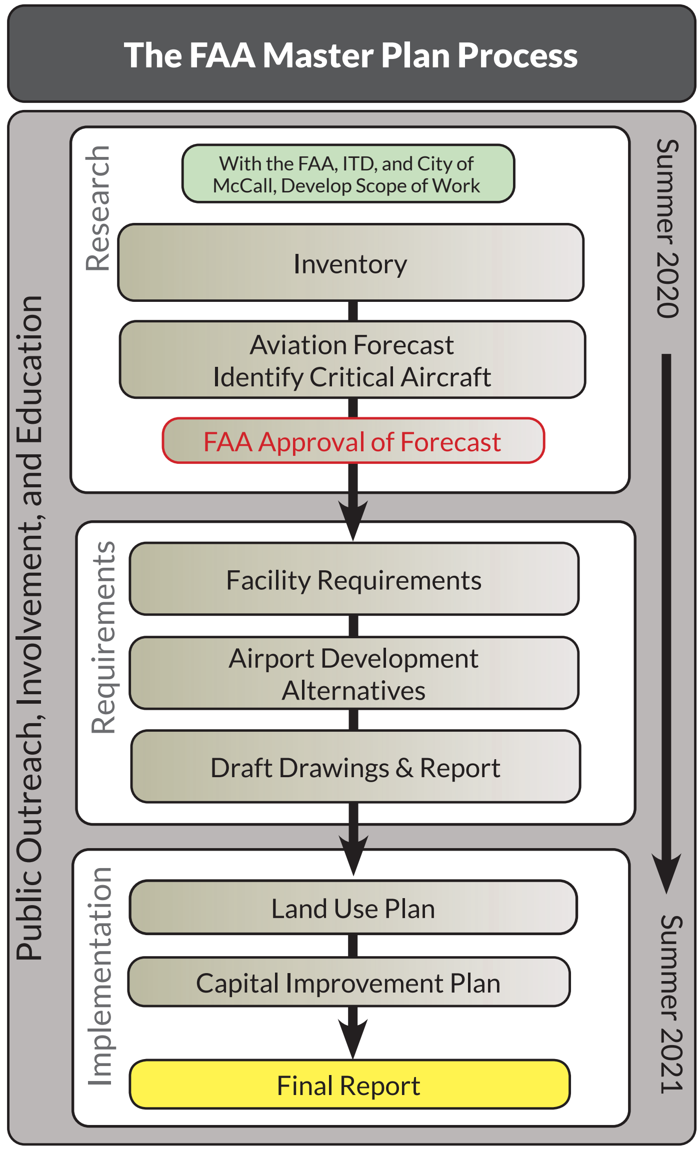
1.7 AIRPORT MASTER PLANS

An Airport Master Plan is a comprehensive study of an airport that describes short, medium, and long term development plans to meet future aviation demand. The elements of the master plan are guided by the FAA, though vary in detail and complexity depending upon the size, function, and issues of individual airports (see *Figure 1.5*). The elements provide a systematic approach, and build upon each other throughout the process. Master plans present a strategy for airport development by providing a framework to cost-effectively satisfy aviation demand while considering the potential safety, environmental, and socioeconomic impacts to users and the local community.

Master Plans generally meet the following objectives:

- Understand the issues, opportunities, and constraints.
- Consider the impact of aviation trends.
- Identify the capacity of existing airport infrastructure.
- Determine need for airport improvements.
- Estimate project costs and funding sources.
- Develop a schedule for project implementation.
- Obtain stakeholder and public input.

Figure 1.5 FAA Master Plan Process



1.8 PUBLIC INVOLVEMENT

Public input is highly encouraged throughout the planning process. Each master plan includes a public involvement program, and the amount of public involvement typically corresponds to the complexity of the airport and project. Effective public involvement connects numerous parties, including but not limited to: aircraft owners, hangar tenants, airport and businesses on airport property, public officials, governmental agencies, and the general public. The earlier public input is received, the easier it is to incorporate in the planning process.

Public involvement programs are typically facilitated by the planning consultant and include multiple strategies, such as forming an Airport Master Plan Technical Advisory Committee (TAC) of key stakeholders, local citizens, and decision makers. This group provides insight and input into issues that arise, as well as provides general information. Public workshops are another common public involvement element. These are typically held at public locations to inform the general public about the status of the airport and Master Plan process and to provide the public with access to the airport consultants and government officials. Other methods used to engage the public are user surveys and public awareness campaigns that utilize fliers, project websites, and newspaper articles.

This master plan project began amidst the U.S. COVID-19 Pandemic where public gatherings were not possible. To promote the same level of public involvement and provide the community with the same information and opportunities, public meetings were initially moved to a virtual setting. For this project, more emphasis was placed on the project website, to include recorded presentations, a myriad of resources, and a location for the public to ask questions, provide comments, and encourage information sharing. For more details regarding public involvement efforts pertaining to this Master Plan, refer to Appendix A.

1.9 FAA DESIGN STANDARDS

The FAA has established standards for the design and construction of airport facilities. There are design standards for nearly every facet of an airport, and these standards are presented in a collection of documents called Advisory Circulars (AC). Multiple ACs are pertinent to Airport Master Plans, notably AC 150/5070-6B, *Airport Master Plans* and AC 150/5300-13A, *Airport Design*. The first document details the requirements and guidance for Airport Master Plans. The second document contains the FAA standards and recommendations for the geometric layout and engineering design of runways, taxiways, aprons, and other airport facilities.

CRITICAL AIRCRAFT

An key determination of any master plan is the identification of the critical aircraft, discussed in more detail in Chapter 4, *Forecast of Aviation Demand.* This is the most demanding aircraft with at least 500 annual local operations and drives the FAA design standards to be applied at the airport.

FAA CODES, CATEGORIES, AND GROUPS

The FAA has developed a coding system to aid in defining airport design. There are several codes and groups which define the design elements, and are driven by the airport's critical aircraft. Particularly important is the two part coding system which includes the Aircraft Approach Category (AAC) and Airplane Design Group (ADG). The AAC is designated by a letter (A through E) and is based off the approach speed of an aircraft. The ADG is identified by a Roman numeral (I through VI) and represents the tail height and wing span of an aircraft. The combination of the critical aircraft's AAC and ADG (for example, A-I or B-II) signifies the Airport Reference Code (ARC). The ARC is the code representing the design standards to be applied at the airport. There are additional design codes which will be explained throughout the master plan.

1.10 SUMMARY

Table 1.2 Aircraft Approach Category

Category	Speed
A	Less than 91 knots
B	91 knots or more, less than 121 knots
C	121 knots or more, less than 141 knots
D	141 knots or more, less than 166 knots
E	166 knots or more

Source: FAA

Table 1.3 Airplane Design Group

Group	Tail Height (Feet)	Wingspan (Feet)
I	<20	<49
II	20 - <30	49 - <79
III	30 - <45	79 - <118
IV	45 - <60	118 - <171
V	60 - <66	171 - <214
VI	66 - <80	214 - <262

Source: FAA

A successful Airport Master Plan provides answers and explanations to a wide range of audiences including pilots, government officials, and the general public. A basic understanding of these concepts will help the reader to interpret this Airport Master Plan. Even small general aviation airport are complex entities. To plan for the future, consideration must be given to all aspects involving the airport: current facilities and infrastructure; airport users; local , state, and federal zoning regulations; regional socioeconomics; national and state aviation systems; and environmental considerations. These will be discussed throughout this Airport Master Plan study.

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2. Socioeconomic Overview

SECTION OVERVIEW

This chapter provides a general depiction of McCall Municipal Airport (MYL) and the surrounding area, including the City of McCall, Valley County, and the State of Idaho. This is accompanied by a broad description of the airport's history, location, economic impact, and demographics.

An analysis of a community's socioeconomic data serves to help establish the nature of the community and the market the airport serves, as well as provide specific data for the formulation of the aviation demand forecast.

2.1 AREA AND AIRPORT OVERVIEW

CITY OF MCCALL

The City of McCall is a vibrant resort town located on the southern shore of Payette Lake in Valley County, west central Idaho, and surrounded by the Payette National Forest. It is approximately 100 miles north of Boise along Idaho State Highway 55. The North Fork Payette River runs through the city, flowing south as it leaves Payette Lake. The city encompasses approximately 9 square miles and had an estimated population of 3,600 in 2019[1]. McCall is the largest city in Valley County and is a destination for outdoor recreational activities.

The history of McCall is linked with mining, fishing, logging, recreation, forestry, and commerce. Early inhabitants from the Northern Shoshone, Nez Perce, and Weiser tribes used the area during the summer months for fishing and hunting. They considered the lake to be a sacred and spiritual meeting place. The discovery of gold brought settlers into the area via the various trails. In the summer of 1889, Tom McCall and his family arrived at the south end of the lake and acquired the land rights from the only resident, Sam Devers, to establish a town that would eventually bear his name. Logging would become the backbone of McCall's economy until 1977, as it provided jobs and materials needed to construct the town homes, hotels, and businesses. The U.S Forest Service has also had a historical presence in McCall, and remains so today with an established aerial firefighting and smokejumper base located at the airport[2].

Today, McCall's economy and character revolves around tourism and the many outdoor activities offered year-round. Its location, small-town character, and amenities make it an attractive location for retirement and second home. With the highest average snowfall in Idaho, McCall is a haven for outdoor winter activities, such as snowmobiling, skiing, tubing, and hot springs. Area ski resorts boast a combined 2,600 skiable acres, featuring vertical drops ranging from 1,800 to 2,800 feet. McCall's annual Winter Carnival has grown into an iconic Idaho event, bringing more than 60,000 visitors each year.

In the summer, McCall's warm sunny days and cool nights provide for outdoor music, art festivals, and lakeside activities. It is not uncommon for the population to triple during the summer months. Payette Lake is popular for boating, sailing, jet skiing, and swimming. The North Fork of the Payette River provides a world-class whitewater playground for kayakers and canoers, and excellent opportunities to view wildlife. There also are numerous hiking and mountain biking trails in and around McCall, as well as five golf courses[3].

The City of McCall hosts several historic sites listed in the National Register of Historic Places in Idaho, mainly located downtown. One location is at the airport. A list of the historic places in McCall is shown in *Table 2.1*.

Table 2.1 City of McCall Historic Places

Place	Location	Description
Southern Idaho Timber Protective Association (SITPA) District	1001 State Street	8 buildings constructed in 1937: Statehouse, garage, pumphouse, machine shop, 3 storage sheds, long garage. Assistant Fire Warden's house constructed in 1950.
McCall District Administrative Site	102 West Lake Street (Hwy. 55)	8 buildings constructed between 1933-1939: Bldgs. A (hay barn), B (warehouse), C (carpenter shop), D (engineering facility), E (Krassel warehouse), F (bunkhouse), G (oil house), H (cap house).
Johnson Flying Service Hangar	104 South 3rd Street (Airport)	Aircraft hangar constructed in 1932.

Source: Idaho State Historic Society, National Register of Historic Places in Idaho

VALLEY COUNTY

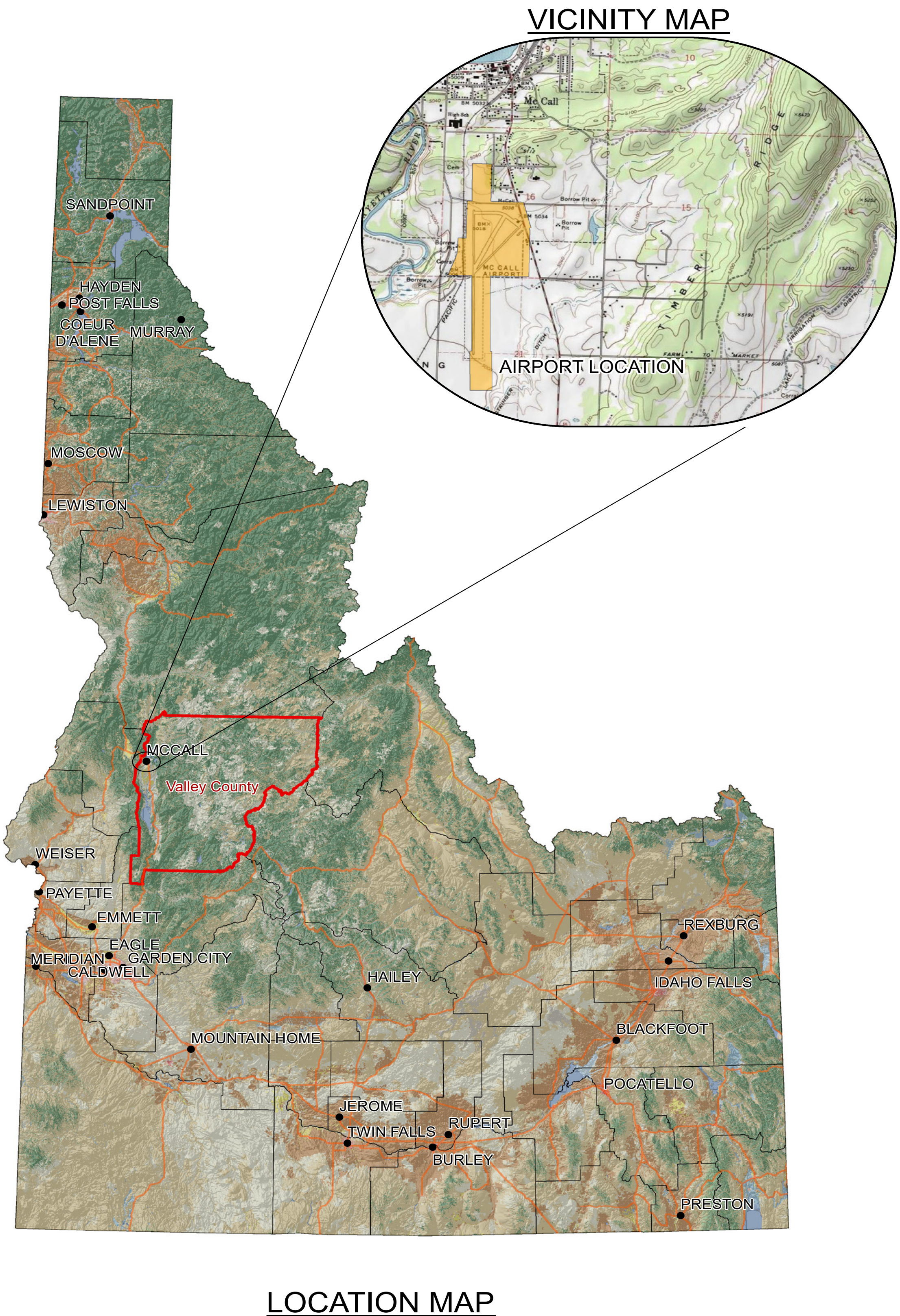
Valley County is a rural county located in west central Idaho, covering approximately 3,664 square miles. It is the fifth largest county in Idaho by area, and bordering counties include Custer, Gem, Boise, Idaho, Adams, and Lemhi[4]. Established in 1917, Valley County was named after the Long Valley of the North Fork of the Payette River, which extends over 30 miles from Payette Lake at McCall, south to Cascade to Round Valley[5]. The valley was formerly a summer pasture for livestock from the Boise Valley. Since the completion of the Cascade Dam in 1948, much of the northern valley has been covered by the Cascade Reservoir. The population of Valley County was estimated at 11,392 in 2019. The county seat is Cascade, and the largest city is McCall.

Like McCall, Valley County is well positioned for outdoor recreation. Located in the geographic center of Idaho, the terrain in the county is mostly high and rugged, ranging from rolling wooded plateaus to 10,000-foot peaks on the Middle Fork of the Salmon River[6]. The Boise, West, and Salmon River Mountains are the principal mountain chains in the county. 88 percent of Valley County is contained in portions of three National Forests: Boise, Payette, and Salmon-Challis. The Frank Church River of No Return Wilderness is also in Valley County, while the Hells Canyon National Recreation Area is located just west of the county in the Payette National Forest. Outdoor activities include hiking, mountain biking, Nordic skiing, whitewater rafting, hunting, fishing, snowmobiling, off-roading, and more.

MCCALL MUNICIPAL AIRPORT OVERVIEW

McCall Municipal Airport is a public-use general aviation airport owned by the City of McCall[7]. The airport was established in 1926 when resident and member of the McCall Chamber of Commerce, Arthur Austin Goodman purchased 40 acres of land south of downtown McCall for use as a landing strip[8]. The original landing field ran northeast to southwest, generally along what is now the diagonal taxiway. In 1931, the City of McCall purchased the airport from Goodman for $630.00 at a time when mining production was increasing. In 1932, the Johnson Flying Service Hangar was constructed to support pilots transporting air mail and supplies to remote communities in the backcountry. In 1943, the U.S. Forest Service established a smokejumper program at the airport, which still exists today with two basedTwin Otter turboprop aircraft[9]. Today, the airport serves as "The Gateway to the Backcountry."

Figure 2.1 Vicinity Map



2. Socioeconomic Overview

McCall Municipal Airport is located less than one mile south of downtown McCall, between Idaho State Highway 55 (South 3rd Street) and the North Fork Payette River in the southern part of the city limits. It encompasses 197 acres and the field elevation is 5,024.2 feet above Mean Sea Level (MSL). Access to the airport by the general public is by Highway 55 on the east side of the airport and Deinhard Lane on the north side. Access to the U.S. Forest Service Smokejumper Base is via Mission Street on the west side of the airport. Mountain Community Transit operates a free public transit service for the City of McCall seven days per week from 7:00 AM to 7:00 PM, called the Red Line[10]. The Red Line passes by the airport along Highway 55 and circulates through downtown. A Green Line bus provides transit between McCall and Cascade Monday through Friday for a fee.

The three-letter identifier for McCall Municipal Airport is MYL. The airport is served by a single runway, 16/34, that is 6,108 feet long and 75 feet wide. The weight-bearing capacity is published as 86,500 pounds for single wheel configuration for the main landing gear, 141,000 pounds for dual wheel, and 261,500 pounds for single tandem wheel configuration. Additional details about the characteristics of the airport are discussed in Chapter 3, *Inventory*.

AIRPORT GOVERNANCE

McCall Municipal Airport is owned and operated by the City of McCall and assisted by an Airport Advisory Committee. There are five members of the Airport Advisory Committee, appointed by the Mayor and confirmed by City Council. The responsibility of the Airport Advisory Committee is to advise the Airport Manager, City Manager, and the City Council on matters pertaining to airport planning and operations. Meetings are normally scheduled for the first Thursday of each month at noon in the American Legion Hall and are open to the public.

AREA AIRPORTS

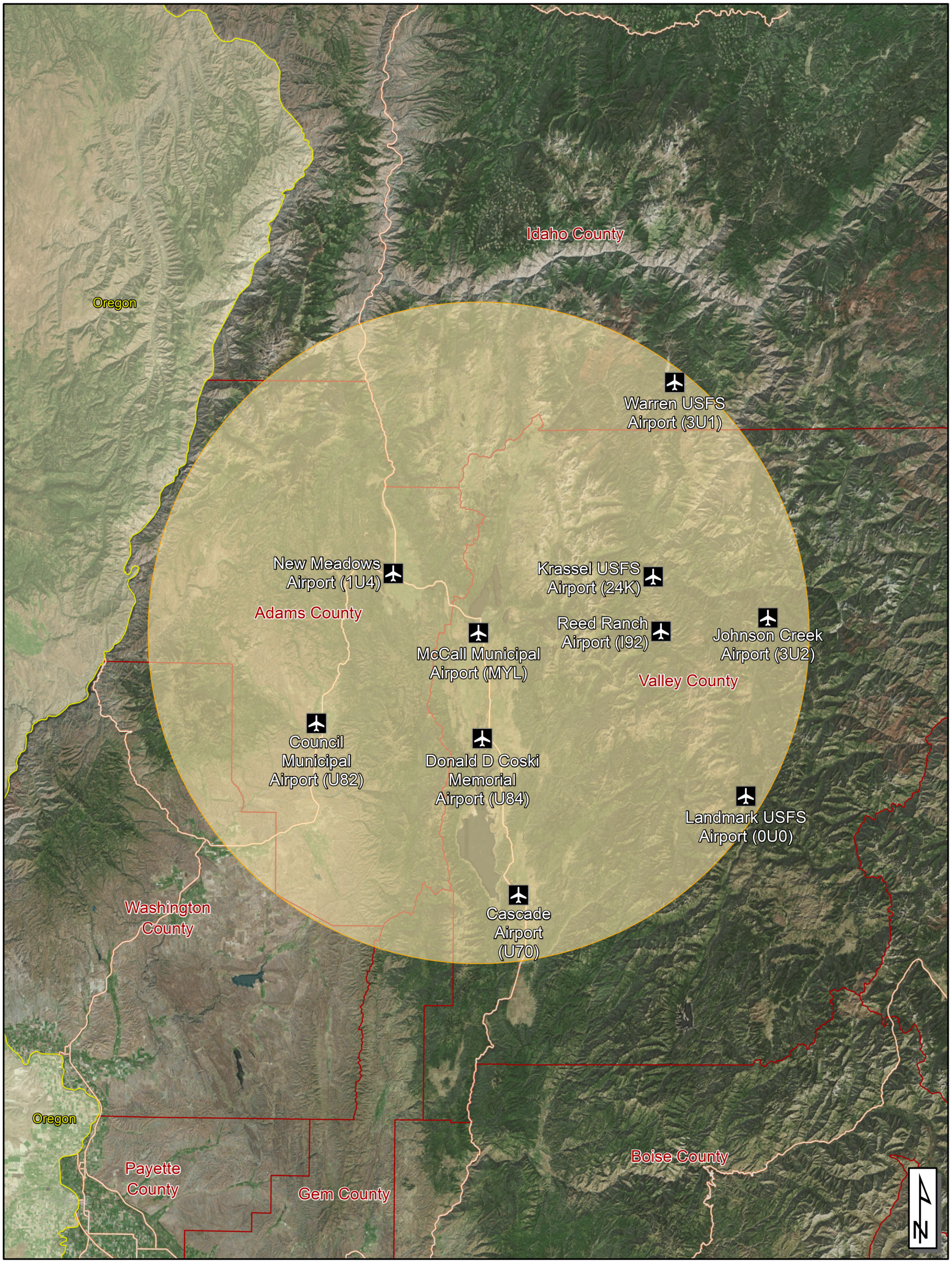
As a general rule, a general aviation airport's service area extends for 30 nautical miles. Boise Airport (BOI) is located 79 nautical miles from McCall Municipal Airport, and is the only commercial service airport within 100 nautical miles of McCall. There are nine other public-use airports within 30 nautical miles of McCall, along with several other non-public-use private airports. Of the public-use airports, Cascade and Council Airports are the only airports besides McCall that have paved runways. Only McCall offers published instrument approach procedures. *Table 2.2* summarizes the other public-use airports in McCall's service area.

Table 2.2 Airports Within 30 Nautical Miles (NM) of MYL

Airport	Distance From MYL (NM)	NPIAS Service Level	Based Aircraft	Annual Operations	Longest Runway (ft) and Surface Type	Lowest Approach Visibility Minimums (mile)
McCall Municipal Airport (MYL)	N/A	GA	74	43,600	6,108 / Asphalt	7/8
New Meadows Airport (1U4)	9.4 NW	N/A	0	1,000	2,400 / Turf-Gravel	Visual
Donald D. Coski Memorial Airport (U84)	9.7 S	N/A	0	1,525	2,500 / Turf	Visual
Krassel USFS (24K)	16.6 NNE	N/A	0	400	1,500 / Turf	Visual
Reed Ranch Airport (I92)	16.6 E	N/A	0	225	2,175 / Turf-Dirt	Visual
Council Municipal Airport (U82)	16.9 SW	GA	6	4,000	3,600 / Asphalt	Visual
Cascade Airport (U70)	24.1 S	GA	17	9,050	4,300 / Asphalt	Visual
Johnson Creek Airport (3U2)	26.3 E	N/A	0	5,750	3,400 / Turf	Visual
Landmark USFS Airport (0U0)	28.4 SE	N/A	0	900	4,000 / Turf	Visual
Warrren USFS Airport (3U1)	28.8 NE	N/A	0	1,150	2,765 / Dirt	Visual

Source: SkyVector.com, Airport Master Records, Google Earth

Figure 2.2 Vicinity Airports



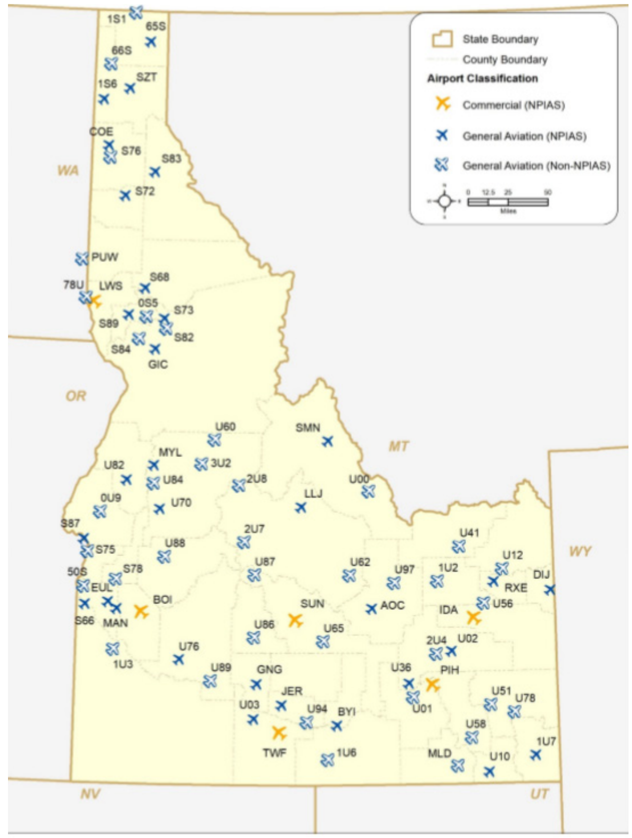
IDAHO AVIATION OVERVIEW

There are 302 aviation facilities in the State of Idaho as of May 21, 2020. Of those, 176 are private-use, while 126 are public-use. Of the 126 public-use airports, all but four are owned by a public entity, such as a city, county, state, or federal government. 75 of Idaho's publicly-owned, public-use airports are included in the 2020 Idaho Airport System Plan (IASP), based on eligibility of funding, ownership, and levels of operations[11].

Out of the 75 airports in the IASP, only 37 are part of the National Plan of Integrated Airport Systems (NPIAS) for 2019-2023, and are eligible for federal funding assistance (NPIAS airports). The 38 remaining are non-NPIAS airports, and not eligible for federal funding, but are eligible for state funding. Of the 75 IASP airports, seven are commercial service airports and 68 are general aviation airports.

The seven commercial service airports include Boise Air Terminal/Gowen Field (BOI), Friedman Memorial (SUN), Idaho Falls Regional (IDA), Lewiston – Nez Perce County (LWS), Pocatello Regional (PIH), Pullman-Moscow Regional (PUW), and Joslin Field-Magic Valley Regional (TWF). There are 30 general aviation NPIAS airports in Idaho, three of which are in Valley County – McCall Municipal, Cascade, and Council Municipal.

Figure 2.3 Idaho Airports



Source: IASP Update

Another airport system known in Idaho is the Idaho Airstrip Network (IAN). According to the website, "The Idaho Airstrip Network is a group of airstrip owners including the U.S. Forest Service, BLM, Idaho Fish and Game, the Idaho Division of Aeronautics and a few private owners, along with several nonprofit aviation groups including the Idaho Aviation Association, Idaho Aviation Foundation and the Recreational Aviation Foundation, and other entities that have an interest in aviation such as Idaho Outfitters and Guides and the Idaho Department of Commerce. The group is held together by a Memorandum of Understanding and is managed by a steering committee and a part-time coordinator." McCall Municipal Airport is a part of the IAN, and has a webcam that can be viewed from the website[12].

2.2 AIRCRAFT ACCIDENTS

The National Transportation Safety Board (NTSB) is an independent federal agency that investigates civil aviation accidents in the United States and maintains the Aviation Accident Database & Synopses. Using this database, the McCall Airport accident history, compiled since 1982, is presented in *Table 2.3*. There have been 17 accidents at McCall Municipal Airport, two of which were fatal. One incident was the result of an aircraft striking a deer while landing at night (SEA91LA176). This incident is the only wildlife strike reported in the FAA Wildlife Strike Database for MYL.

All accidents recorded at the airport occurred under Visual Meteorological Conditions (VMC). VMC represents a regulatory weather condition in which pilots must have sufficient cloud clearance and visibility to fly.

Accident Number	Event Date	Aircraft Damage	Aircraft	Total Fatal Injuries	Total Nonfatal Injuries	Weather Condition	Broad Phase of Flight
WPR19LA120	4/22/2019	Substantial	Piper Super Cub (tailwheel)	0	0	VMC	Arriving
GAA16CA522	9/10/2016	Substantial	Air Cam (tailwheel)	0	0	VMC	Landing
WPR14CA221	6/3/2014	Substantial	Boeing Stearman (tailwheel)	0	0	VMC	Landing
WPR12CA170	4/15/2012	Substantial	Cessna 180 (tailwheel)	0	0	VMC	Landing
SEA07CA211	7/24/2007	Substantial	Arctic Tern (tailwheel)	0	0	VMC	Landing
SEA05CA186	9/5/2005	Substantial	Piper Tri-Pacer	0	0	VMC	Takeoff
SEA05CA152	7/28/2005	Substantial	Cessna 180 (tailwheel)	0	0	VMC	Takeoff
SEA03LA196	9/28/2003	Substantial	Beech T-34	0	2	VMC	Go-Around
SEA02LA177	9/20/2002	Destroyed	Cessna 182	0	0	VMC	Landing
SEA02LA114	6/28/2002	Substantial	Comp Air 6 (tailwheel)	0	1	VMC	Landing
SEA01FA175	9/29/2001	Substantial	Piper Twin Comanche	1	0	VMC	Landing
SEA99LA009	10/23/1998	Substantial	Pitts S-1 Biplane (tailwheel)	0	0	VMC	Landing
SEA95LA045	2/5/1995	Substantial	Cessna 185 (tailwheel)	0	0	VMC	Takeoff
SEA93FA040	12/18/1992	Substantial	Falcon 10 (jet)	0	4	VMC	Takeoff
SEA91LA176	7/17/1991	Substantial	Mooney M20K	0	0	VMC	Landing
SEA91FA175	7/16/1991	Destroyed	Cessna 206	1	0	VMC	Landing
SEA83LA020	11/6/1982	Substantial	Cessna 210	0	0	VMC	Takeoff

Table 2.3 Aircraft Accidents

Source: National Transportation Safety Board

2.3 MCCALL MUNICIPAL AIRPORT GRANT HISTORY

Table 2.4, Airport Improvement Program Grant History - FAA, lists the airport improvement projects at the airport that have been partially funded by the FAA since 1985. The FAA Helena Airports District Office (HLN-ADO) and Idaho Transportation Department Division of Aeronautics (ITD Aeronautics) provided the data listed in the table.

Table 2.4 Airport Improvement Program Grant History - FAA			
Fiscal Year	**Grant Number (3-16-0023)**	**Project(s)**	**Total Grant Amount**
1985	001-1985	Acquire Land for Development •Rehabilitate Runway •Rehabilitate Taxiway •Construct Apron Construct Taxiway •Acquire Land for Approaches Rehabilitate Apron	$859,776
1988	002-1988	Extend Taxiway •Rehabilitate Runway •Conduct Miscellaneous Study •Extend Runway	$452,752
1989	003-1989	Extend Taxiway •Extend Runway •Install Miscellaneous NAVAIDS •Install Weather Reporting Equipment •Construct Taxiway	$1,033,404
1994	004-1994	Construct Taxiway •Rehabilitate Apron •Conduct Airport Master Plan Study •Construct Apron	$1,289,558
1995	005-1995	Conduct Airport Master Plan Study	$80,000
1997	006-1997	Construct Taxiway • Rehabilitate Taxiway • Acquire Land for Approaches • Improve Runway Safety Area • Conduct Airport Master Plan Study • Rehabilitate Apron • Extend Taxiway	$1,483,643
1997	007-1997	Improve Runway Safety Area	$276,157
2002	008-2002	Rehabilitate Runway • Rehabilitate Runway Lighting • Remove Obstruction • Install Miscellaneous NAVAIDS	$461,307
2003	009-02003	Install Perimeter Fencing • Conduct Airport Master Plan Study	$201,825
2006	010-2006	Update Airport Master Plan Study	$228,206
2006	011-2006	Install Perimeter Fencing • Acquire Snow Removal Equipment • Rehabilitate Runway •Rehabilitate Taxiway	$215,051
2007	012-2007	Conduct Aeronautical Study for WAAS Approach •Rehabilitate Runway	$187,002
2008	013-2008	Conduct Environmental Study	$128,574
2008	014-2008	Conduct Environmental Study	$44,799
2009	015-2009	Acquire Snow Removal Equipment	$148,693
2009	016-2009	Rehabilitate Taxiway	$0
2009	017-2009	Acquire Snow Removal Equipment	$33,982
2009	018-2009	Conduct Environmental Study	$90,611
2010	019-2010	Rehabilitate Runway	$2,112,609
2011	020-2011	Construct Snow Removal Equipment Building	$512,673
2014	021-2014	Install Miscellaneous NAVAIDS •Rehabilitate Taxiway •Rehabilitate Runway	$203,582
2016	022-2016	Acquire Snow Removal Equipment	$396,615
2017	023-2017	Reconstruct Apron	$1,208,640
2018	024-2018	Construct Taxiway	$155,249
2018	025-2018	Construct Taxiway	$1,751,410
2019	026-2019	Conduct Miscellaneous Study	$60,300
2020	027-2020	Construct Taxiway	$7,861,402
2020	028-2020	Update Airport Master Plan Study	$366,332
2020	029-2020	CARES Act Funds	$30,000

Source: FAA

2.4 ECONOMIC IMPACT OF MCCALL MUNICIPAL AIRPORT

This section provides a general description of how general aviation, and general aviation airports contribute to local and regional economies. Data for this section was provided by the General Aviation Manufacturers Association's (GAMA) Contribution of General Aviation to the US Economy in 2018, published February 19, 2020, and the Idaho Transportation Department's 2020 Idaho Airport System Plan Update.

In 2018, general aviation contributed 1,179,200 total jobs, $76.7 billion in labor income, and $246.8 billion in economic output to the U.S. economy. For the State of Idaho, general aviation contributed 9,100 jobs, $421 million in labor income, and $1.46 billion in economic output in 2018[13].

According to the 2020 IASP Update, general aviation airports contribute 4,822 jobs, $233 million in labor income, and $1.037 billion in total economic output to the State of Idaho. McCall Municipal Airport contributes 307 jobs, $13.6 million in labor income, and $43.2 million in economic output. *Table 2.5* below compares the economic impact of peer airports with MYL.

Table 2.5 Economic Impact Comparisons			
Airport	**Jobs**	**Labor Income**	**Economic Output**
McCall Municipal Airport (MYL)	307	$13,660,000	$43,210,000
Challis Airport (LLJ)	51	$2,150,000	$7,330,000
Coeur d'Alene Airport (COE)	1,026	$54,840,000	$208,400,000
Driggs-Reed Memorial Airport (DIJ)	119	$5,440,000	$22,520,000
Friedman Memorial Airport (SUN)	3,020	$94,400,000	$291,100,000
Lemhi County Airport (SMN)	140	$5,990,000	$20,420,000
Sandpoint Airport (SZT)	873	$51,700,000	$306,760,000

Source: 2020 Idaho Airport System Plan Update

2.5 SOCIOECONOMIC AND DEMOGRAPHIC OVERVIEW

This section identifies social and economic indicators that may influence current and future aviation demand for the McCall Municipal Airport. The City of McCall and Valley County were the focus of socioeconomic conditions, with some comparisons made to state and national conditions.

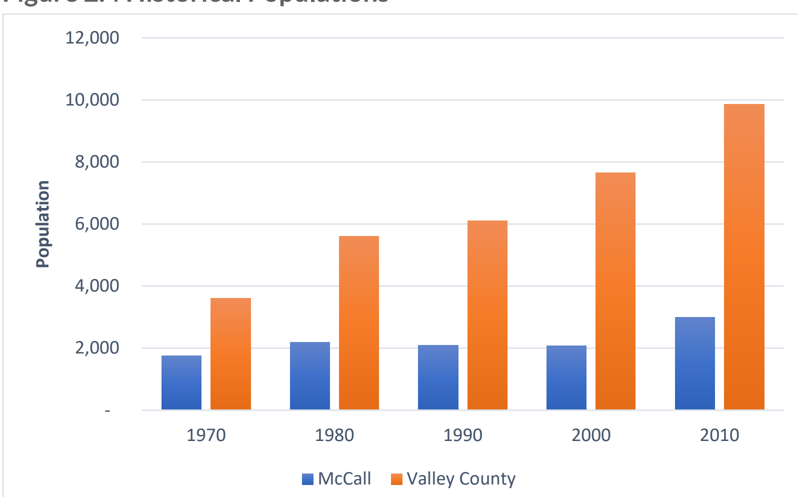
FAA Advisory Circular 150/5070-6B, *Airport Master Plans*, states the economic characteristics of a community affect the demand for air traffic. The type of industries in an airport's service area also affect aviation demand. For example, manufacturing and service industries tend to generate more aviation activity than resource industries such as agriculture. Additionally, the demographic characteristics of an area's population affect the demand for aviation services. Demographic characteristics influence the level, composition, and growth of both local traffic and traffic from other areas, also known as itinerant traffic. One important demographic characteristic is the level of disposable income, usually measured on a per capita basis, which is a good indicator of propensity to travel, as well as use and general aviation aircraft ownership.

Socioeconomic status is a specified measure of an individual, family, or group of people, used to draw comparisons between groups. Socioeconomic status is derived from the relative economic and sociological position compared to other groups, such as income, wealth, education, and occupation. Demographic data is similar but distinct, typically describing a population, including items such as age and population size. Local socioeconomic conditions and demographics play a considerable role in the demand for air transportation services. As a simple example, the demographics of a large urban area, such as Seattle, indicate very large population base which correlates to a higher demand for commercial air service. Demographics associated with a smaller population base in a recreational destination area, such as McCall, may create a greater demand for air charter or scenic flying not directly associated with local population trends.

The primary socioeconomic indicators examined for this master plan include population, household income, employment, education, and per capita income. These indicators provide insight into the financial strength and well-being of the local economy and historically correlate with the local level of aviation activity and aircraft ownership. Population and employment statistics assist in understanding the number of people and their ability to fulfill the employable positions that exist with businesses in the area. These socioeconomic indicators also give an indication of stability with respect to the cost of living, commerce, and industry. Per capita personal income reflects the average annual monetary wage per head of household. High per capita personal income in an area is usually a good indicator for greater aviation demand, as higher income populations are more likely to own and fly aircraft. An increase in discretionary income would result in an increased demand for business and leisure air travel.

Aviation demand in an airport's market often correlates with population. As of the 2010 Census, the total population of McCall was 2,991, with a compound annual growth rate (CAGR) of 1.34% since 1970. Valley County had a population of 9,862 as of the 2010 Census, with a CAGR of 2.54% since 1970. *Figure 2.4* shows the population of McCall and Valley County between 1970 and 2010.

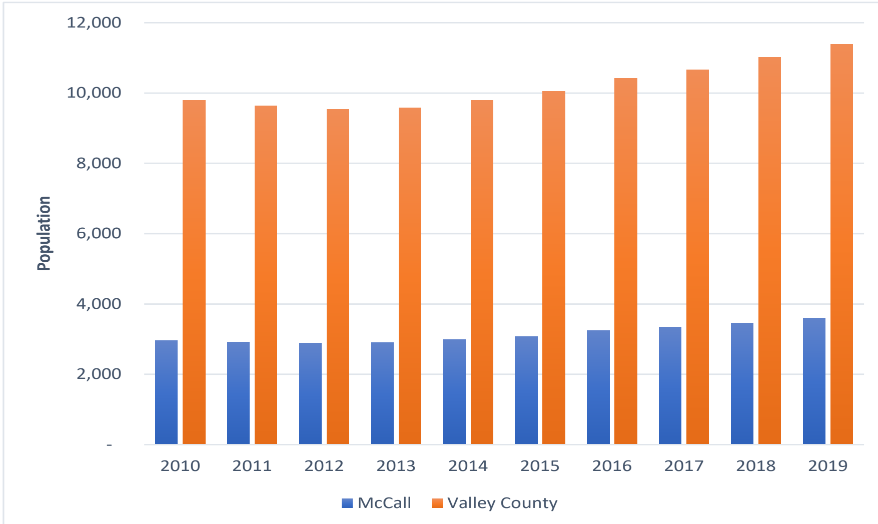
Figure 2.4 Historical Populations



Source: U.S. Census Bureau

Figure 2.5 shows the estimated population in McCall and Valley County according to the U.S. Census 2018 population estimates, which fills the gap since the last decennial census (2010). The 2020 decennial census was underway at the time of this master plan. The graphic shows a 9-year CAGR for McCall increasing at a rate of 2.2%, while the CAGR for Valley County increases at a rate of 1.7%. This is the opposite of the historic population rates between 1970 and 2010, where the county grew at a faster rate than McCall.

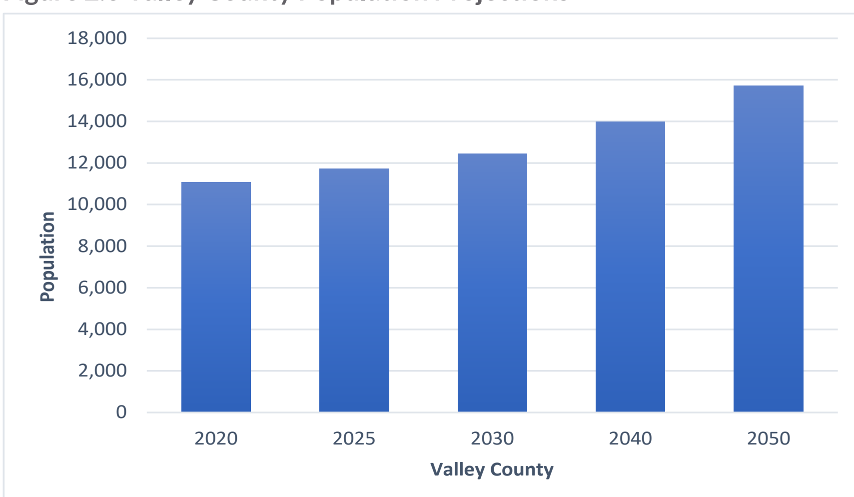
Figure 2.5 Population Estimates (2010-2019)



Source: U.S. Census Bureau

Population projections for Valley County were derived from Woods and Poole Inc. Woods and Poole is an independent firm specializing in long-term economic and demographic projections. *Figure 2.6* shows population projections for Valley County, which shows an increase in population over the next 30 years, with a CAGR of 1.18%. The projected population growth rate is well below the historic population growth rate of 2.54%.

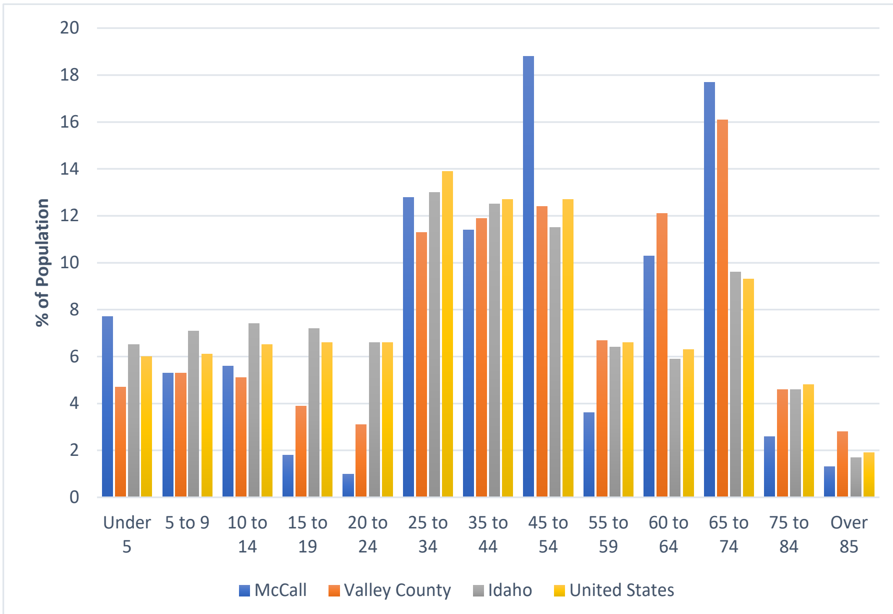
Figure 2.6 Valley County Population Projections



Source: Woods & Poole

Figure 2.7 shows the comparison of age distribution of McCall, Valley County, Idaho, and the United States as of U.S. Census 2018 population estimates. This figure illustrates a low number of residents between ages 15 to 24, offset by a high number of residents in the 45 to 54, and 60 to 74 age groups, a reflection of a more seasoned community.

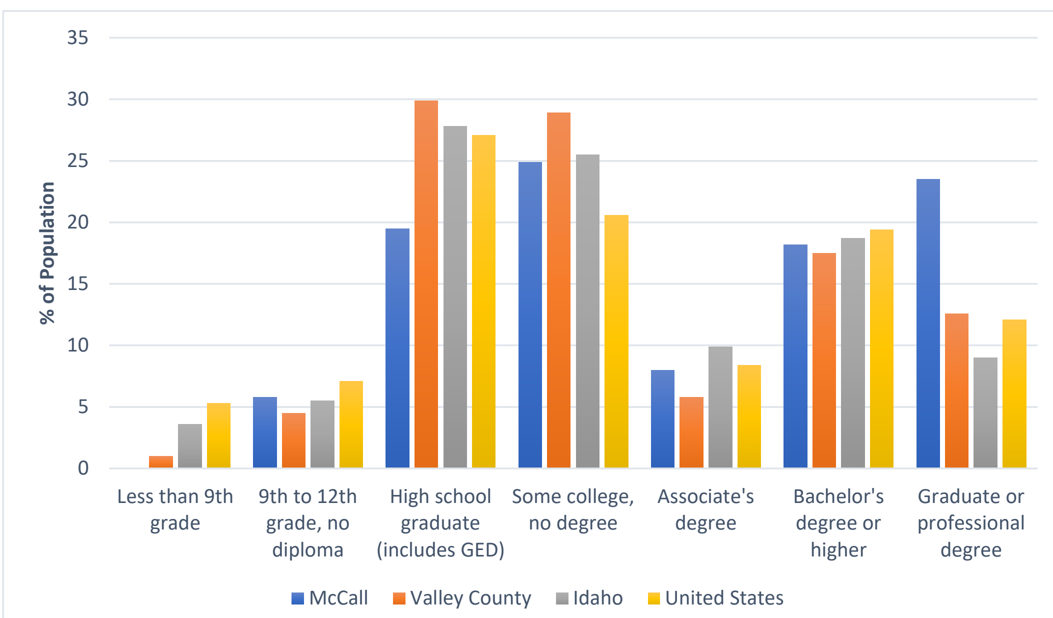
Figure 2.7 Age Distribution



Source: U.S. Census Bureau

Figure 2.8 illustrates the educational attainment for McCall, Valley County, Idaho, and the United States. A much higher percentage of McCall's population has an advanced degree than the county, state, and U.S.

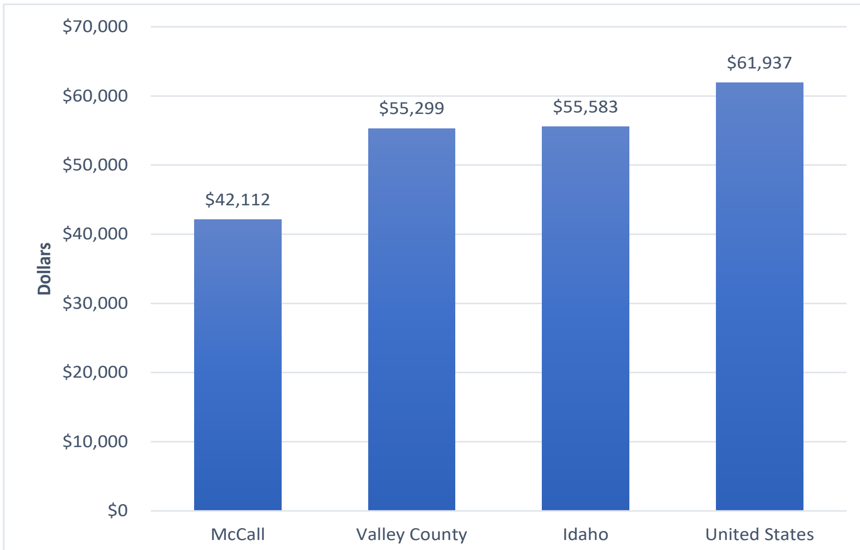
Figure 2.8 Educational Attainment



Source: U.S. Census Bureau

Figure 2.9 illustrates median household income for McCall, Valley County, and the United States based on U.S. Census 2018 estimates. Median household income is the amount that divides income into two groups, half receiving income above that amount, and half receiving income below that amount. McCall falls below the county, state, and U.S. in this category, mainly due to the influx of retirees with less direct income, and employees who live elsewhere.

Figure 2.9 Median Household Income

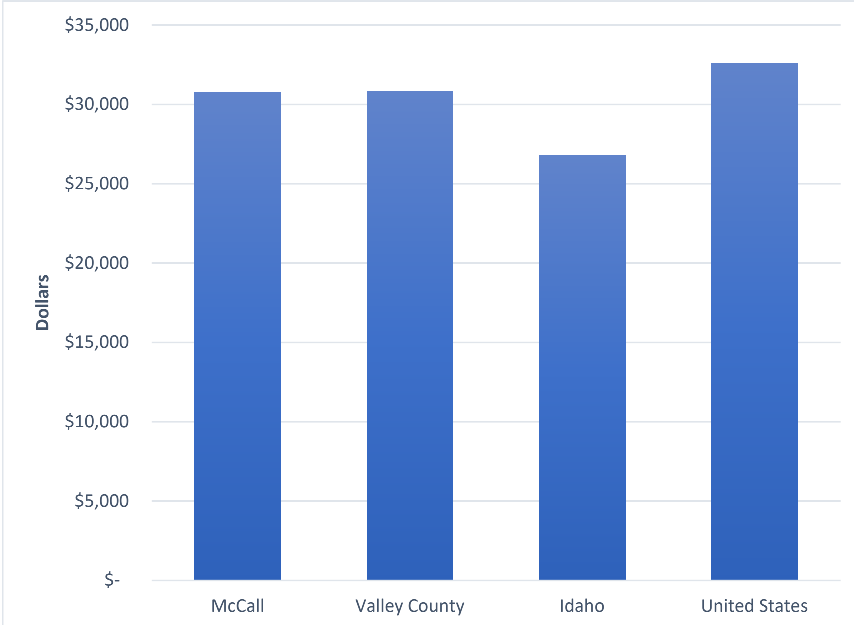


Source: U.S. Census Bureau

Per Capita Income (PCI) is the average income of the people in an economic unit, such as a county or city in a given year. It is calculated by taking a measure of all sources of income in the aggregate and dividing it by the total population. PCI is used to gauge the comparative economic wellbeing of residents in a specified region. Changes over time in per capita growth or decline have economic, social, and political repercussions. Counties with smaller populations are more likely to experience substantial fluctuations for several reasons including bumper crops, natural disaster, and major state or federal projects.

Per Capita Income is one of the most widely used indicators for gauging the economic performance and changing fortunes of local economies. The PCI for McCall, Valley County, Idaho, and the United States is displayed in *Figure 2.10*. As shown, the PCI for McCall and Valley County are higher than the State of Idaho, but lower than the United States.

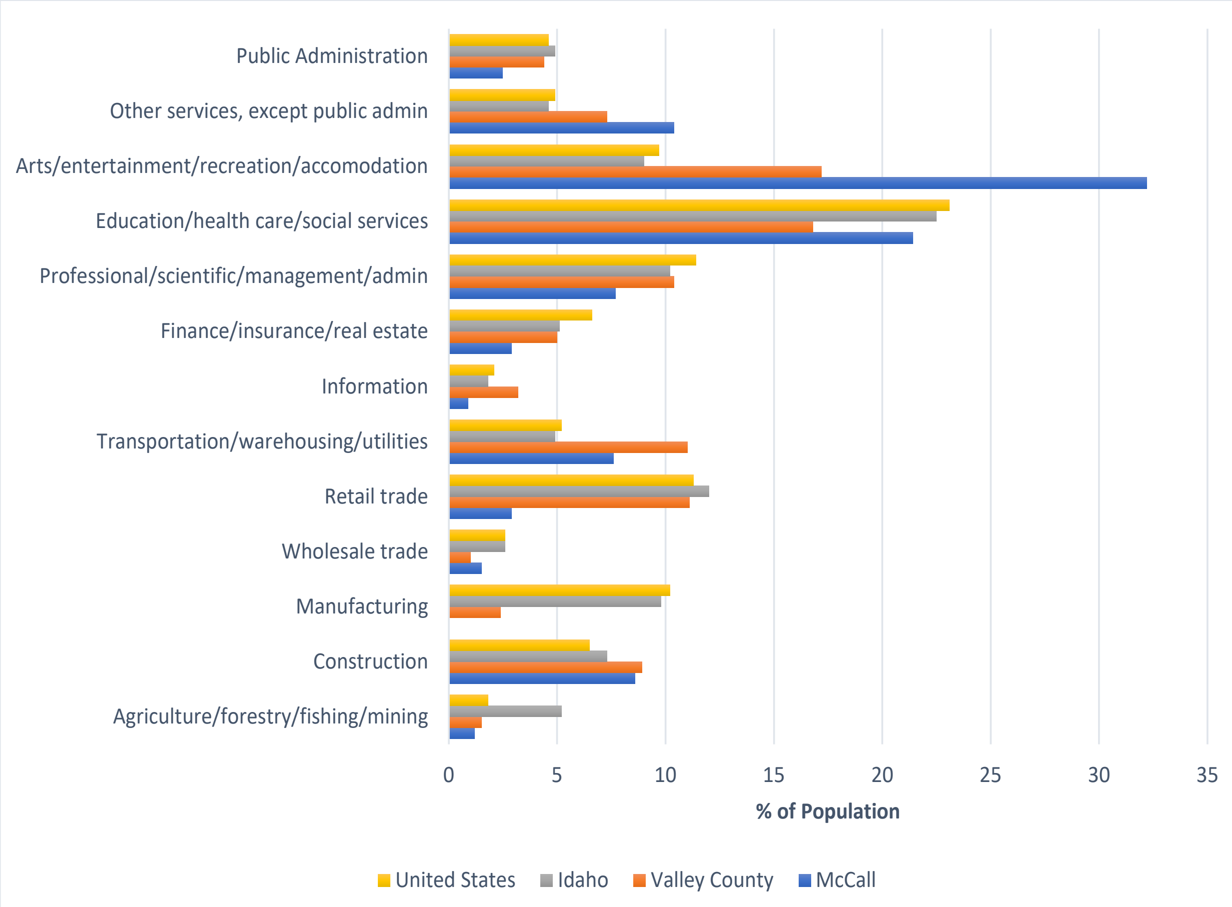
Figure 2.10 Per Capita Income



Source: U.S. Census Bureau

As mentioned previously, McCall is a recreational destination for outdoor enthusiasts. As such, the local economy revolves around services provided to tourists visiting and staying in McCall, as well as using McCall as a stepping point toward their venture into the backcountry. *Figure 2.11* illustrates this point by showing a high percentage of employment for McCall residents in the arts, entertainment, recreation, and accommodation industry when compared to the county, state, and U.S. Also noteworthy is the employment in health care, education, and social services. St. Luke's McCall Medical Center is located in downtown McCall, which is a service not usually afforded to such small towns. The service has been such success and benefit to the community, an expansion was approved in 2019.

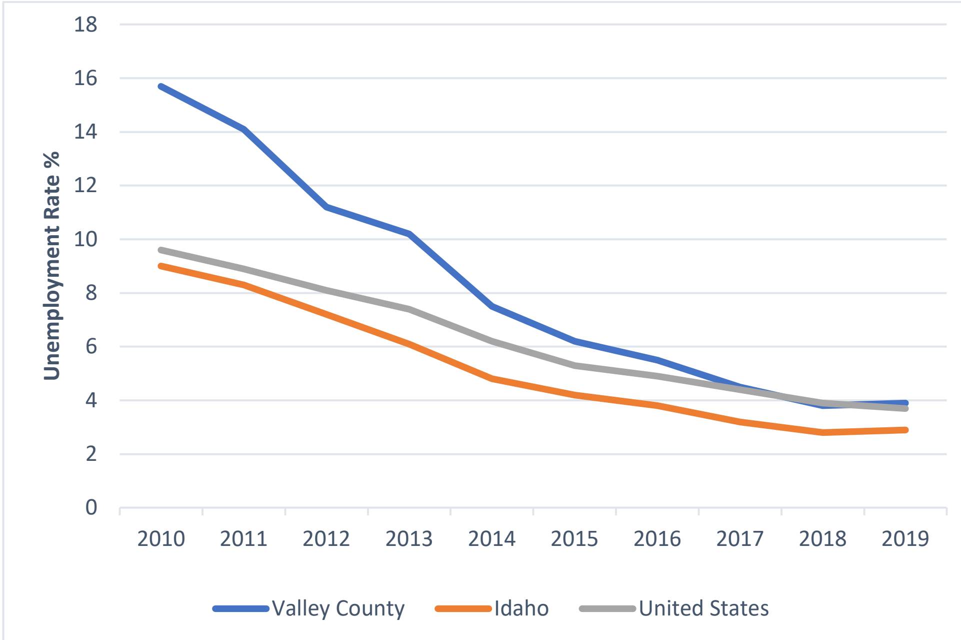
Figure 2.11 Employment by Industry



Source: U.S. Census Bureau

From 2010 through 2019, the unemployment rate in Valley County, Idaho, and the United States, had been on a steady decline according to the U.S. Bureau of Labor Statistics, with the county showing the biggest drop in unemployment, as shown in *Figure 2.12* Unemployment Rate (2010-2019). The events in early 2020 regarding Coronavirus (Covid-19) caused a sharp increase in unemployment due to social distancing and stay at home orders. As of April 2020, the unemployment rate for Valley County was 20.4%, for Idaho it was 11.5%, and the unemployment rate for the United States was 14.7%[14].

Figure 2.12 Unemployment Rate



Source: U.S. Bureau of Labor and Statistics

2.6 SOCIOECONOMIC AND DEMOGRAPHIC REVIEW AND CONCLUSION

An airport is an important element of a community's quality of life and development plans. As discussed in this chapter, McCall is a vibrant resort town with access to a wide array of outdoor activities. Seasonal residents and recreational visitors provide a strong customer base for local businesses, who may eventually retire and become permanent residents. While the population in McCall has been increasing steadily, seasonal and daily fluctuations can triple the number of people within the city limits during peak recreational periods. McCall's population is characterized as a more seasoned and educated group, a reflection of the large number of retirees, and places a high value on maintaining the mountain character and small town feel of McCall.

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SECTION OVERVIEW

The inventory of existing facilities details the natural and physical environment, as well as the airside and landside facilities of McCall Municipal Airport.

The information herein will provide the essential background information used throughout this Airport Master Plan, and provide basic information which will assist in the development of the forecast and facility requirements.

Information for the existing airport and surrounding area was collected through several sources, including site visits, historical studies, airport personnel, the Fixed Base Operator (FBO), airport tenants and users, the FAA, ITD Aeronautics, and numerous online research portals.

3.1 NATURAL ENVIRONMENT

TOPOGRAPHY

An analysis of area topography provides insight to the types of natural and artificial features, to include the types of surfaces, which may be encountered during projects. Topography includes not only the natural landscapes such as bodies of water, mountains, and valleys, but all man-made features as well. Although topography, by definition, is a study of the surface of the earth, it can influence weather patterns, and can help predict seasonal changes in wind patterns and precipitation.

The City of McCall is in the High Glacial Drift-Filled Valley ecoregion. This ecoregion contains terraced, outwash plains, moraines, wetlands, and rugged hills which are not densely forested. Natural and original landscapes include bunchgrass and mountain big sagebrush in drier soils, and lodgepole pine and ponderosa pine in valley floors. Winters in this region are cold and snowy and the area receive large amounts of runoff in the spring from mountain snow. In the summer, pastures are used for livestock and cropland[1].

As can be seen in *Figures 3.1* and *3.2*, McCall Municipal Airport is located on a relatively flat and level valley floor with some sloping terrain to the south of airport property. The airport is within miles of foothills for several ridges and is quickly surrounded by the mountainous terrain of the Payette National Forest.

Figure 3.1 McCall Municipal Airport Ground Contour Map

Source: T-O Engineers

Figure 3.2 McCall Area Topography

Source: Google Maps

GEOLOGY AND SOILS

According to the Natural Resources Conservation Service (NRCS) Custom Soil Report, the soil at McCall Municipal Airport is 66.5% donnel sandy loam variety, 30.5% gestrin loam variety, 0.7% McCall Complex, and 2.3% melton loam.

- Donnel sandy loam – Deep well drained soil formed in alluvial material weathered from granite, with rapid permeability.
- Gestrin loam – Deep, well drained soil formed in mixed alluvium from glacial outwash or glacial till, with moderate permeability.
- McCall Complex – Very deep, excessively drained soils with formed in moderately coarse textured cobbly and stony glacial till.
- Melton loam – Very deep, poorly drained soils, formed in alluvium from glacial outwash, consisting of a very hard granular structure.

Table 3.1 McCall Municipal Airport Soil Distribution

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
16	Donnel sandy loam, 0 to 2 percent slopes	9.2	4.8%
17	Donnel sandy loam, 2 to 4 percent slopes	119.1	61.7%
22	Gestrin loam, 0 to 2 percent slopes	50.0	25.9%
23	Gestrin loam, 2 to 4 percent slopes	8.9	4.6%
31	McCall complex, 5 to 50 percent slopes	1.3	0.7%
34	Melton Loam	4.5	2.3%
	Total for Area of Interest	193.1	100.0%

Figure 3.3 McCall Municipal Airport Soils Map

Source: NRCS Custom Soils Report

VEGETATION

Valley County, and the City of McCall are located near the center of the Payette National Forest. Forested areas are home to ponderosa pine and douglass-fir, and at higher elevations grand fir, lodgepole and spruce trees can be found. Idaho fescue, bluebunch wheatgrass, sagebrush, and bitterbrush are the primary local shrubberies, and the area is scattered with a variety of wildflowers[2].

The 2012 USDA Hardiness Zone Map is the standard by which gardeners and growers can determine which plants are most likely to thrive at a specific location. The USDA identifies McCall as being in the hardiness zone 5a, meaning the average minimum temperature extreme is -20 to -15°F[3].

Vegetation immediately surrounding the Airport is scattered with low lying shrubberies, grasses, and wildflowers. Outside of the cleared area are scattered low density clusters of trees.

Figure 3.4 Airport Vicinity Vegetation

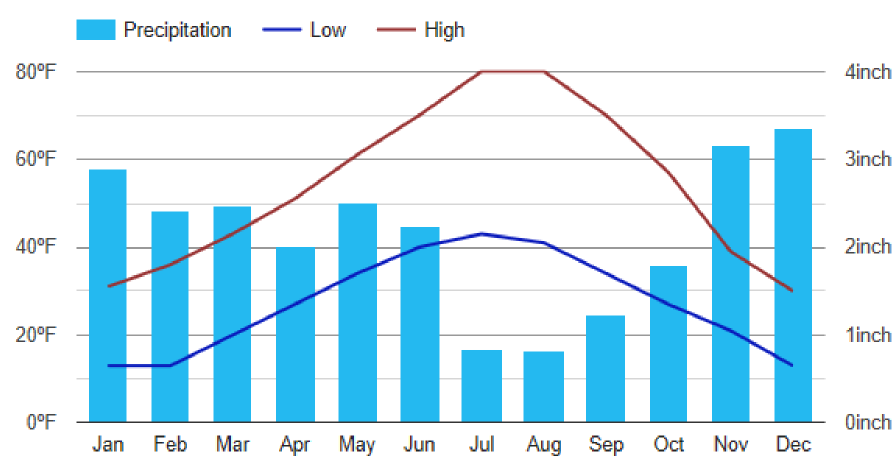
CLIMATE

The climate for the City of McCall is defined as dry-summer continental climate. This means the region experiences cold snowy winters, and warm dry summers.

The average annual high temperature for McCall is 54°F, and the average annual low is 27°F. The average maximum temperature for the hottest month of the year is 80°F occurring in July.

Average annual rainfall is 42 inches, and snowfall is 138 inches. As shown in *Figure 3.5*, the wettest months start in January, taper down throughout the summer months, then increase through the fall and winter to peak in December[4].

Figure 3.5 City of McCall Climate Graph



Source: U.S. Climate Data - McCall

WIND COVERAGE

The FAA advises that the primary runway at an airport be oriented in the direction of the prevailing wind. The most desirable runway orientation is based on the largest wind coverage with the minimum crosswind. By aligning the runway with the predominant wind there is an increase in operational safety due to the aerodynamic design of an aircraft. A crosswind is a wind which is not parallel with the runway, and wind coverage is the percentage of time a crosswind is below an acceptable speed. Thus, properly aligning a runway provides the best wind coverage and allows for safer operations at individual airports.

A wind analysis is completed to ensure the existing runway meets the FAA defined minimum wind coverage of 95%. If the primary runway does not meet this coverage, a crosswind runway may be recommended.

Aircraft are capable of taking off and landing with a crosswind though this greatly depends on the velocity of the crosswind, the particular aircraft, and the skill of the pilot. Generally, the smaller the aircraft, the more it is affected by a crosswind, and this factor is considered as part of runway orientation and design. The selected AAC and ADG as discussed in Chapter 1, are combined with the runway approach and visibility minimums to form the Runway Design Code (RDC) for a particular runway. The defined RDC drives the design standards for the runway and includes an allowable crosswind component. Therefore, the acceptable crosswind component for a runway is appropriate for the aircraft which regularly use the runway, see *Table 3.2*.

On the following page are three wind roses for McCall Municipal Airport. A wind rose is a graphical representation of wind in terms of the direction the wind is blowing from, wind strength, and percentage of time. Wind data is unique to a geographical location; therefore, a wind rose represents data collected over a certain period of time, in a particular location.

The downloaded wind data contained wind direction and speed for every year, for the past 10 years. A total of 112,916 observations were included in the all-weather wind rose, 29,566 for the Instrument Flight Rules (IFR) wind rose, and 88,496 for the Visual Flight Rules (VFR) wind rose. It is important to analyze data for all conditions in order to ensure adequate runway coverage under all meteorological conditions.

Based on this wind analysis, Runway 16/34 at McCall Municipal Airport maintains greater than 95% wind coverage for all weather scenarios and does not exceed the allowable crosswind component for any RDC category.

Table 3.2 Allowable Crosswind Component by Runway Design Code

RDC	Allowable Crosswind Component
A-I and B-I*	10.5 Knots
A-II and B-II	13 Knots
A-III, B-III, C-I through C-III, D-I through D-III	16 Knots
A-IV and B-IV, C-IV through C-VI, D-IV through D-VI	20 Knots

* Includes A-I and B-I Small Aircraft

Source: FAA

Figure 3.6 All Weather Wind Rose

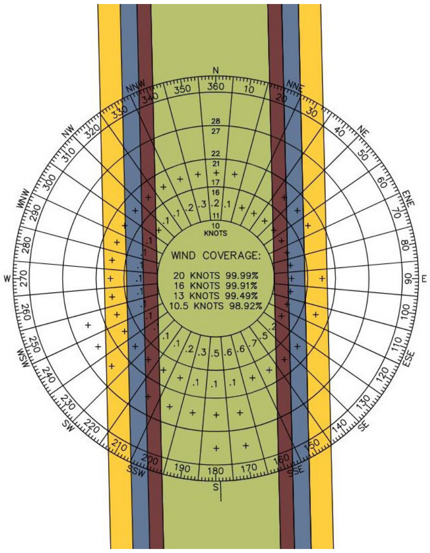


Figure 3.7 IFR Wind Rose

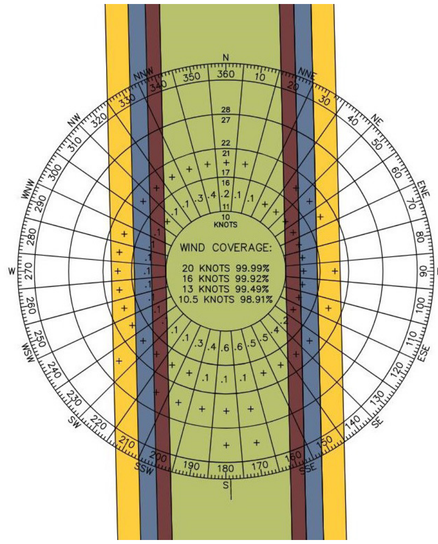
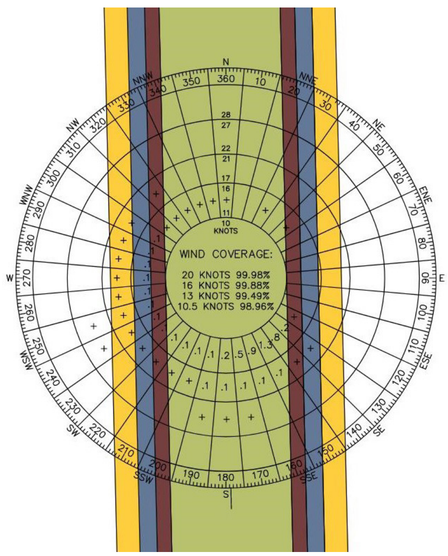


Figure 3.8 VFR Wind Rose



Wind Speed	
	10.5 Knots
	13 Knots
	16Knots
	20 Knots

Table 3.3 Wind Coverage

Weather Condition	Wind Speed in Knots	Runway 16/34 Coverage
All Weather 118,062 Observations	10.5 13 16 20	98.92% 99.49% 99.91% 99.99%
IFR 29,566 Observations	10.5 13 16 20	98.91% 99.49% 99.92% 99.99%
VFR 88,496 Observations	10.5 13 16 20	98.96% 99.49% 99.88% 99.98%

In addition to the wind roses, the same data was overlaid on a satellite image of McCall Municipal Airport. This view offers clarity for wind direction and strength.

The All Weather Overlay, *Figure 3.9*, includes 118,062 observations and shows the predominant wind blowing directly parallel to Runway 16/34. Although there is some crosswind from the south and west, the speed of the crosswind remains below the acceptable limits for the RDC.

Figure 3.9 All Weather Overlay

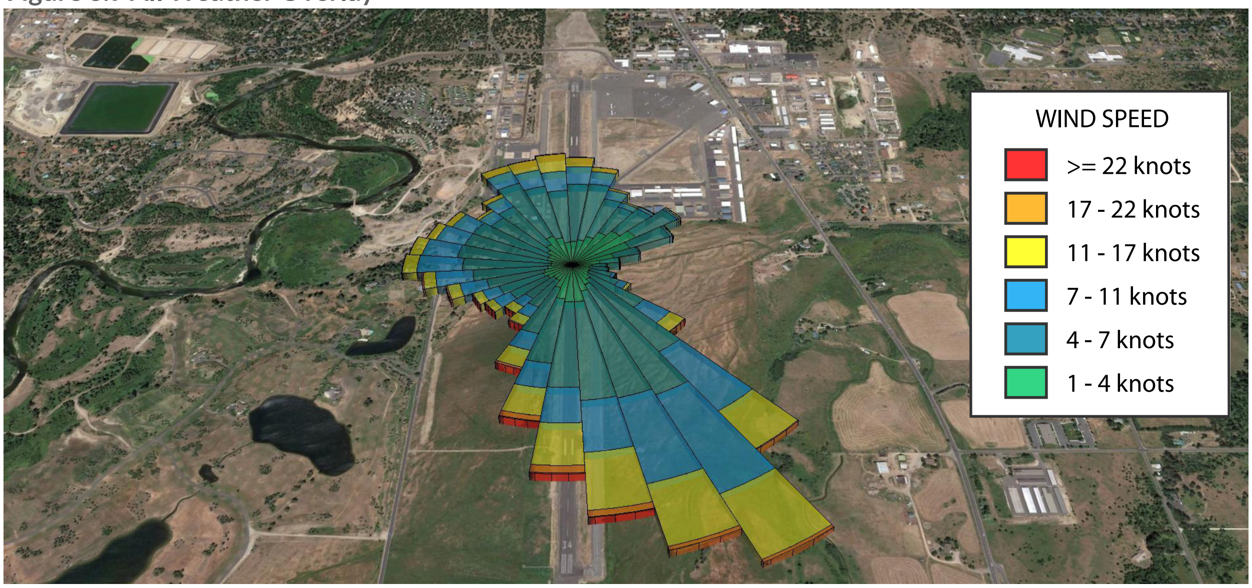


Figure 3.10 depicts wind information during instrument meteorological conditions (IMC), when visibility is less than three miles. This includes 29,566 observations, and shows the winds are typically from the south during instrument conditions. Although the wind is not directly aligned with the runway, the velocity primarily remains within acceptable limits for the RDC, and therefore maintains greater than 95% wind coverage.

Figure 3.10 IFR Overlay

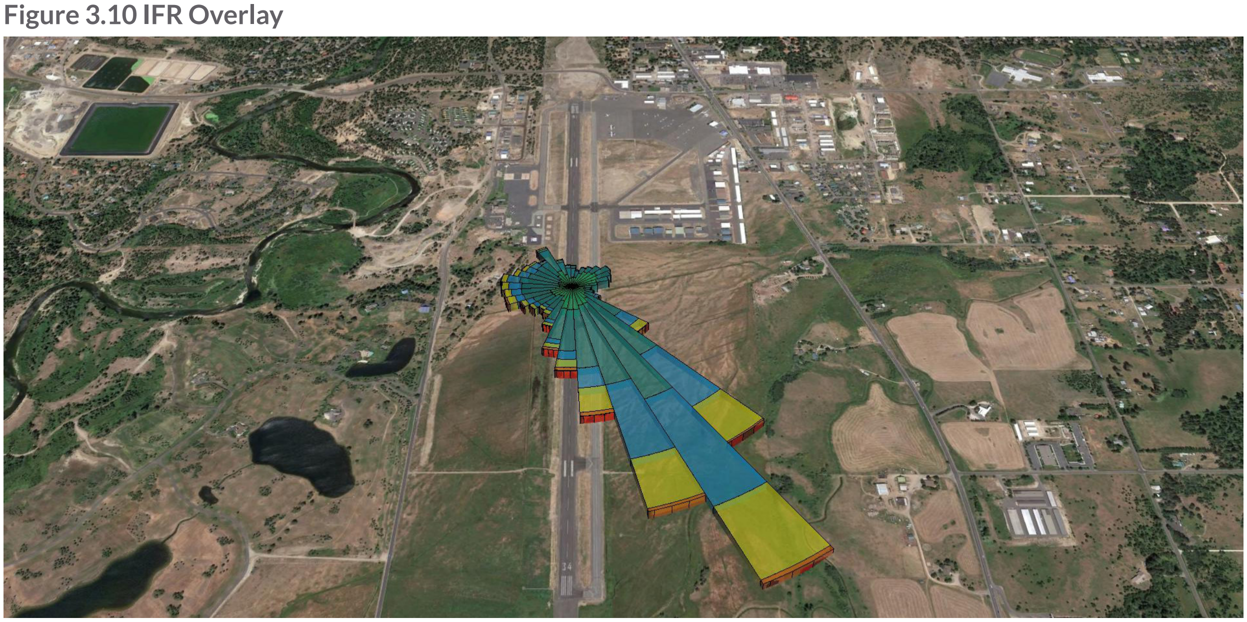
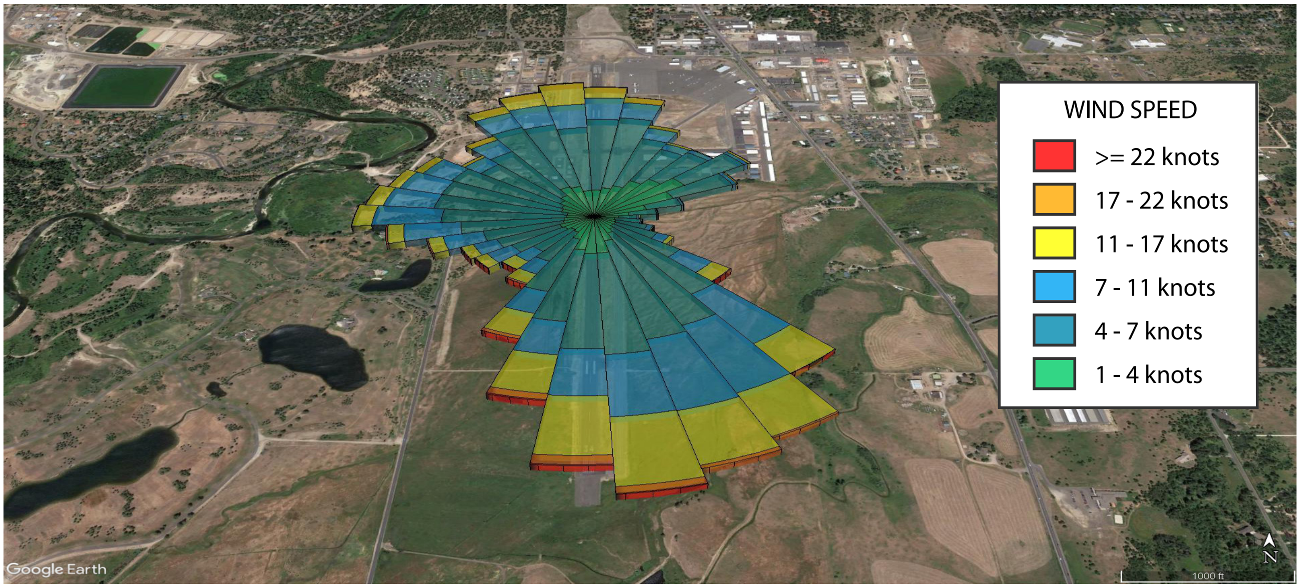


Figure 3.11 depicts wind information during Visual Meteorological Conditions (VMC), when visibility is three miles or greater. This includes 88,496 observations, and is very similar to the All Weather Overlay. Again, the wind is predominantly from the south, with some crosswind of acceptable speed from the west.

Figure 3.11 VFR Overlay



3.2 PHYSICAL ENVIRONMENT

AIRPORT AREA ZONING

Land use in the vicinity of the airport can have an impact on the operations and growth potential. As stated, the airport is owned by the City of McCall and therefore they are obligated to ensure compatible land use around the airport as part of the Airport Improvement Program (AIP) Grant Assurance #21, Compatible Land Use (see Chapter 10, *Planning for Compliance*. By understating typical issues surrounding the airport, appropriate land use planning can be carried forward through the planning horizon. *Figure 3.12* depicts city zoning and land use around the Airport.

The airport is zoned AP, with associated airport zones not pictured in the figure. Within the AP zone is the Airport Perimeter Zone (APP), which includes the land 150 feet from the interior edge of the AP zone. The Airport Internal Zone (API), includes all other land that is internal to the APP zone.

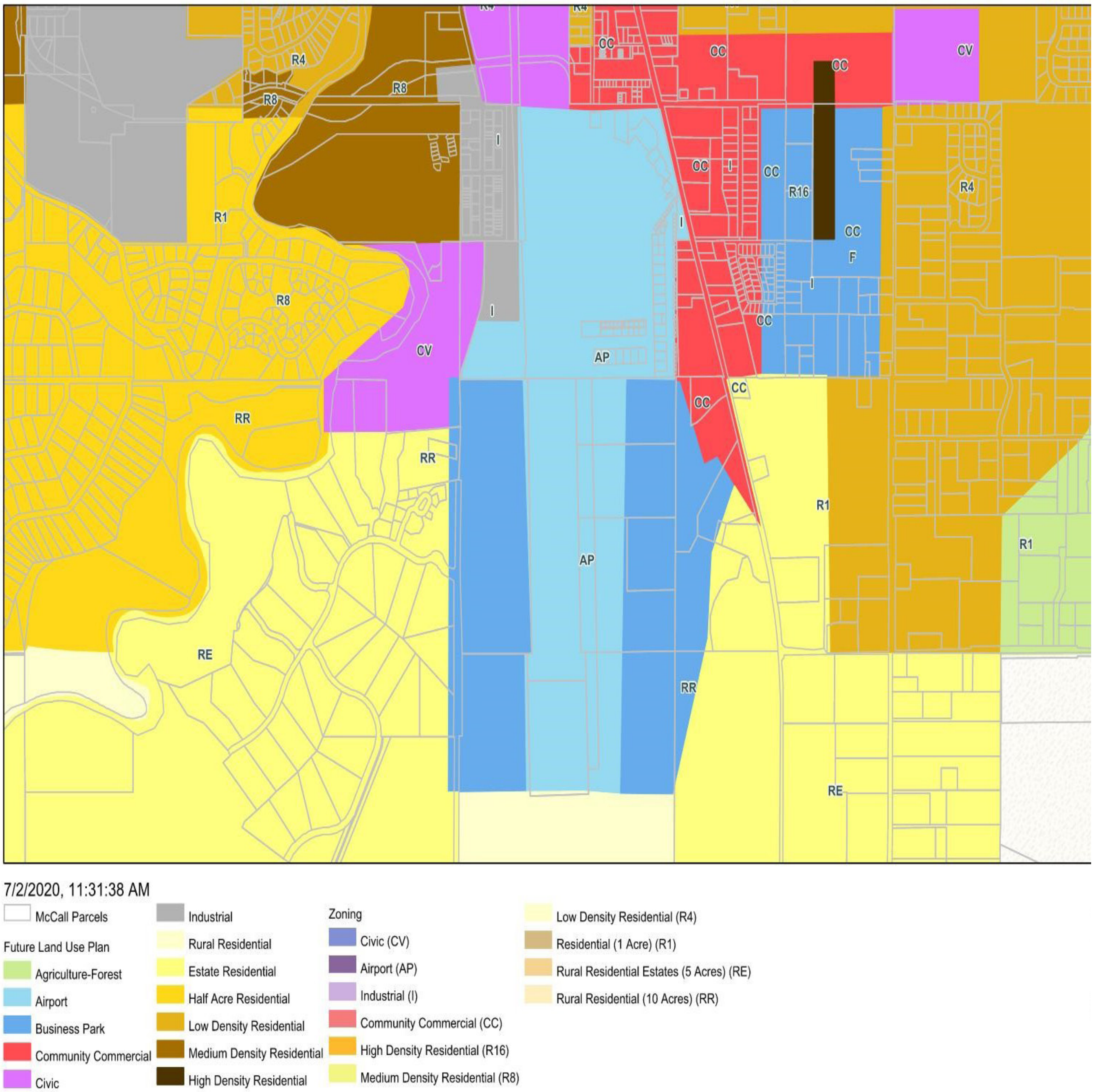
Much of the zoning around the southern half of the Airport is Rural Residential (RR), intending for single family homes on significant acreage. The maximum density per lot is one dwelling per 10 acres. R4 zoning located at the northwest corner of the airport limits four dwelling per acre.

Community commercial (CC) zoning is adjacent to the northeast of the airport. This zoning allows mixed establishments to include retail, service, or automobile establishments, and 40 dwellings per acre are permitted.

Industrial zoning (I) exists on the northwest side of the airport, and zoning here permits various land uses to include business parks, and other industrial uses which will support the diversification of the economy. Civic Use (CV) zoning around the airport includes governmental facilities, or cultural and recreational facilities[5].

Land use and zoning go hand in hand. In addition to city zoning, *Figure 3.12* shows future land uses around the airport. Land use is anticipated to continue to be developed based on what is permitted within the existing zones.

Figure 3.12 McCall Zoning and Future Land Use

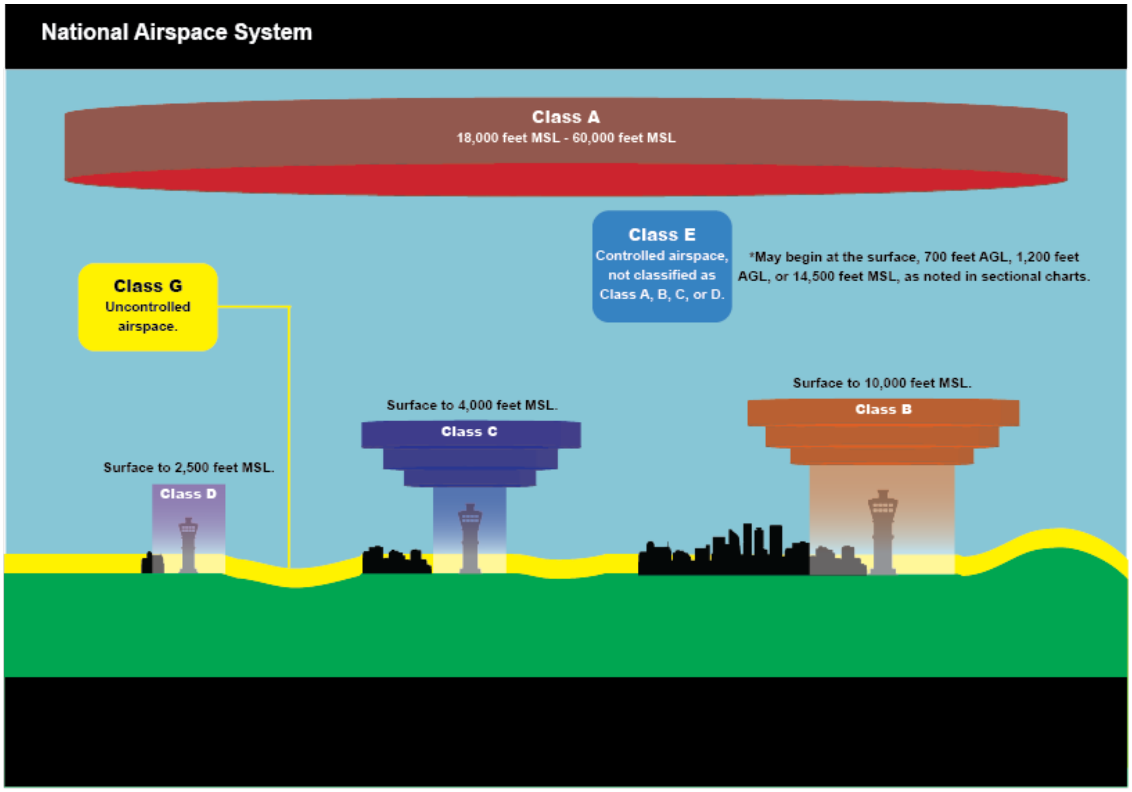


Source: City of McCall

AIRSPACE AND APPROACHES

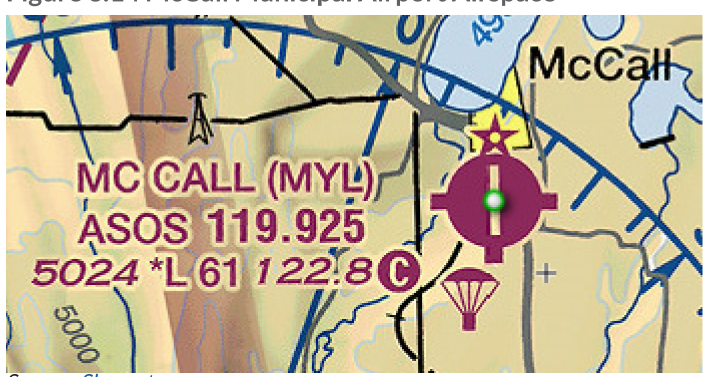
In the United States there are two categories of airspace; regulatory airspace which is governed by the FAA, and non-regulatory airspaces for special uses associated with military operations or national security. Within these two categories there are four different types to include controlled, uncontrolled, special use, and other airspace. For the purpose of this study, the important airspace types to note are controlled and uncontrolled. See *Figure 3.13* for a breakdown of FAA airspace.

Figure 3.13 National Airspace System



Airspace exists to apply specific regulations appropriate for the types and quantity of operations occurring in a specific area. Airspace surrounding large cities and busy commercial service airports will be highly regulated, as opposed to airspace in sparsely populated areas or remote airports.

Figure 3.14 McCall Municipal Airport Airspace

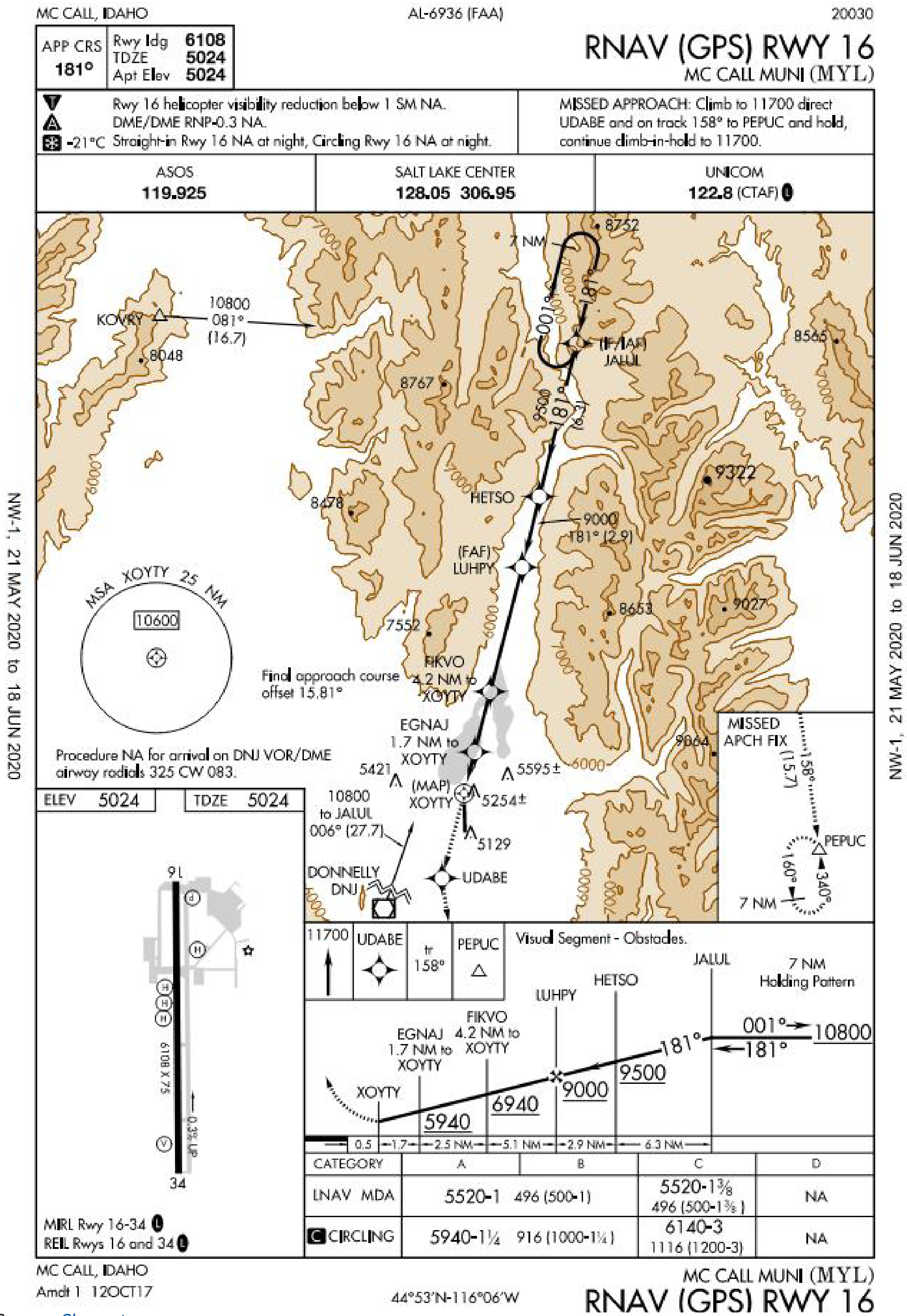


Source: Skyvector.com

The airspace surrounding McCall is designated uncontrolled, Class G airspace, at the surface. Despite being uncontrolled, the FAA mandates pilots abide by specific cloud clearance and visibility requirements to legally fly in this airspace. At 700 feet above the ground, the airspace transitions to controlled, Class E airspace. At this altitude, air traffic control (ATC) services are available, and a higher standard of cloud clearance and visibility requirements are in place.

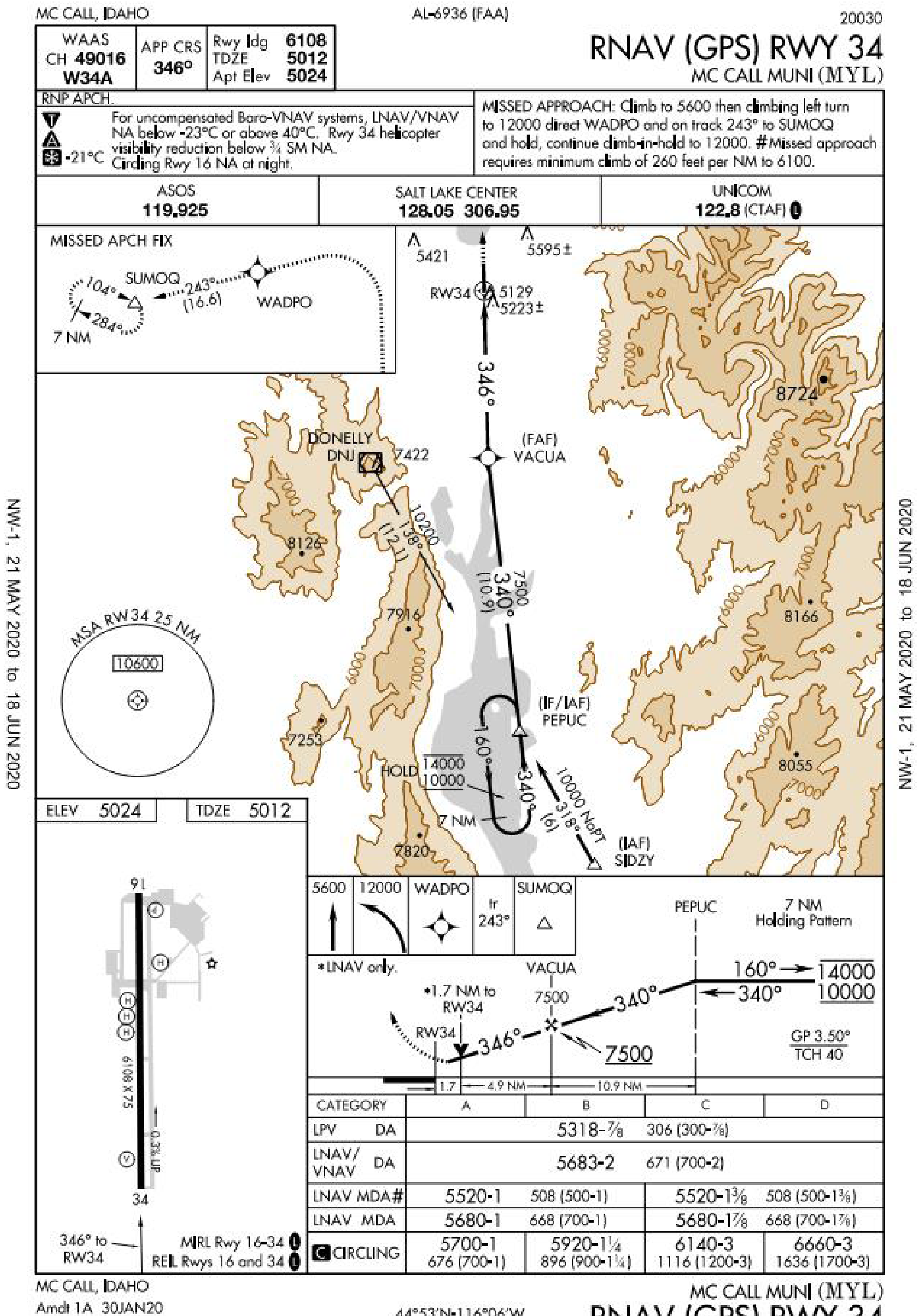
The Airport has two instrument approach procedures, RNAV (GPS) RWY 16, and RNAV (GPS) RWY 34. Instrument approaches are maintained by the FAA with the purpose of providing properly equipped aircraft the ability to land at airports when meteorological conditions are less than the defined visual condition. Instrument procedures may be utilized under both VMC or IMC, with proper coordination with ATC.

Figure 3.14 Instrument Approach Procedure Runway 16 **NOT FOR NAVIGATION**



Source: Skyvector.com

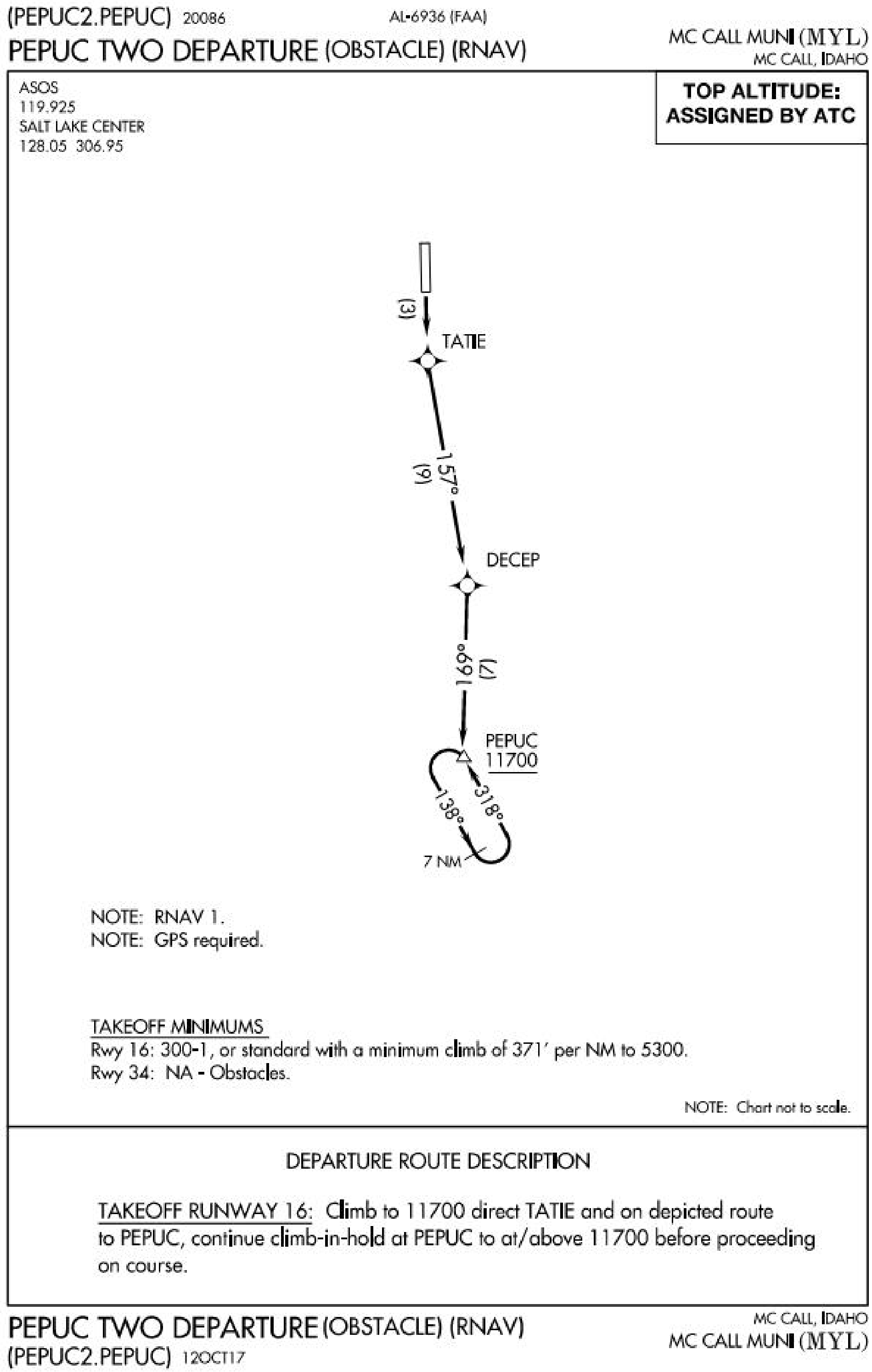
Figure 3.15 Instrument Approach Procedure Runway 34 **NOT FOR NAVIGATION**



Source: Skyvector.com

In addition to instrument approach procedures, McCall Municipal Airport has a single instrument departure procedure, which provides a transition for departing aircraft to join the network of instrument airways in the FAA national airspace system.

Figure 3.16 Instrument Departure Procedure **NOT FOR NAVIGATION**



Source: Skyvector.com

3.3 AIRSIDE AND LANDSIDE INVENTORY

Airside is defined by the FAA as the portion of the airport that contains the facilities necessary for the operation of aircraft. Typically, this includes three elements, the runway, taxiways, and apron areas, and includes all support infrastructure necessary to make those elements operational, (e.g., signage, markings, navigational aids).

Landside is conversely defined as areas and operations on the airport which are not airside elements. Landside is typically referred to in terms of passenger-processing, and possible maintenance or freight support. For the purposes of this study, landside will refer to airport access, automobile parking, and any non-aviation related activities.

RUNWAY

McCall Municipal Airport is served by a single runway, 16/34, which is 6,108 feet long and 75 feet wide. Runway 16 has a 50-foot blast pad which is appropriate marked. The runway surface is asphalt and has a weight bearing capacity of 86,000 pounds single wheel, 141,000 pounds double wheel, and 261,000 pounds single tandem.

The runway is appropriately marked with nonprecision markings. Although there is precision instrument approach for Runway 34, the minimum visibility for that approach is higher than the minimum visibility required for precision runway markings.

The runway is equipped with Medium Intensity Runway Lighting (MIRL). These lights outline the runway and are white for the primary length of the runway, then turn to amber for the last 2,000 feet (*Figure 3.18)*. The lights marking the end of the runway are called runway end lights, or threshold lighting (*Figure 3.19)*. These lights emit red toward the runway identifying the end of the runway for departing aircraft, and green outward from the runway end to indicate the runway threshold for landing aircraft. The runway lighting is pilot controlled, meaning the lights are defaulted to be off, and pilots have the ability to turn them on from the aircraft. This is done by the pilot clicking the radio transmit button a series of times on the Common Traffic Advisory Frequency (CTAF); the lights will remain on for 15 minutes once activated.

Figure 3.18 Runway Edge Lights

Figure 3.19 Runway End Lights

In addition to the MIRLS, each runway end is equipped with Runway End Identifier Lights (REILS). These lights provide rapid identification of the runway end and consist of two flashing white lights on each side of the runway threshold. The lights flash outwards towards the approach path of the runway, and the flash provides an easily identified contrast to any surrounding lights or terrain[6].

Figure 3.20 REILS

Each runway end has a visual slope indicator for the purpose of assisting incoming traffic obtain an appropriate approach angle for landing on the runway. Runway 16 has a 2-light Precision Approach Path Indicator (PAPI), however, due to numerous trees located on private residences in the approach path, the PAPI is permanently out of service. Runway 34 has a 2-box Visual Approach Slope Indicator (VASI). Both systems emit red and white lights, with changing patterns depending on the approach angle of the incoming aircraft. These lights are visible for approximately 3-5 miles during the day and up to 20 miles at night[7].

Figure 3.21 Runway 16 PAPI

Figure 3.22 Runway 34 VASI

TAXIWAY

Taxiways at airports provide a designated path for aircraft movement connecting the runway to the apron, hangars, and support facilities. McCall Municipal Airport has a full parallel taxiway, Taxiway A, on the east side of the runway. The taxiway was newly constructed in 2020, and is 50 feet wide with 300 feet of clearance from the runway centerline. The taxiway has a total of five runway connectors starting with A1 at runway end 16 through A5 at runway end 34.

There is a partial parallel taxiway on the west side of the runway, designated Taxiway B, connecting the runway to the USFS air tanker base.

Figure 3.23 Taxiway A1 Connector

Figure 3.24 TaxiwayA5 Connector

NAVIGATIONAL AIDS

Navigational Aids (NAVAIDs) are electronic and visual air navigation aids including lights, signs, and associated supporting equipment. These increase navigational efficiency throughout the airspace system, as well as provide vital information to pilots maneuvering around airports.

McCall Municipal Airport does not maintain a NAVAID for the purposes of an instrument approach, however, there is a Very High Frequency Omni-directional Range (VOR) located approximately 10 miles to the southwest of the Airport. A VOR broadcasts a VHF radio signal, which allows aircraft to navigate using directional magnetic bearings emitted from the facility. In the case of McCall, the VOR is not associated with an instrument approach, but is operational and can provide distance and radial information from the facility.

The Airport maintains other visual NAVAIDS in addition to the runway and taxiway lighting and signage discussed previously in this chapter, and include the airport beacon, segmented circle, and lighted windcone.

Airport beacons are rotating omni-directional lights, mounted on tall towers and indicate the location of a lighted airport. In the United States there are different classifications of airports which are identified with different beacon colors and flashing light patterns emitted from the rotating beacon. The airport classifications are land, water, heliport, military, and hospital or emergency services heliport.

At McCall Municipal Airport, the beacon flashes alternating white and green identifying it as a lighted, land airport. The beacon is in operation from sunset to sunrise, and when ground visibility is less than three miles.

The Airport is equipped with a segmented circle and lighted wind cone located east of the parallel taxiway, towards runway end 16. The segmented circle acts as a central location for easy identification of the wind cone, and aids in controlling the traffic pattern direction for incoming aircraft. The segmented circle identifies a standard left-hand traffic pattern for both runway ends. The segmented circle and wind cone were replaced in 2020 as part of the taxiway relocation project.

Figure 3.25 Airport Beacon

Figure 3.26 Segmented Circle

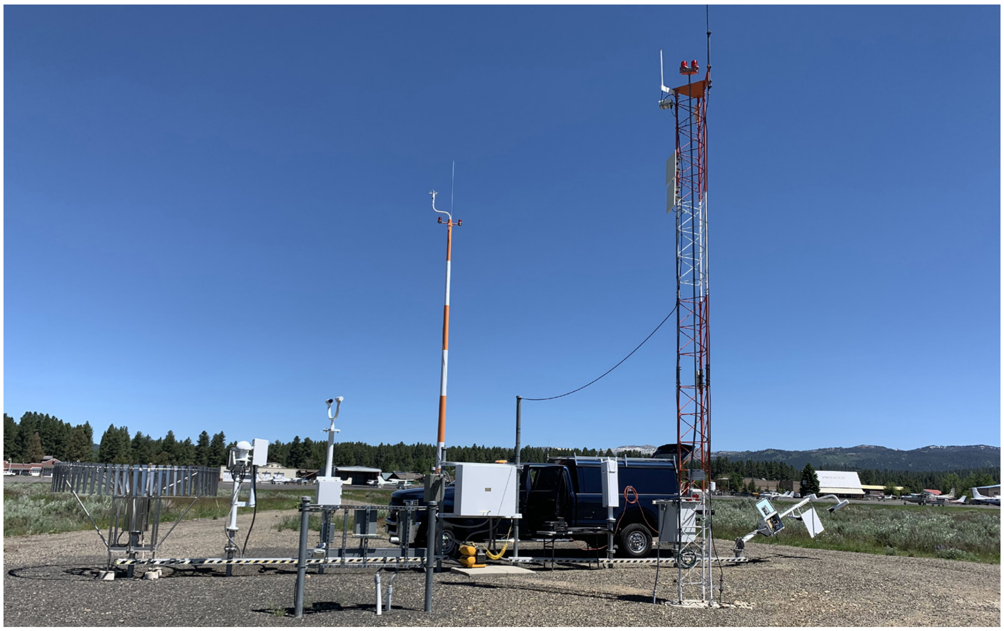
Source: Google Earth

Figure 3.27 Wind Cone

WEATHER INFORMATION

Weather information at the Airport is provided by an on-site Automated Surface Observation System (ASOS). The ASOS provides hourly observations, with additional reports in the event weather changes rapidly. Conditions reported are wind direction and strength, to include gusts and wind shifts, pressure altitude, visibility, cloud layers and condition (i.e., scattered, broken, overcast). ASOS information can be obtained in an aircraft on frequency 119.925, or by telephone at 208-634-5947, as well as through several online flight planning and weather reporting websites.

Figure 3.28 ASOS



APRON

The apron for McCall Municipal Airport is located on the north eastern corner of the airport. The apron has a total of 110 open tie-downs; 97 for small aircraft, 8 medium, and 5 for large aircraft with an additional area for large helicopters or seasonal overflow. West of the overflow parking area is a compass rose used to calibrate the magnetic compass in an aircraft (*Figure 3.31*).

Figure 3.29 Apron and Tie-Down Area

Figure 3.30 Large Helicopter/Overflow Parking

Figure 3.31 Compass Rose

BASED AIRCRAFT

According to McCall Municipal Airport's FAA 5010 Master Record dated May 21, 2020, there are a total of 74 based aircraft to include 77 single-engine, 8 multi-engine aircraft, and a helicopter.

The airport manager continually maintains an internal based aircraft inventory. The 2020 inventory lists 95 based aircraft. For the purpose of this study, the Airport's internal inventory is assumed to be the most accurate and will be used for further exploration in the forecast.

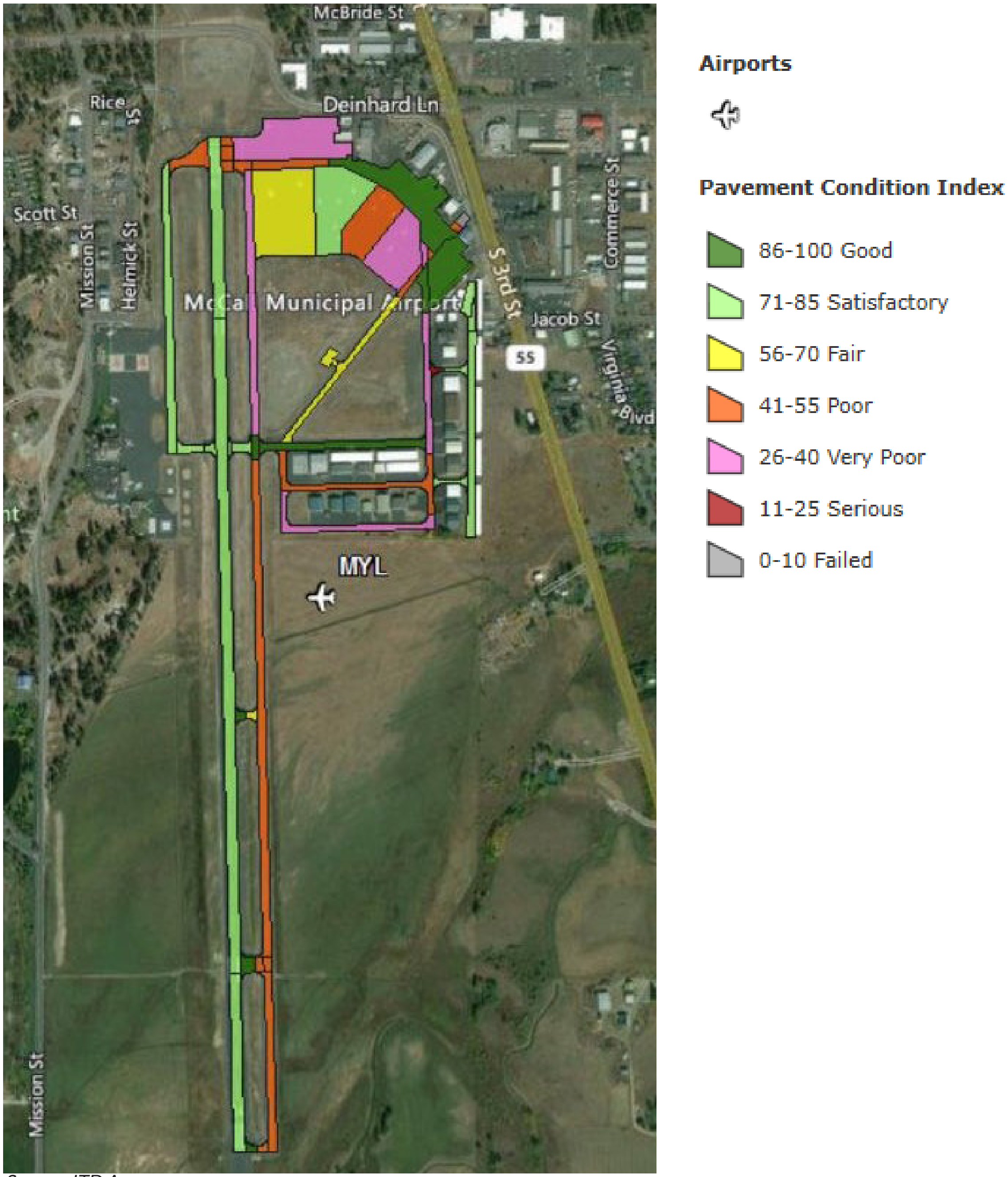
PAVEMENT CONDITION

Pavements at airports are routinely surveyed by the state transportation department, and result in a Pavement Condition Index (PCI) score. The PCI scores range from 0-100 with 0 representing failing conditions, and 100 identifying perfect conditions. The score acts as a general gauge for operational condition. Typically, the range between 50-80 indicated the window where rehabilitation is needed. A PCI score lower than 50 is no longer a candidate for rehabilitation and requires complete reconstruction.

ITD Aeronautics tracks pavement conditions of Idaho's airports. This allows ITD to determine priority across the state's airports in determining the need for rehabilitation and maintenance.

As can be seen from *Figure 3.32*, pavement conditions vary throughout the Airport. The majority of the pavement is between fair and good condition, however some areas do exist with a score less than 50 requiring complete reconstruction[8].

Figure 3.32 ITD PCI Survey



Source: ITD Aero

AIRPORT SERVICE PROVIDERS

McCall Aviation - Salmon Air is the single Fixed Base Operator (FBO) at McCall Municipal Airport. This is a full service FBO which offers line service for 100LL and Jet A refueling in addition to a 24-hour self-service 100LL fuel tank. Additionally, McCall Aviation offers tug services, type I deicing, and bottle or in-plane oxygen service. The FBO maintains aircraft tie-downs available for overnight or short-term parking, has a fleet of rental cars, and provides refreshments to patrons. The FBO facilities include a maintenance hangar and pilot's lounge.

Outside of basic FBO services, McCall Aviation offers a variety of flight packages ranging from backcountry and scenic flights to destination recreational activities, as well as air-share opportunities and private charter[9].

Figure 3.33 McCall Aviation

Figure 3.34 McCall Aviation Deice Truck

Figure 3.35 McCall Aviation Self Service 100LL

Figure 3.36 McCall Aviation Fuel Trucks

Mountain/Canyon Flying Seminars was established in 1997 and provides ground and flight training for backcountry flying and off pavement landings. Several seminar options are available to include but not limited to, Part 121 professional pilot courses, tailwheel endorsement, backcountry fundamentals, and individualized mountain/canyon flying instruction.

In addition to flight training, McCall Mountain/Canyon Flying Seminars has the expertise to build customized advanced aviation safety courses which include short runway, high altitude, off pavement, and confined area training. They maintain three aircraft available as rentals[10].

Sawtooth Flying Services is based out of McCall Municipal Airport and provides backcountry destination flights, hiking, hunting, and fishing services, and river running working with Idaho outfitters to get people and gear to and from launch points[11].

Dew Aviation provides maintenance support at McCall Municipal Airport. Maintenance capabilities include long annuals, and aircraft parts and tires.

Gem Air is based out of Salmon, Idaho but offers a variety of services at McCall Municipal Airport. Services include backcountry and charter flights, as well as adventure packages with partnering Idaho outfitters. Gem Air flies hunters, backpackers, fishermen, boaters and explorers throughout the mountain northwest[12].

Figure 3.36 McCall Mountain/Canyon Flying Seminars

Figure 3.37 Sawtooth Flying Services

MYL High Flying Club is located at the Airport, and was established in 2016. The club maintains three aircraft, a C-172, C-182, and a PA-32 available for member rental. Membership is capped at 8 people per aircraft to ensure members have desired access to aircraft. The MYL High Flying Club promotes aviation by encouraging and sponsoring aviation activities and a scholarship program with the purpose of enabling a selected local student to complete their pilot training[13].

AIRPORT OPERATORS

The U.S. Forest Service has been a non-commercial operator out of McCall Municipal Airport since 1944. The U.S. Forest Service currently maintains a complex on the west side of the airport which includes a smoke jumper base and training facility, air tanker base, Krassel Helibase, and Payette Interagency Fire Dispatch.

The McCall smokejumper base is one of four U.S. Forest Service training bases in the United States, and the base has been in operation since 1944. The base is home to approximately 70 smokejumpers during the summer months, and utilizes two agency owned Twin Otter DH-6 aircraft, and an SD3-60 Sherpa. The Air Tanker Base is host to a state owned AT-802 Air Tractor, and a viewing station is open to the public to observe operations from a safe distance.

Figure 3.38 USFS SD3-60 Sherpa

Krassel Helitack was relocated to McCall Municipal Airport in 2014 and is assigned to the 1.2 million acres of the East Zone fire management area. The crew consists of a 14-person team and is one of 5 U.S. Forest Service emergency medical shorthaul programs in the nation. The crew is equipped to respond to a variety of missions including initial attack, wilderness fire management, crew support, resource projects, as well as off-forest fire support. Helicopters on contract include a Sikorsky SH-3 Sea King, and an A-Star 350, though this is subject to change on an annual basis as contracts change[14].

Figure 3.39 A-Star 350

HANGARS

Hangars at McCall Municipal Airport are various sized box hangars with ownership being city, commercial, or private. The Johnson Flying Service Hangar, also known as the Pioneer Hangar, is listed in the National Register of Historic Places. This hangar was built in 1932 for the purpose of sheltering and servicing airplanes transporting airmail and supplies. In 1944 Pioneer Hangar became the USFS backcountry base as they became established at the airfield. Although the USFS now occupies a complex on the west side of the airport, Pioneer Hangar stands as a symbol of early aviation, air transport, and fire fighting efforts in the community.

Figure 3.40 Historic Pioneer Hangar

Figure 3.41 Box Hangars

SNOW REMOVAL

Snow removal at McCall Municipal Airport is accomplished by airport staff using a 20 foot plow, 644 John Deer Loader, New Holland rotary broom, and a Rolba snowblower. A snow removal plan places priority on the runway, taxiway and taxiway connectors respectively, and snow removal for private or commercial areas are the responsibility of the tenant. Equipment is stored in a designated Snow Removal Equipment (SRE) building.

Figure 3.42 Snow Removal Equipment

AIRCRAFT RESCUE AND FIREFIGHTING (ARFF)

McCall Municipal Airport is a general aviation facility, therefore not required to have on-site ARFF facilities and equipment. A city fire station is located directly across Deinhard Lane, with direct access to an emergency entry gate allowing for quick response and excellent accessibility to airport facilities when needed.

FENCING

Fencing around the airport consists of a six foot chain link fence topped with razor wire around the north of the airport, and wildlife fencing around the south. Fencing is in fair to poor condition with large gaps allowing wildlife to penetrate.

AIRPORT ACCESS

Access to the airport can be gained through one of four secure vehicle access gates or man-doors. There is public parking with a capacity of approximately 50 parking spots, and the parking lot is frequently at capacity.

Figure 3.43 Airport Access and Parking

REFERENCES

1 NRC, Ecoregions of Idaho, accessed May 2020 at https://www.nrc.gov/docs/ML1018/ML101800248.pdf

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SECTION OVERVIEW

This chapter will analyze the existing aviation activity at McCall Municipal Airport, and using approved forecasting methodologies, determine a realistic forecast of aviation demand. This analysis will determine a baseline of activity for the year 2020, and provide short (5 year), medium (10 year), and long (20 year) term projections.

4.1 FORECAST ELEMENTS

The forecast of future aviation activity at the airport is the foundation for effective airport planning and development. By understanding the realistic outlook of activity, it will allow the sponsor to justifiably plan for future growth, including anticipated infrastructure development needs, and a timeline for which development needs should be met.

FAA Advisory Circular (AC) 150/5070-6B, *Airport Master Plans*, and FAA Order 5090.5, *Formulation of the National Plan of Integrated Airport Systems (NPIAS) and Airports Capital Improvement Plan (ACIP)*, states that forecasts should be:

+ Realistic
+ Based on the most recent data available
+ Be supported by information in the study
+ Reflect the current and anticipated future conditions at the airport
+ Provide adequate justification for airport planning and development

In following FAA guidance, the forecast process is divided into seven elements:

Step 1. Identify aviation activity parameters and measures to forecast
Step 2. Collect and review previous airport forecasts
Step 3. Gather data
Step 4. Select forecast methods
Step 5. Apply forecast methods and evaluate results
Step 6. Summarize and document results
Step 7. Compare airport planning forecast results with TAF

The final component of this analysis will be to identify the existing design or critical aircraft for McCall Municipal Airport. The FAA defines the critical aircraft as the most demanding aircraft, or family grouping of aircraft, which regularly operate at the airport. Regular use is further defined as at least 500 operations, either local or itinerant, excluding touch-and-go operations a year. The forecasted critical aircraft will be approved by the FAA and will be based on observed data obtained during the study.

The determination of the critical aircraft and the approved forecast will become the foundation for future airport planning and design. This is not a choice of the Airport Sponsor, community, or FAA, it is determined from actual operations, and approved forecast methodologies.
Additionally, it should be realized there are always short- and long-term fluctuations in airport activity, but history has shown the aviation industry to be resilient. Aviation trends are cyclical in nature and tend follow the economy. These cycles in activity should be anticipated, but the degree of impact and timeline cannot be predicted. The forecast provided herein will provide the framework and justification needed for future airport development.

4.2 IDENTIFY AVIATION ACTIVITY PARAMETERS

The first element in the forecast is to determine the types of aviation activity that can affect the facility needs of the airport. Fleet mix, annual operations and based aircraft are the primary factors for airfield planning and development, as these are what define the runway and taxiway design standards. Commercial service airports have additional activities to consider such as such as passenger levels, and enplanements.

As discussed in Chapters 1 and 2, MYL is a general aviation airport which is used by a variety of operators ranging from private and recreational, to business, charter, and seasonal firefighting. McCall Municipal Airport is not expected to receive scheduled commercial service throughout the planning period.

In understanding the types of aviation activity occurring at the airport, the baseline will specify the actual fleet mix and annual operations, as well as the existing based aircraft fleet mix and quantity. This data provides the critical information used in forecasting future levels of demand at the airport.

Due to the seasonal variations in activity, a peak period forecast will also be provided. A significant increase in operations beginning in the spring, and continue through the fall season occur due to the U.S. Forest Service firefighting and smoke jumper base, an increase in recreational and backcountry flights, and the fact the McCall is a resort town and sees an influx in tourists during the warm summer months.

Table 4.1 MYL Aviation Demand Elements to be Defined

Operations (Annual)	Aircraft
Itinerant	Based
Air Taxi	Fleet Mix
General Aviation	Single Engine Piston
Military	Multi Engine Piston
Total Itinerant	Single Engine Turboprop
Local	Multi Engine Turboprop
General Aviation	Jet
Military	Helicopter
Total Local	Glider
Total Operations	Critical Aircraft

4.3 FORECAST METHODOLOGIES

FAA Advisory Circular (AC) 150/5070-6B, *Airport Master Plans*, details the approved forecast methodologies. There are several techniques available, and acceptable methodologies may include a combination of, or additional techniques as deemed appropriate. FAA guidance dictates that a forecast includes multiple techniques for comparative purposes.

This study will explore the following forecasting methodologies in addition to the comparison with the FAA Terminal Area Forecast (TAF):

Socioeconomic Regression Analysis: This methodology utilizes the local economy to develop a relationship between the social and economic trends to aviation trends. A correlation can be made between the local statistical economics, and the forecast of annual operations, fleet mix, and based aircraft.

Trend Analysis: The Trend Analysis uses historical trends and projects them into the future over the planning period.

Comparison with Peer Airports: This technique compares McCall Municipal Airport to peer airports of the relative size and characteristics in the same region. Because of the similarities regional setting and activity, a comparison of forecasts can be made and applied to MYL.

4.4 AVIATION INDUSTRY TRENDS

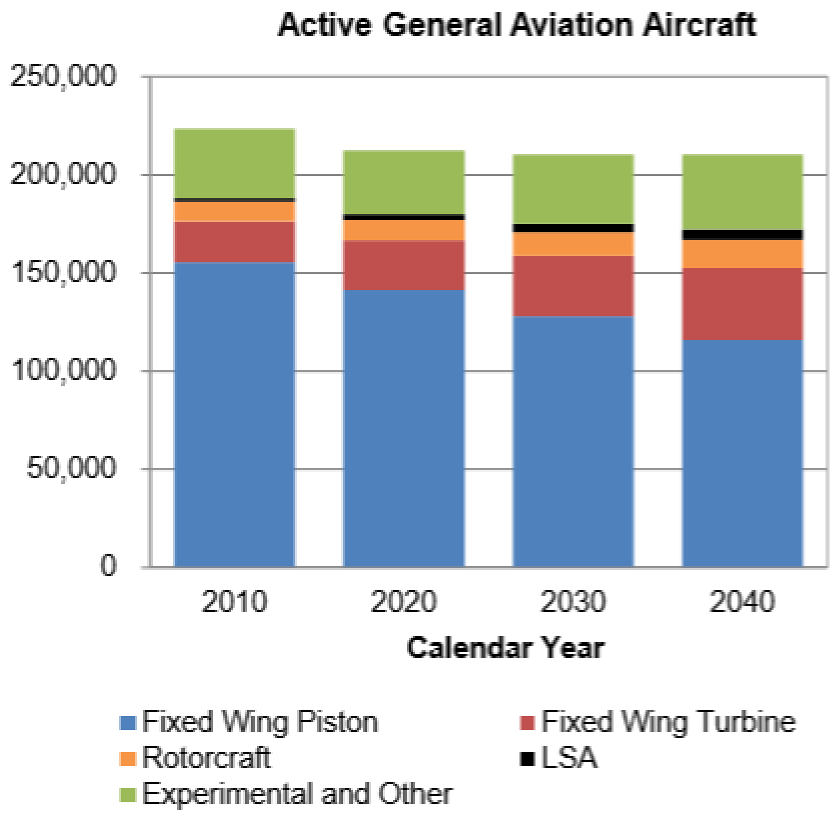
The aviation industry is intrinsically linked to the economy and experiences the same fluctuations on a global level. The FAA uses models built on economic forecasting to produce the FAA Aerospace Forecast, which breaks down the industry from U.S. airlines, to general aviation, as well as unmanned aircraft systems, and commercial space. The current FAA Aerospace Forecast for FY2020-2040 was released just as the Coronavirus (COVID-19) was gaining attention. It is unknown exactly what the long-term impacts will be on aviation, following a sharp and deep decline in airline travel across the world in April 2020.

FAA GENERAL AVIATION FORECAST

The FAA conducts annual general aviation activity surveys to establish a baseline for fleet size and hours flown. The forecast of aircraft deliveries comes from data released by the General Aviation Manufactures Association (GAMA), in addition to assumptions of retirement rates of fleet categories.

The results of the 2020-2040 General Aviation Forecast revealed the long-term general aviation outlook is relatively stable, with a 0.9% decrease in GA fleet expected throughout the planning period. The fixed wing piston fleet is expected to decline at an average annual rate of -1.0% due to unfavorable pilot demographics, increased cost of ownership, lower cost alternatives for recreational usage, and retirement of an aging fleet. This decline is offset by an increase in turbine, experimental, and light sport aircraft. Additionally, an increase of 2.3% annual growth is expected for the turbojet fleet, all which is due to steady growth in both GDP and corporate profits. See *Figure 4.1*.

Figure 4.1 GA Aircraft Fleet Mix

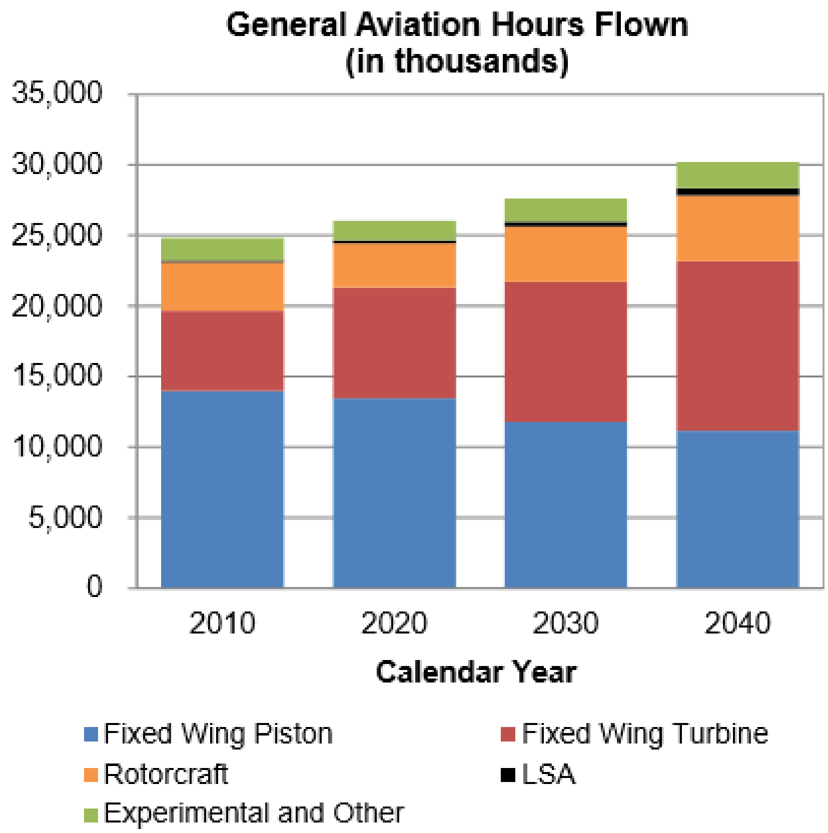


Source: FAA Aerospace Forecast 2020--40

Despite the decline in fleet, the number of general aviation hours flown is projected to increase by 0.7% annually during the same period, as newer aircraft fly more hours each year. Fixed wing piston hours are expected to decrease at the same rate of the fleet decline; however, growth in turbine, rotorcraft, and experimental hours more than offset a decline in fixed wing piston hours.

Turbine aircraft (including rotorcraft) are forecast to increase 2.2% yearly between 2019 and 2040. Jet aircraft are expected to account for most of the increase, with hours flown increasing at an average annual rate of 2.7% over the forecast period. The large increases in jet hours result mainly from the increasing size of the business jet fleet. GA hours flown are depicted in *Figure 4.2*[1].

Figure 4.2 GA Hours Flown



Source: FAA Aerospace Forecast 2020--40

IDAHO GENERAL AVIATION TRENDS

The 2020 Idaho Airport System Plan (IASP) Update provides a forecast for both commercial service airports, and general aviation airports for a 20-year horizon beginning in 2017. The forecast examines enplanement (for commercial service airports), based aircraft, and annual operations. Data used in the IASP Update forecast comes from the FAA Aerospace Forecast, the FAA Terminal Area Forecast (TAF) as well as individual airport reporting.

Two methodologies were explored to estimate based aircraft through the year 2037 including:

- Population Growth methodology (Option 1): which uses Idaho's current and projected population growth by county to apply to the baseline for based aircraft at the airport(s) in the county with the assumption that the based aircraft growth rate will mirror the population growth rate through the forecast years. For McCall Municipal Airport, a population growth rate of 1.3% was used.

- Based Aircraft by Type methodology (Option 2): which uses each individual airport's reported 2017 based aircraft by type and then applies a projected annual growth rate on the type of based aircraft at the airport and what is projected by the FAA in terms of growth for the different active aircraft fleet types on the national level. For McCall Municipal Airport, a growth rate of 1.0% was used.

The IASP compared the two methodologies, and Based Aircraft by Type Methodology (Option 2) was selected as the preferred forecast because it uses the FAA forecast growth rates for active aircraft by type. The forecast produced by Option 2 will be used for comparative purposes detailed later in this chapter.

The IASP compared the two methodologies, and Based Aircraft by Type Methodology (Option 2) was selected as the preferred forecast because it uses the FAA forecast growth rates for active aircraft by type. The forecast produced by Option 2 will be used for comparative purposes detailed later in this chapter.

- Two methodologies were also used to examine forecasted annual operations through the year 2037. The methodologies focus on different indicators influencing GA operation growth patterns in the future. Operations Per Based Aircraft (OPBA) Methodology (Option 1): which determines a ratio between the number of operations and the number of based aircraft, generally reflecting a relationship between the number of annual aircraft operations and the number of aircraft based at an airport. For McCall Municipal Airport, the OPBA was 352 with a growth rate of 1.0% (from the prior selected based aircraft methodology).

- ARC Category Growth Rate Method (Option 2): which uses the airport's ARC identified from the Airport Inventory and Survey Data Form and designates a specific growth rate to them. For McCall Municipal Airport, a growth rate of 0.8% was used for the ARC B-II aircraft.

Again, the results were compared and the ARC Category Growth Rate Method (Option 2) was selected as the preferred forecast method because it represents a more conservative growth trend. Option 2 will be used for comparative purposes detailed later in this chapter.

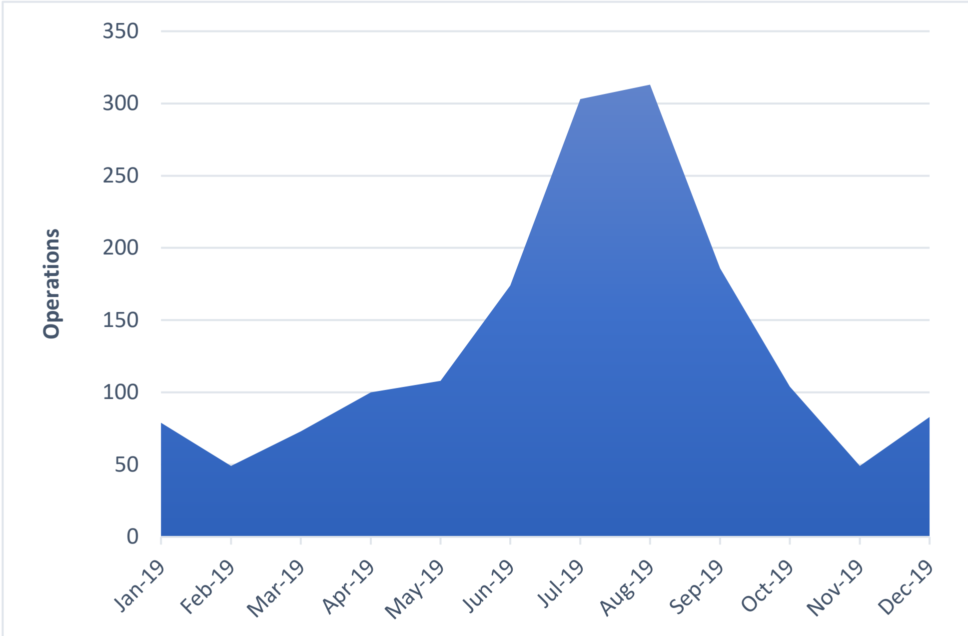
4.5 LOCAL DATA

TFMSC FLIGHT PLAN DATA

The FAA's Traffic Flow Management System Counts (TFMSC) provides information on aircraft traffic counts by airport or by city pair for various data groupings, such as aircraft type or by hour of the day. It includes data for flights that fly under Instrument Flight Rules (IFR) and are captured by the FAA's enroute computers. Most VFR and some non-enroute IFR traffic are excluded. TFMSC source data is created when pilots file flight plans and/or when flights are detected by the National Airspace System (NAS), usually via radar. Filing a flight plan is not required for non-air carrier flights, so flight plans associated with smaller airports such as McCall are limited. Flight plans are commonly filed for poor weather conditions and by corporate and charter flight operators. As such, more demanding aircraft using McCall Municipal Airport will likely be captured by TFMSC data. Smaller general aviation traffic will likely not be captured by TFMSC data since they are not likely to file a flight plan or will self-file with a trusted friend or family member with their intended route and schedule. Nonetheless, TFMSC data will be an important factor in determining the critical aircraft and fleet mix operating at McCall Municipal Airport.

According to the TFMSC data for calendar year 2019, 829 flight plans were filed to MYL and 794 were filed from MYL for a total of 1,623 operations. *Figure 4.3* illustrates the total flight plans filed for MYL by month for 2019. August had the most flight plans filed, followed by July, September, and June. February and November had the fewest flight plans filed.

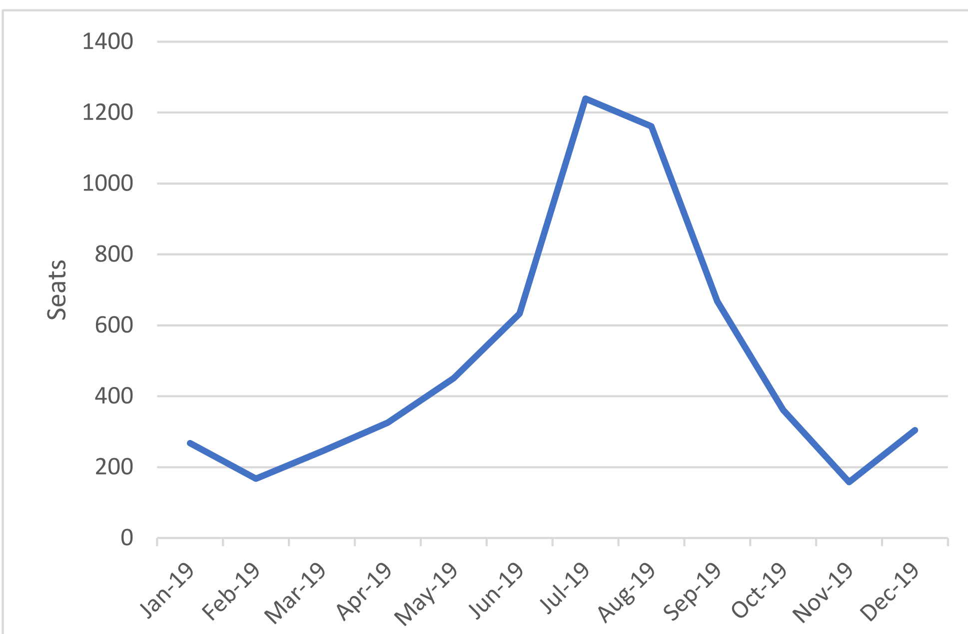
Figure 4.3 MYL Operations 2019 by Flight Plans Filed



Source: FAA TFMSC

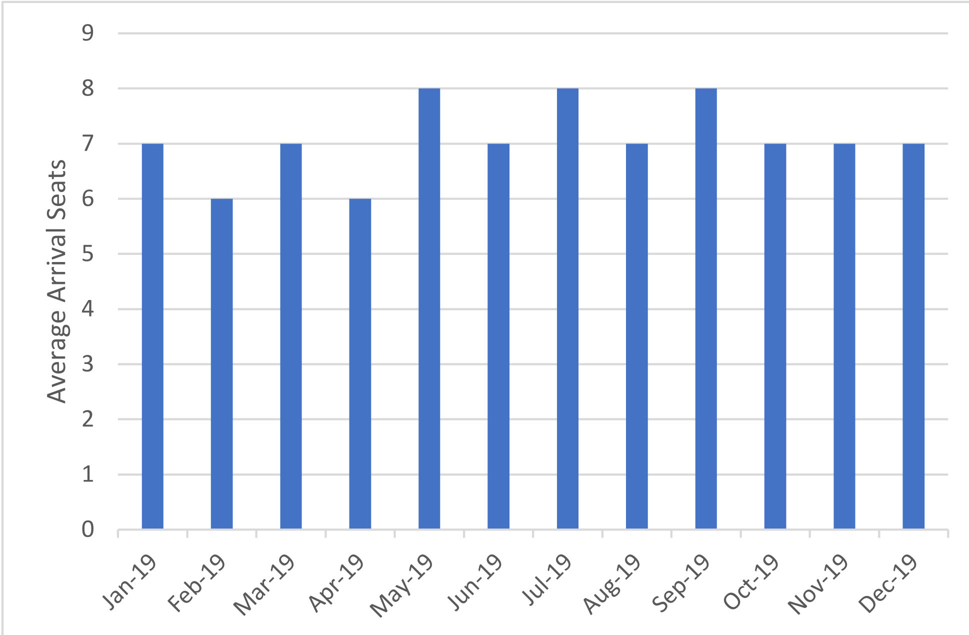
Another piece of data provided from TFMSC data is the total and average departure and arrival seats of the aircraft with flight plans. In 2019, the total arrival seats for MYL was 5,985, with an average of 7 seats. *Figures 4.4* and *4.5* below show the total arrival seats and average arrival seats for 2019 by month. The total seat graph shows a similar pattern to the total operations graph in *Figure 4.3*. Average seats by month ranged between 6 and 8, which is representative of small to medium size jets and turboprops such as the Cessna Citation 560 and Beechcraft King Air 200.

Figure 4.4 Total Arrival Seats for MYL in 2019



Source: FAA TFMSC

Figure 4.5 Average Arrival Seats for MYL in 2019



Source: FAA TFMSC

TFMSC FLEET MIX BY AIRPORT REFERENCE CODE (ARC) AND AIRCRAFT TYPE

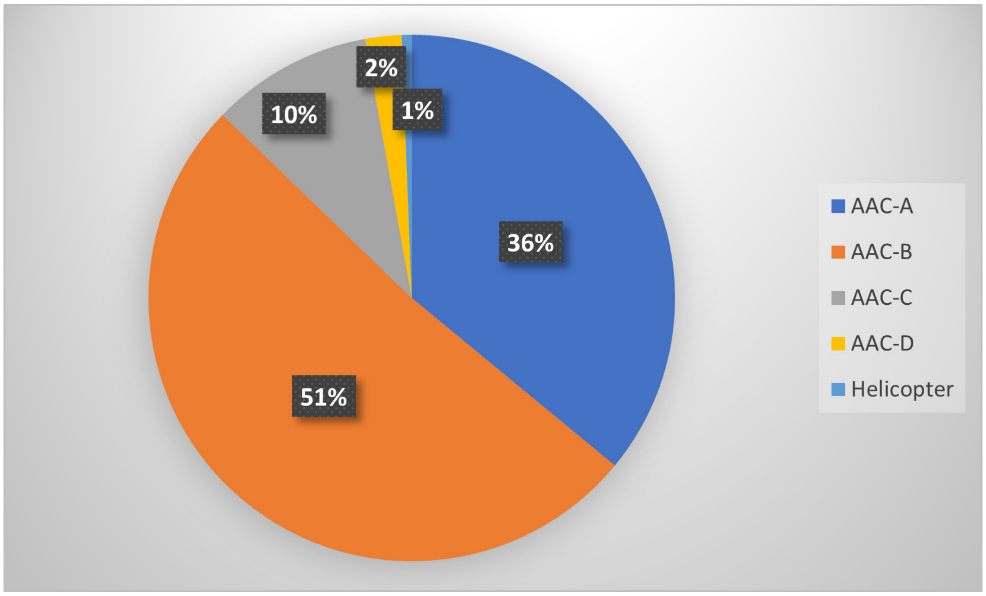
TFMSC flight plan data from 2019 provided a breakdown of the fleet mix by aircraft type, Aircraft Approach Category (AAC), and Airplane Design Group (ADG). This information will be a primary source in verifying the existing critical aircraft ARC, which is B-II, and determining the future critical aircraft ARC, as it is assumed the most demanding aircraft using MYL are on flight plans.

As mentioned in the previous section, in 2019 there were a total of 1,623 operations by filed flight plans. *Table 4.2* and *Figure 4.6* show the fleet mix breakdown by total numbers and percentage for Aircraft Approach Category.

Table 4.2 TFMSC Fleet Mix by Aircraft Approach Category (2019)	
AAC-A	584 (36%)
AAC-B	832 (51%)
AAC-C	161 (10%)
AAC-D	36 (2%)
Helicopter	10 (1%)
Total	1,623

Source: FAA TFMSC

Figure 4.6 TFMSC Fleet Mix by Aircraft Approach Category (2019)

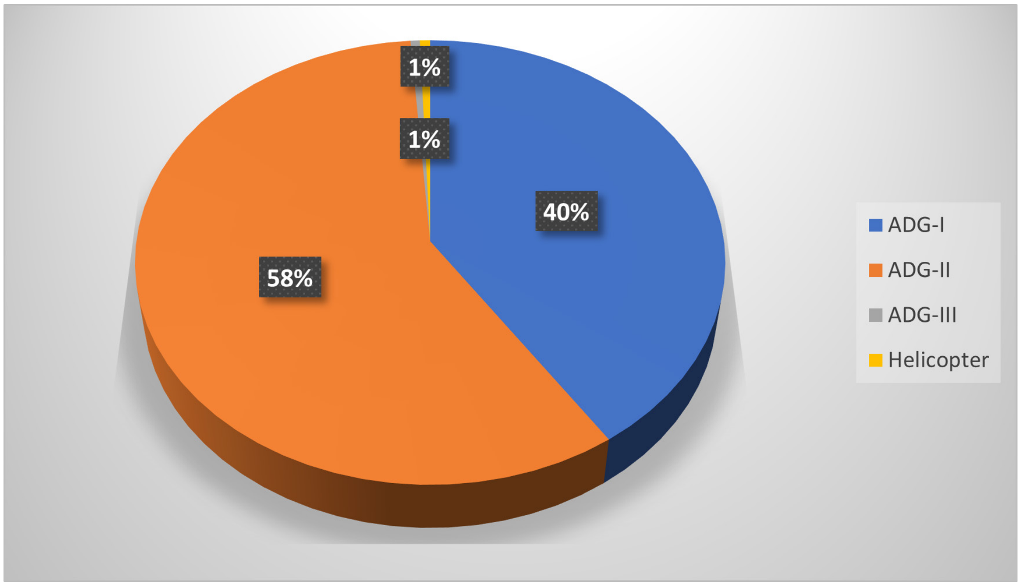


Source: FAA TFMSC

With respect to Airplane Design Group during 2019, *Table 4.3* and *Figure 4.7* show the fleet mix breakdown by total numbers and percentage for Airplane Design Group.

Table 4.3 TFMSC Fleet Mix by Airplane Design Group (2019)	
ADG-I	658 (40%)
ADG-II	946 (58%)
ADG-III	9 (1%)
ADG-IV	0 (0%)
Helicopter	10 (1%)
Total	1,623

Figure 4.7 TFMSC Fleet Mix by Airplane Design Group (2019)



Source: FAA TFMSC

By observing the 2019 TFMSC data for MYL by ARC, it is clear AAC-B and ADG-II are the dominant aircraft using the airport based on filed flight plans. Next, we will look at the aircraft type using MYL that are AAC-B and ADG-II.

Table 4.4 Top AAC-B Aircraft with Filed Flight Plans at MYL in 2019					
Aircraft Type	**AAC**	**ADG**	**Departures**	**Arrivals**	**Total Ops**
King Air 200	B	II	134	140	274
Citation 560	B	II	39	43	82
Citation CJ1	B	I	29	26	55
Citation CJ3	B	II	19	18	37
Citation 550	B	II	17	18	35
King Air 350	B	II	16	18	34
King Air 90	B	I	14	16	30
Citation Mustang	B	I	1I5	15	30
Citation Excel	B	II	14	14	28
Phenom 300	B	II	15	13	28

Source: FAA TFMSC

Table 4.5 Top ADG-II Aircraft with Filed Flight Plans at MYL in 2019					
Aircraft Type	**AAC**	**ADG**	**Departures**	**Arrivals**	**Total Ops**
King Air 200	B	II	134	140	274
PC-12	A	II	90	98	188
Citation 560	B	II	39	43	82
Challenger 300	C	II	21	21	42
Citation CJ3	B	II	19	18	37
Citation 550	B	II	17	18	37
King Air 350	B	II	16	18	34
Gulfstream IV	D	II	17	16	33
Citation Excel	B	II	14	14	28
Phenom 300	B	II	15	13	28

Source: FAA TFMSC

Table 4.6 Top ARC B-II Aircraft with Filed Flight Plans at MYL in 2019					
Aircraft Type	**AAC**	**ADG**	**Departures**	**Arrivals**	**Total Ops**
King Air 200	B	II	134	140	274
Citation 560	B	II	39	43	82
Citation CJ3	B	II	19	18	37
Citation 550	B	II	17	18	35
King Air 350	B	II	16	18	34
Citation Excel	B	II	14	14	28
Phenom 300	B	II	15	13	28
King Air 300	B	II	6	7	13
Hawker 4000	B	II	5	5	10
Dornier 328	B	II	5	5	10

Source: FAA TFMSC

TERMINAL AREA FORECAST

The Terminal Area Forecast (TAF) is the official FAA forecast of aviation activity for U.S. airports. It contains active airports in the National Plan of Integrated Airport Systems (NPIAS) including FAA-towered airports, federal contract-towered airports, non-federal towered airports, and non-towered airports. Forecasts are prepared for major users of the National Airspace System (NAS) including air carrier, air taxi/commuter, general aviation, and military. The forecasts are prepared to meet the budget and planning needs of the FAA and provide information for use by state and local authorities, the aviation industry, and the public. The current TAF was published in January of 2020. For this study, historic TAF data will be reviewed for 2010-2019 and projected TAF data will be reviewed for 2020-2040.

Table 4.7 shows the TAF Operations and Based Aircraft data for McCall Municipal Airport from 2010 to 2040. Estimates are noted with an asterisk. Historic operations between 2010 and 2019 show an annual growth rate increase of 0.28%, while the based aircraft totals show an annual growth rate decrease of 0.24%. Projected total operations between 2020 and 2040 is an increase of 2.25%, while the based aircraft growth rate is an increase of 3.19%. Itinerant operations make up 74% of the operations, while local operations account for 26%. A detailed breakdown of itinerant and local operations is shown in the table and figures below.

Table 4.7 TAF Historic and Projected Operations and Based Aircraft for MYL

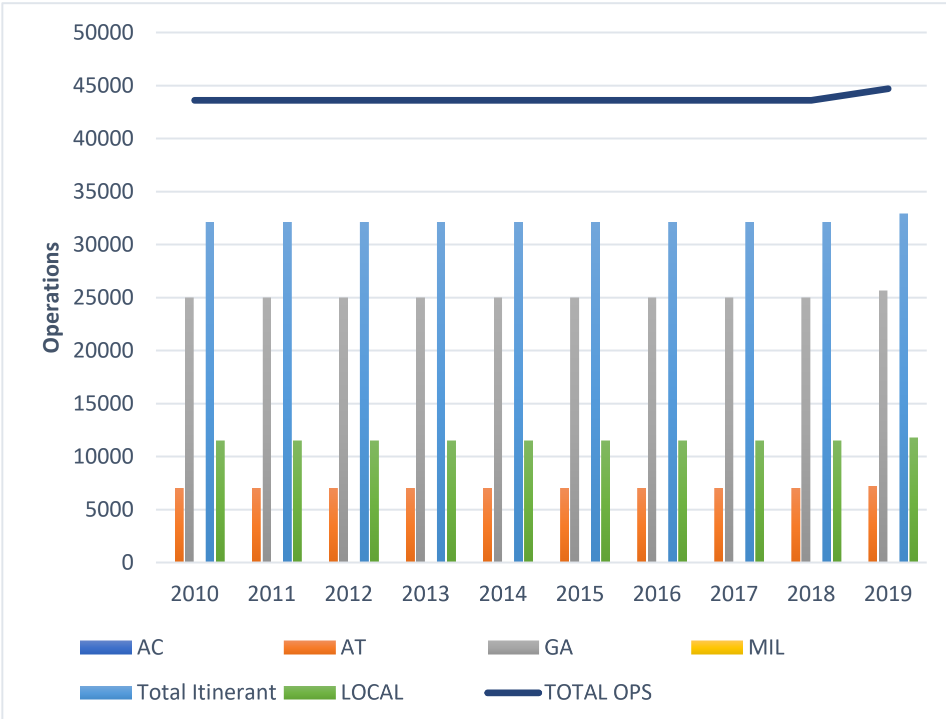
Year	Itinerant Air Taxi	Itinerant GA	Itinerant Military	Total Itinerant	Local Civil	Local Military	Total Local	Total Operations	Based Aircraft
2010	7,000	25,000	100	32,100	11,500	0	11,500	43,600	94
2011	7,000	25,000	100	32,100	11,500	0	11,500	43,600	94
2012	7,000	25,000	100	32,100	11,500	0	11,500	43,600	88
2013	7,000	25,000	100	32,100	11,500	0	11,500	43,600	85
2014	7,000	25,000	100	32,100	11,500	0	11,500	43,600	98
2015	7,000	25,000	100	32,100	11,500	0	11,500	43,600	100
2016	7,000	25,000	100	32,100	11,500	0	11,500	43,600	97
2017	7,000	25,000	100	32,100	11,500	0	11,500	43,600	89
2018	7,000	25,000	100	32,100	11,500	0	11,500	43,600	89
2019*	7,180	25,643	100	32,923	11,795	0	11,795	44,718	92
2020*	7,360	26,286	100	33,746	12,090	0	12,090	45,836	96
2021*	7,540	26,929	100	34,569	12,385	0	12,385	46,954	99
2022*	7,720	27,572	100	35,392	12,680	0	12,680	48,072	103
2023*	7,900	28,215	100	36,215	12,975	0	12,975	49,190	106

2024*	8,080	28,858	100	37,038	13,270	0	13,270	50,308	109
2025*	8,258	29,501	100	37,859	13,567	0	13,567	51,426	113
2026*	8,441	30,160	100	38,701	13,872	0	13,872	52,573	116
2027*	8,629	30,832	100	39,561	14,182	0	14,182	53,743	120
2028*	8,820	31,519	100	40,439	14,500	0	14,500	54,939	124
2029*	9,016	32,220	100	41,336	14,824	0	14,824	56,160	129
2030*	9,215	32,937	100	42,252	15,157	0	15,157	57,409	133
2031*	9,419	33,671	100	43,190	15,497	0	15,497	58,687	137
2032*	9,626	34,421	100	44,147	15,844	0	15,844	59,991	141
2033*	9,839	35,188	100	45,127	16,200	0	16,200	61,327	145
2034*	10,057	35,971	100	46,128	16,563	0	16,563	62,691	150
2035*	10,280	36,772	100	47,152	16,934	0	16,934	64,086	155
2036*	10,507	37,592	100	48,199	17,313	0	17,313	65,512	160
2037*	10,740	38,429	100	49,269	17,702	0	17,702	66,971	165
2038*	10,977	39,283	100	50,360	18,098	0	18,098	68,458	170
2039*	11,220	40,159	100	51,479	18,503	0	18,503	69,982	175
2040*	11,467	41,053	100	52,620	18,919	0	18,919	71,539	180
2010-2019 CAGR	0.28%	0.28%	0%	0.28%	0.28%	0%	0.28%	0.28%	-0.24%
2020-2040 CAGR	2.24%	2.25%	0%	2.25%	2.26%	0%	2.26%	2.25%	3.19%

Source: FAA TAF for MYL

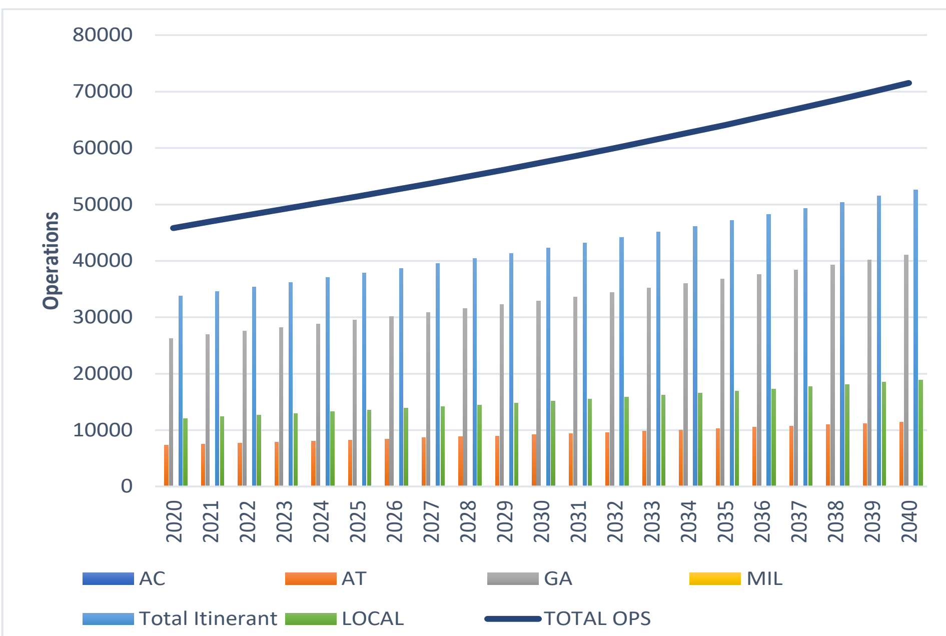
Figures 4.8 through *4.11* below show a graphical representation of *Table 4.7* above.

Figure 4.8 MYL Historic Operations 2010-2019 (TAF)



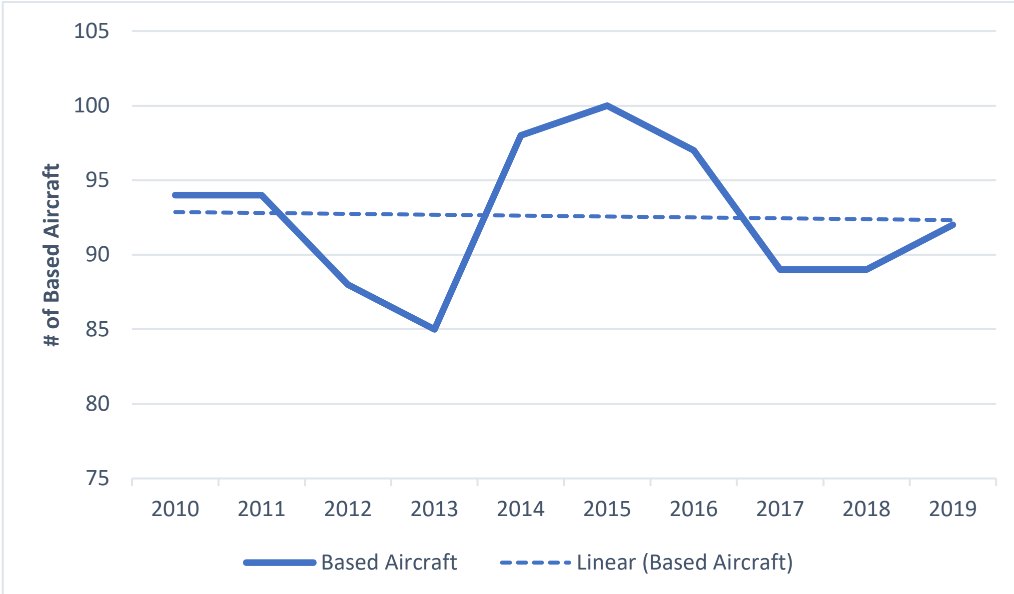
Source: FAA TAF for MYL

Figure 4.9 MYL Projected Operations 2020-2040 (TAF)



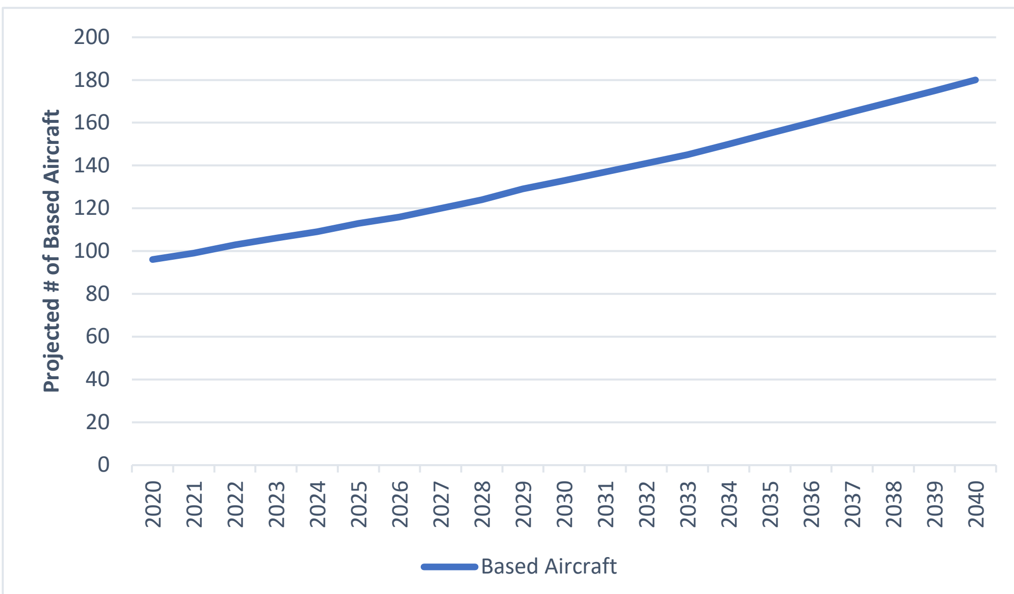
Source: FAA TAF for MYL

Figure 4.10 MYL Historic Based Aircraft 2010-2019



Source: FAA TAF for MYL

Figure 4.11 MYL Projected Based Aircraft 2020-2040 (TAF)



Source: FAA TAF for MYL

TAF COMPARISONS WITH REGIONAL AND PEER AIRPORTS

In order to see how well McCall Municipal Airport performed, historic operations and based aircraft totals from 2010-2019 were compared with regional and national aviation activities, as well as peer airports – other recreational destination airports in Idaho. Regional activities are those in the FAA Northwest Mountain Region, which includes Colorado, Idaho, Montana, Oregon, Utah, Washington, and Wyoming.

Table 4.8 Historic TAF Comparisons (Regional and National)				
CAGR 2010-2019	Itinerant Air Taxi	Itinerant GA	Local Civil	Based Aircraft
McCall	**0.3%**	**0.3%**	**0.3%**	**-0.2%**
Idaho	-2.2%	-1.1%	0.3%	1.7%
NWM Region	-3.3%	-0.6%	-0.6%	0.4%
United States	-2.5%	-0.7%	0.0%	0.1%
Average	-1.9%	-0.5%	0.0%	0.5%
Median	-2.4%	-0.7%	0.2%	0.3%
High	0.3%	0.3%	0.3%	1.7%
Low	-3.3%	-1.1%	-0.6%	-0.2%

Source: FAA TAF

Table 4.9 Historic TAF Comparisons (Peer Airports)				
CAGR 2010-2019	Itinerant Air Taxi	Itinerant GA	Local Civil	Based Aircraft
McCall	**0.3%**	**0.3%**	**0.3%**	**-0.2%**
Challis	0.0%	0.0%	0.1%	-7.8%
Coeur d'Alene	0.0%	0.2%	0.5%	2.5%
Driggs	0.0%	0.2%	1.2%	-0.8%
Salmon	0.0%	0.0%	0.0%	-4.7%
Sandpoint	0.3%	0.3%	0.1%	-3.1%
Average	0.1%	0.2%	0.4%	-2.3%
Median	0.0%	0.2%	0.2%	-1.9%
High	0.3%	0.3%	1.2%	2.5%
Low	0.0%	0.0%	0.0%	-7.8%

Source: FAA TAF

These comparisons reveal McCall Municipal Airport outperformed Idaho, the Northwest Mountain Region, and the U.S. during the period between 2010 – 2019 in operations, but underperformed in based aircraft totals with an overall drop in based aircraft. With respect to peer airports, McCall performed better than average in itinerant operations and based aircraft, but slightly less than average in local operations. There does not appear to be consistency when comparing MYL with regional and national airport trends. There is some consistency when comparing MYL to peer airport operations, but not based aircraft. As such, historic growth rate for MYL should be considered as a viable forecast methodology, COVID-19 impacts notwithstanding.

Tables 4.10 and *4.11* below compare the TAF projections for the region, nation, and peer airports. McCall Municipal Airport projections are above average in all categories.

Table 4.10 Projected TAF Comparisons (Regional and National)				
CAGR 2010-2019	**Itinerant Air Taxi**	**Itinerant GA**	**Local Civil**	**Based Aircraft**
McCall	**2.2%**	**2.3%**	**2.3%**	**3.2%**
Idaho	0.3%	1.5%	1.7%	1.0%
NWM Region	-0.3%	0.9%	0.8%	0.9%
United States	-0.5%	0.4%	0.4%	0.8%
Average	0.4%	1.3%	1.3%	1.5%
Median	0.0%	1.2%	1.3%	1.3%
High	2.2%	2.3%	2.3%	3.2%
Low	-0.5%	0.4%	0.4%	0.8%

Source: FAA TAF

Table 4.11 Projected TAF Comparisons (Peer Airports)				
CAGR 2010-2019	Itinerant Air Taxi	Itinerant GA	Local Civil	Based Aircraft
McCall	**2.2%**	**2.3%**	**2.3%**	**3.2%**
Challis	0.0%	0.0%	1.2%	0.0%
Coeur d'Alene	0.0%	1.6%	4.6%	2.1%
Driggs	2.1%	1.5%	1.5%	2.8%
Salmon	0.0%	2.3%	1.2%	2.1%
Sandpoint	2.8%	3.1%	1.1%	2.2%
Average	0.8%	1.8%	2.0%	2.1%
Median	0.0%	1.9%	1.4%	2.1%
High	2.8%	3.1%	4.6%	3.2%
Low	0.0%	0.0%	1.1%	0.0%

Source: FAA TAF

POPULATION GROWTH RATE COMPARISONS WITH THE TAF

At the local level, aviation activity can be analyzed through a socioeconomic evaluation of the city and county that are in the airport's service area to see if there is a correlation. Chapter 2 thoroughly discusses the socioeconomics of the City of McCall and Valley County, and certain indicators are more important than others at determining aviation trends. We will compare population trends from Chapter 2 with the TAF historic data and projections to see if a correlation exists. U.S. Census population estimates for 2010-2019 show an annual growth rate of 2.2% for the City of McCall, and an annual growth rate of 1.7% for Valley County. *Table 4.12* below compares those population growth rates with the TAF historic growth rates for 2010-2019 for operations and based aircraft at MYL. While operations increased, the rate was considerably lower than the population growth rates for McCall and Valley County. TAF projections for operations are close to the historic population growth rate for the City of McCall, although the historic operations do not support such an optimistic projected growth rate. Based aircraft decreased as population increased during the same time period. For operations and based aircraft, population growth rates appear to be a poor candidate for use as a forecast methodology.

Table 4.12 2010-2019 TAF Historic Growth Rate Comparison and Population							
	McCall Population	Valley County Population	Itinerant Air Taxi	Itinerant GA	Local Civil	Total Ops	Based Aircraft
2010-2019	2.20%	1.70%	0.28%	0.28%	0.28%	0.28%	-0.24%

Sources: U.S. Census and FAA TAF for MYL

VALLEY COUNTY ECONOMIC PERFORMANCE COMPARISON WITH THE TAF

Woods & Poole Economics historical information for Valley County was reviewed for economic performance related to employment, earnings, gross regional product, and personal income for the period between 2010 to 2018. There was no estimate for 2019. The growth rates associated with these economic performance metrics were compared to the historic TAF information for MYL during the same period to see if there was a correlation. The results are shown in *Table 4.13* below. All economic performance measures showed an increase, while aircraft operations remained flat, and based aircraft decreased. As such, it appears positive economic growth did not translate into increased operational activity at the airport. Socioeconomic growth rates will not be carried forward for use as a forecast methodology for MYL.

Table 4.13 2010-2018 TAF Historic Growth Rate Comparison with Economic Performance

	Employment	Earnings	Gross Regional Product	Personal Income	Operations	Based Aircraft
2010-2018	1.84%	2.68%	2.71%	3.70%	0.00%	-0.68%

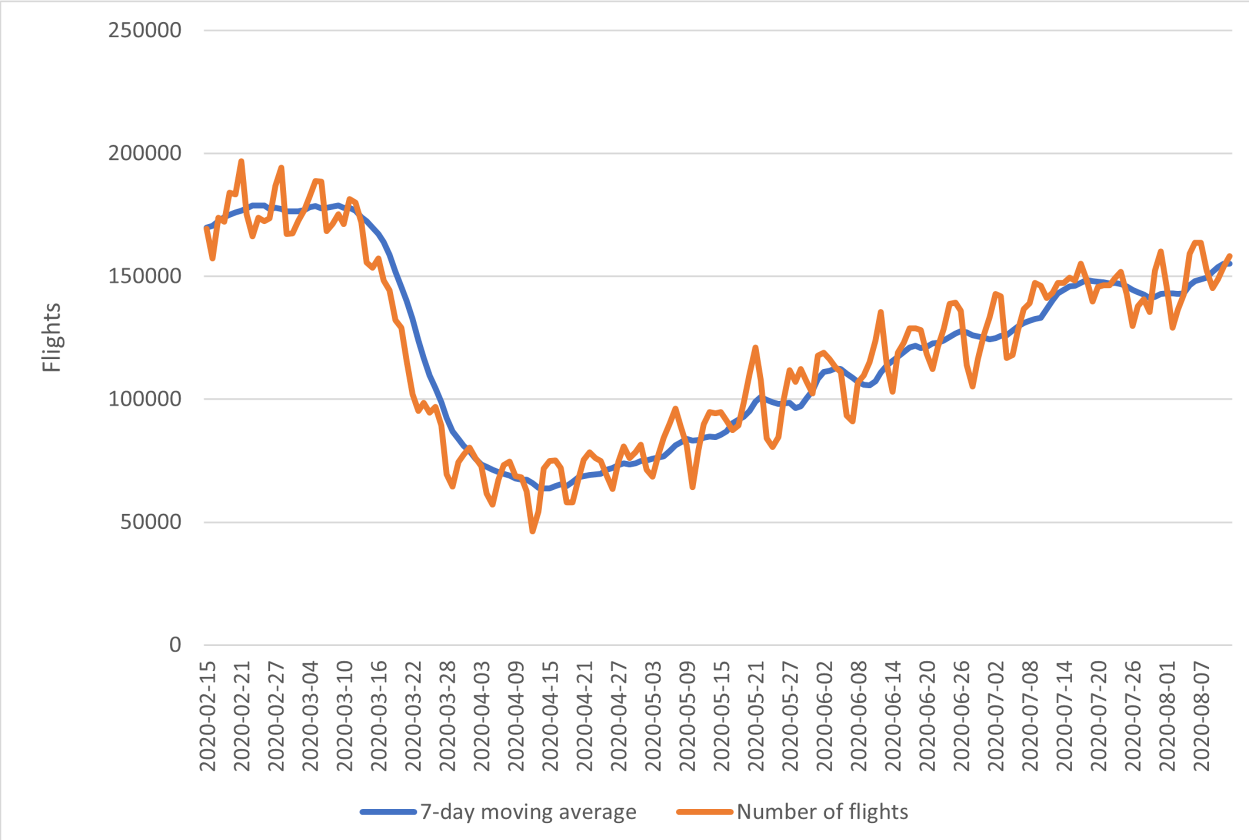
Source: Woods & Poole Economics Inc. and FAA TAF for MYL

2020 YEAR TO DATE COMPARISON, AND COVID-19 IMPACTS TO OPERATIONS

According to the World Economic Outlook Report for June 2020, produced by the International Monetary Fund (IMF), the pandemic had a more negative impact on the first half of 2020 than originally anticipated, with a projected recovery more gradual than originally forecast. In the report, the IMF projects a decrease of 4.9% in world economic output in 2020, with an increase of 5.4% in 2021. For the United States, the IMF projects a decrease of 8.0% in economic output in 2020, followed by an increase of 4.8% in 2021.

As mentioned previously, the COVID-19 pandemic was occurring at the time of this Airport Master Plan Study, hitting the aviation industry hard. *Figure 4.12* below shows 180 days of flights tracked by the publicly available Flightradar24 flight tracker. The number of flights dropped approximately 50% between March 15 and April 15, 2020 due to stay at home orders, then steadily increased going into August 2020. This does not necessarily reflect the operational impact at McCall Municipal Airport.

Figure 4.12 Total Flights Tracked by Flightradar24



Source: Flightradar24

PREVIOUS SHOCKS TO THE AVIATION SYSTEM

As the COVID-19 pandemic unfolds, there is great uncertainty over the short- and long-term impacts to the aviation industry. *Table 4.12* above shows a clear shock to aviation operations. We will review previous shocks to see how general aviation reacted and how they affected operations at McCall Municipal Airport.

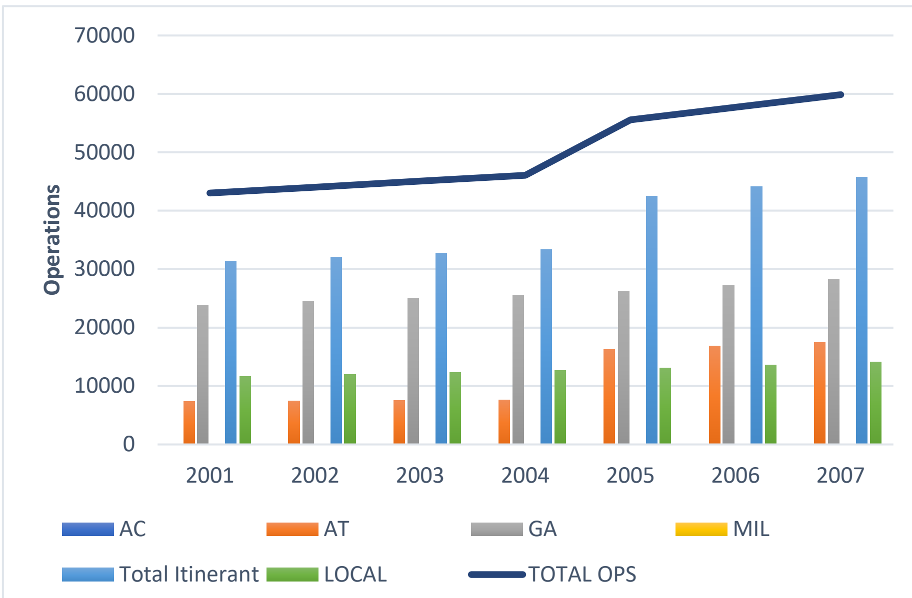
September 11, 2001 resulted in a temporary shutdown of aviation in the United States in response to terrorist attacks using commercial airliners as guided weapons. *Table 4.14* shows the growth rates of general aviation hours flown during the immediate aftermath of the attacks (2001-2003) and during the recovery period (2003-2007), as reported by the FY2008-2025 FAA Aerospace Forecast. The result shows general aviation piston hours decreased during the aftermath and continued to decrease at a greater rate during the recovery period. Turbine and rotorcraft hours flown increased during the aftermath and increased at a greater rate during the recovery period.

Table 4.14 General Aviation Hours Flown Growth Rates – 9/11						
	Fixed Wing Piston Total	Fixed Wing Turbine Total	Rotorcraft Total	TotalGeneral Aviation Hours	Total Piston Hours	Total Turbine Hours
2001-2003	-0.5%	2.2%	4.6%	0.6%	-0.6%	3.4%
2003-2007	-4.2%	9.3%	14.2%	0.5%	-3.2%	9.9%

Source: FY2008-2025 FAA Aerospace Forecast

The TAF historic operations for McCall Municipal Airport for 2001-2007 show an increase in operations, as shown in *Figure 4.13*. This shows the airport, along with airport businesses and users, did not experience the same level of impact as the aviation industry on a national level for 9/11.

Figure 4.13 MYL Historic Operations from 2001-2007



Source: FAA TAF for MYL

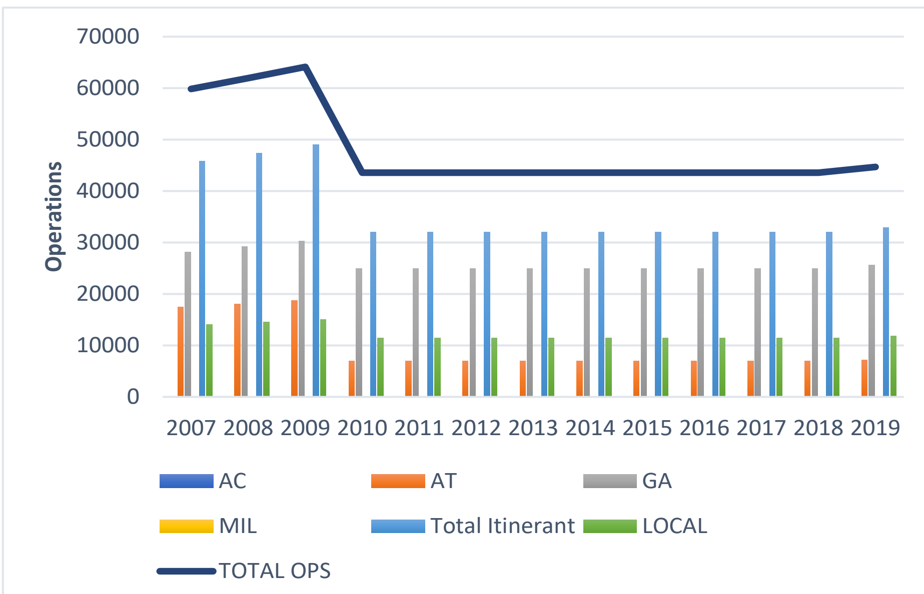
The Great Recession occurred in 2007 which resulted in another shock to the aviation system. *Table 4.15* shows the growth rates of general aviation hours flown during the immediate aftermath of the economic downturn (2007-2010) and during the recovery period (2010-2019), as reported by the FY2015-2035 and FY2020-2040 FAA Aerospace Forecasts. The result shows fixed wing piston and turbine hours flown decreased during the aftermath, while rotorcraft hours flown increased. Fixed wing piston and rotorcraft hours flown decreased during the recovery, while turbine hours flown increased during the recovery period.

Table 4.15 General Aviation Hours Flown Growth Rates – The Great Recession						
	Fixed Wing Piston Total	Fixed Wing Turbine Total	Rotorcraft Total	TotalGeneral Aviation Hours	Total Piston Hours	Total Turbine Hours
2007-2010	-4.9%	-4.8%	1.6%	-3.8%	-4.5%	-3.1%
2010-2019	-1.7%	2.3%	-0.7%	-0.5%	-1.6%	1.3%

Sources: FY2015-2035 and FY2020-2040 FAA Aerospace Forecasts

The TAF historic operations for McCall Municipal Airport for 2007-2019 show a clear shock to airport operations between 2009 and 2010 as a result of the Great Recession, as shown in *Figure 4.14*. Operations increased until 2009, then dropped 32% in 2010 before remaining constant until 2019. It is uncertain if operations at McCall Municipal Airport will experience growth, as it did following 9/11, or experience a sharp decrease as it did following the Great Recession. National trends have shown to not be a consistent indicator of operations at MYL.

Figure 4.14 MYL Historic Operations from 2007-2019



Source: FAA TAF for MYL

TFMSC FOR MYL DURING JANUARY - JUNE

Flight plan data for MYL was reviewed for January through June 2020 and compared to the same period for 2019. The results are shown in *Table 4.16*. Despite the pandemic and stay at home orders, flight plans at MYL are higher in 2020. Flight plans for smaller aircraft decreased slightly, while flight plans for larger and faster planes increased, although there is still a preponderance of AAC-A and B, and ADG-I and II aircraft using the airport in 2020.

Table 4.16 TFMSC Comparison for January-June 2019 and 2020			
	2019	**2020**	**% Difference**
AAC-A	234	229	-2%
AAC-B	309	332	7%
AAC-C	31	53	71%
AAC-D	4	6	50%
ADG-I	244	238	-2%
ADG-II	334	380	14%
ADG-III	0	2	N/A
A-I	161	149	-7%
A-II	73	80	10%
A Total	234	229	-2%
B-I	80	73	-9%
B-II	229	259	13%
B Total	309	332	7%
C-I	3	16	433%
C-II	28	35	25%
C-III	0	2	N/A
C Total	31	53	71%
D-II	4	6	50%
Total Operations	578	620	7%

Source: FAA TFMSC

FBO FUEL VOLUME

McCall Aviation provided fuel volume sold for January – June of 2019 and 2020, as shown in *Table 4.17*. Aviation Gasoline, or 100LL, was down approximately 30%, while Jet A was down approximately 3% in 2020 when compared to the same period in 2019. Total fuel volume sold was down approximately 12%. This is consistent with discussions with other airport businesses using MYL.

Table 4.17 FBO Fuel Volume Sold between January and June

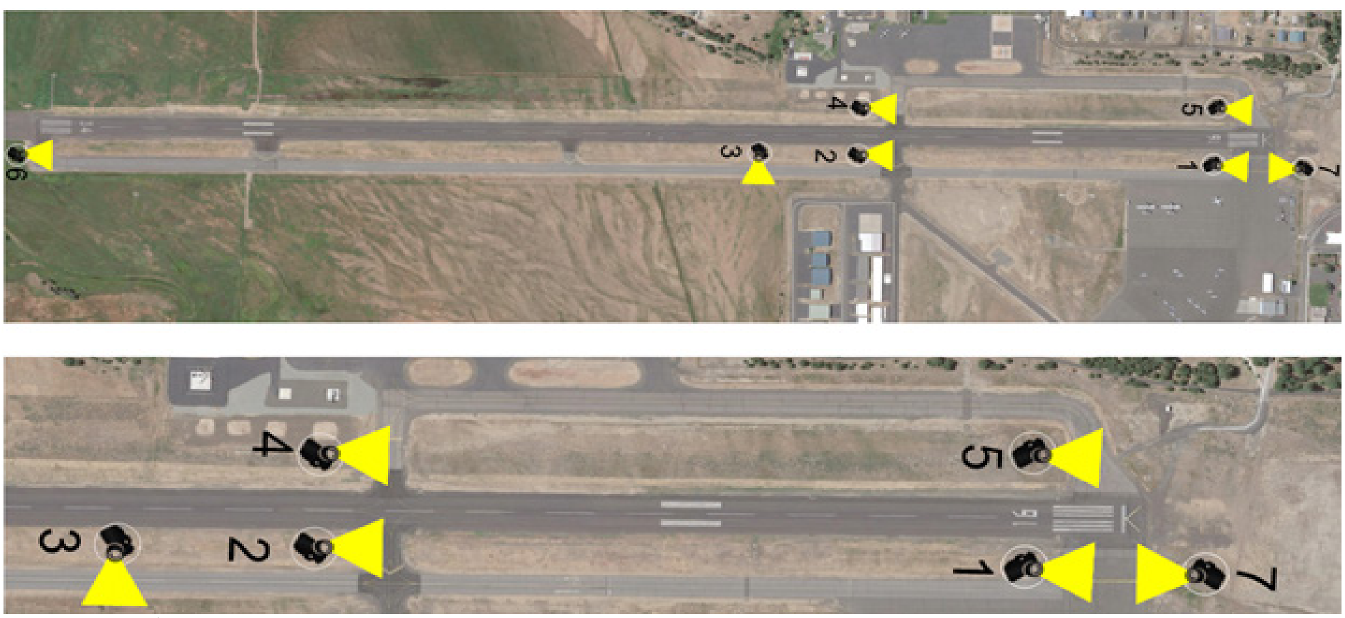
	2019	2020	% Difference
100LL (gallons)	25,203	17,572	-30%
Jet A (gallons)	51,385	49,789	-3%
Total (gallons)	76,588	67,361	-12%

Source: McCall Aviation

MOTION ACTIVATED CAMERA PHOTO DATA

Seven motion activated cameras were deployed along key runway intersections to capture actual aircraft activity at McCall Municipal Airport. *Figure 4.15* illustrates the camera numbers and locations. Data was collected for 75 days between May 21, 2020 – August 3, 2020. During the sample period, 2,529 General Aviation aircraft operations were recorded, while 170 operations were recorded from U.S. Forest Service aircraft. The cameras were positioned to capture aircraft taxiing on the ground, so helicopter operations may not have been fully captured. A breakdown of general aviation operations by aircraft type is shown in *Table 4.18*. It should be noted that during the photo data collection period, in addition to the COVID-19 pandemic, there was a major taxiway relocation project underway. Aircraft captured by cameras were dominated by light general aviation aircraft, ARC A-I.

Figure 4.15 Motion Activated Camera Locations



Source: T-O Engineers

Table 4.18 General Aviation Operations from Game Cameras		
Sample Period: 5/21/2020-8/3/2020 (75 days), 2,529 total operations		
	Operations	**% of Total**
AAC-A	2,262	89.4%
AAC-B	194	7.7%
AAC-C	36	1.4%
AAC-D	21	0.8%
Helicopter	16	0.6%
ADG-I	2,239	88.5%
ADG-II	265	10.5%
ADG-III	9	0.4%
A-I (SE Piston)	2,136	84.5%
A-II (SE Turbine)	126	5.0%
B-I (ME Piston/Jet)	87	3.4%
B-II (ME Turbine/Jet)	104	4.1%
B-III (Jet)	3	0.1%
C-I (Jet)	15	0.6%
C-II (Jet)	21	0.8%
D-II (Jet)	15	0.6%
D-III (Jet)	6	0.2%
Helicopter	16	0.6%

Source: T-O Engineers

The figures below show an example of the aircraft types captured by the motion activated cameras at McCall Municipal Airport by ARC.

Figure 4.16 Cessna 172, A-I

Source: T-O Engineers

Figure 4.17 Pilatus PC-12, A-II

Source: T-O Engineers

Figure 4.18 Cessna Citation Mustang, B-I

Source: T-O Engineers

Figure 4.19 Beech King Air 200, B-II

Source: T-O Engineers

Figure 4.20 Bombardier Global 5000, B-III

Source: T-O Engineers

Figure 4.21 Bombardier Lear 45, C-I

Source: T-O Engineers

Figure 4.22 Bombardier Challenger 300, C-II

Source: T-O Engineers

Figure 4.23 Gulfstream 450, D-II

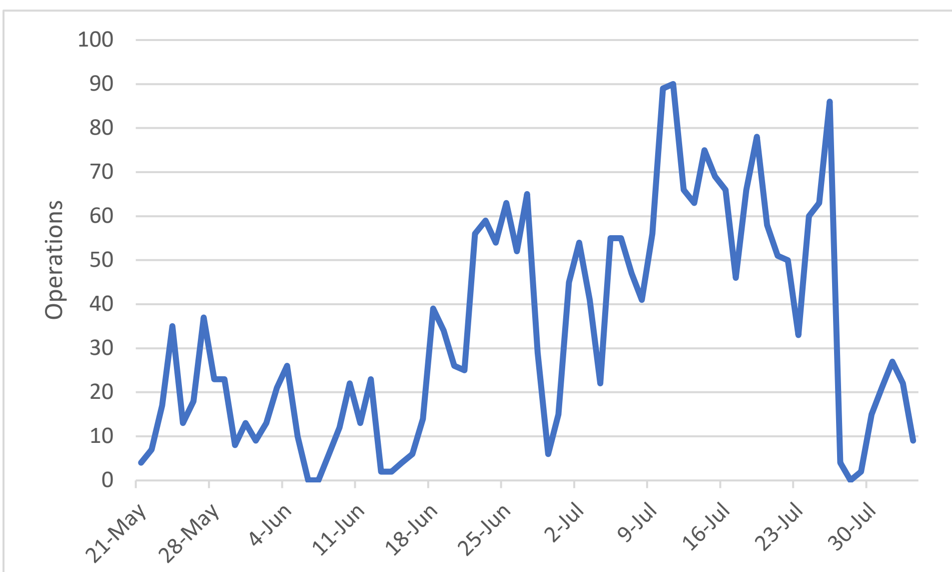
Source: T-O Engineers

Figure 4.24 Gulfstream 500, D-III

Source: T-O Engineers

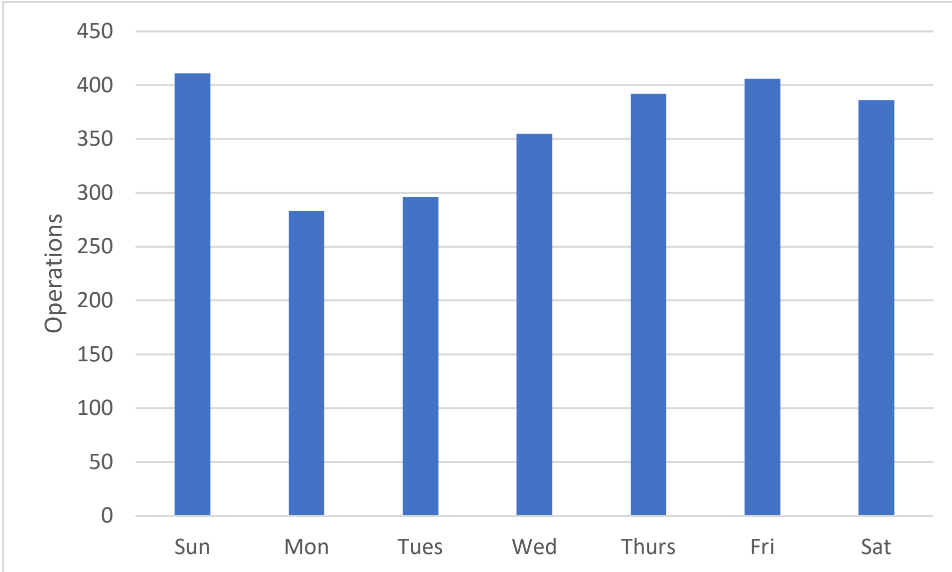
Figures 4.25 – 4.27 below show the general aviation activity during the sample period by day, day of week, and time of day. The month of July showed a healthy level of aircraft operations. Sunday was shown to be the busiest day of the week, while Monday was the slowest day of the week. Aircraft activity began during the 5:00 AM hour, peaked during the 10:00 AM hour, then tapered off until the 10:00 PM hour.

Figure 4.25 General Aviation Daily Operations



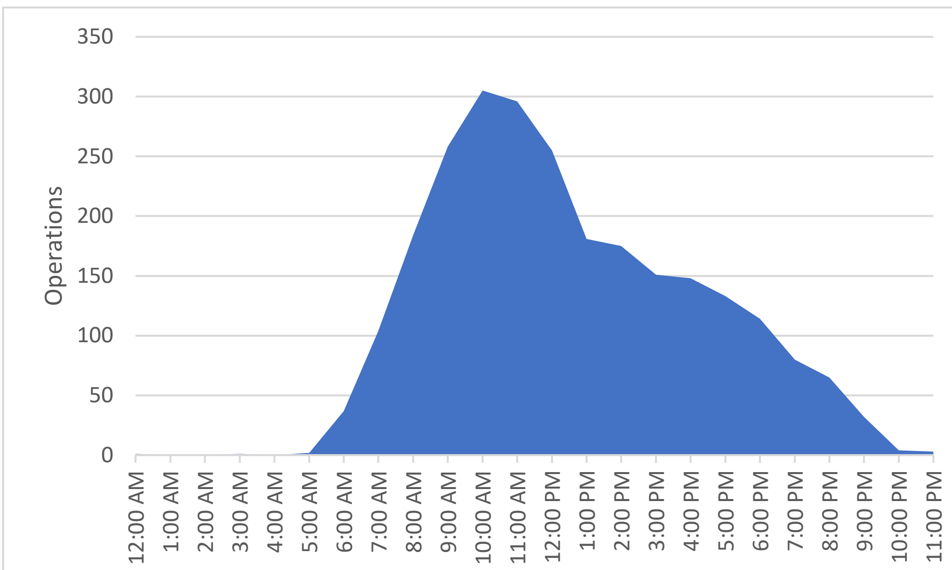
Source: T-O Engineers

Figure 4.26 General Aviation Operations by Day of Week



Source: T-O Engineers

Figure 4.27 General Aviation Operations by Time of Day



Source: T-O Engineers

FIREFIGHTING AIRCRAFT OPERATIONS

During the sample period from May 21, 2020 – August 3, 2020, the total number of operations by firefighting aircraft was 170. There were 10 operations from the Cessna 206 (ARC A-I), 102 operations from the De Havilland Twin Otter (ARC A-II), 56 operations from the Shorts Sherpa (ARC B-II), and 2 operations from the Air Tractor AT-802 (ARC B-II).

Figure 4.28 Cessna 206, A-I

Source: T-O Engineers

Figure 4.29 De Havilland Twin Otter, A-II

Source: T-O Engineers

Figure 4.30 Shorts Sherpa, B-II

Source: T-O Engineers

Figure 4.31 Air Tractor 802, B-II

Source: T-O Engineers

4.6 BASELINE DATA

2020 will be used as the baseline year for future planning at McCall Municipal Airport. In order to arrive at an operational baseline for 2020, previous studies and the airport master record will be reviewed to come up with an annual operations figure for 2019. Then, current data from fuel sales and camera photos will be used to adjust the 2019 figure to establish the 2020 baseline for operations and fleet mix. Based aircraft for 2020 will be derived from camera photos, existing hangar tenants, FAA registrations, flight track data, and publicly available information from company websites.

PREVIOUS BASELINE OPERATION COMPARISONS

Table 4.19 below shows baseline operation figures used previously.

Table 4.19 Previous Baseline Operation Comparison		
Baseline Year	**Source**	**Reported Operations**
2017	2020 IASP Update	32,000
2018	Taxiway Relocation Pre-Design Study	20,871
2019	TAF	44,718
2019	5010 Airport Master Record	43,600
	Average	35,297
	Median	**37,800**
	High	44,718
	Low	20,871

Discussion with the Airport Sponsor determined the median value of 37,800 from the previous baseline operations figures would be the most appropriate figure to use for calendar year 2019, given the economic conditions that existed in 2019 prior to the pandemic. As reported in the TAF, historically, itinerant operations made up 74% of the total operations, with the remaining 26% accounting for local operations. Thus, in 2019 there were a total of 37,800 operations – 27,972 being itinerant and 9,828 being local. Military operations have historically been counted as 100 annual itinerant operations. The remaining itinerant operations were divided into air taxi and general aviation, with approximately 28% being air taxi and 72% being general aviation. Based on these assumptions, the 2019 annual operations are summarized in *Table 4.20* below.

Table 4.20 2019 Operational Activity						
	Itinerant				**Local**	
	Air Taxi	**GA**	**Military**	**Total Itinerant**	**Total GA Local**	**Total Operations**
2019	7,804	20,068	100	27,972	9,828	37,800

2020 OPERATIONAL ADJUSTMENT AND BASELINE

Fuel sales are a truth-teller when it comes to operational activity at the airport. The 30% decrease in avgas sales, and 3% decrease in jet fuel sales occurred during the worst part of the downturn in aviation, and before the historically busiest time of the year for MYL – July and August. Photo data during July showed there is a desire and demand to fly to McCall and into the backcountry. The short- and long-term effects on aviation and the economy are uncertain, and the operational and economic downturn during the first half of 2020 cannot be ignored. As such, it is reasonable to assume the total operations for 2020 will be less than 2019, but not as much as 30% less. For the 2020 baseline, we will assume 15% fewer total operations to account for continued uncertainty, while recognizing there is still a demand to fly out of the airport. *Table 4.21* below shows the 2020 baseline for operations at McCall Municipal Airport.

Table 4.21 2020 Operational Baseline for McCall Municipal Airport

	Itinerant				Local	
	Air Taxi	GA	Military	Total Itinerant	Total GA Local	Total Operations
2020	6,633	17,058	85	23,776	8,354	32,130

BASED AIRCRAFT

Data collected from cameras, hangar agreements with the City, flight trackers, and the FAA registration database revealed there are a total of 100 aircraft based at McCall Municipal Airport. A breakdown of the based fleet at the airport is shown in *Table 4.22* below.

Table 4.22 2020 Based Aircraft Baseline for McCall Municipal Airport

SE Piston	ME Piston	SE Turboprop	ME Turboprop	Jet	Helicopter	Glider	Total
87	2	3	5	1	1	1	100

4.7 REVIEW OF AVIATION FORECASTS

Previous planning study forecast methodologies used for MYL were reviewed to see if any would be appropriate for use during this planning effort.

2007 AIRPORT MASTER PLAN

The preferred operations forecast methodology was based on peer analysis and a regression hybrid that used population growth rate for Valley County initially, followed by peer airport growth rate. The preferred based aircraft forecast methodology was based on population growth rates. The forecast methodologies were pre-Great Recession and quite optimistic, particularly for based aircraft.

Table 4.23 2007 Airport Master Plan				
Planning Period	**Itinerant**		**Local**	**Based Aircraft**
	Air Taxi	**GA**	**Civil**	**Total Based**
2006-2025	2.97%	2.97%	2.97%	3.65%

2008 IDAHO AIRPORT SYSTEM PLAN (IASP)

The preferred operations forecast methodology was based on Operations Per Based Aircraft (OPBA), while the preferred based aircraft forecast methodology was based on tiered population growth rates. The forecast methodologies were also pre-Great Recession and not quite as optimistic as the 2007 Airport Master Plan Forecast.

Table 4.24 2008 IASP				
Planning Period	**Itinerant**		**Local**	**Based Aircraft**
	Air Taxi	**GA**	**Civil**	**Total Based**
2007-2027	1.15%	1.15%	1.15%	1.15%

2020 IASP

The preferred operations forecast methodology was based on Airport Reference Code (ARC), while the preferred based aircraft methodology was based on aircraft type and FAA fleet forecast. The result was an operations growth rate of 0.8% and a based aircraft growth rate of 1.0% from 2017 – 2037.

Table 4.25 2020 IASP				
Planning Period	**Itinerant**		**Local**	**Based Aircraft**
	Air Taxi	**GA**	**Civil**	**Total Based**
2017-2037	0.80%	0.80%	0.80%	1.00%

2019 TAXIWAY RELOCATION PROJECT PRE-DESIGN STUDY

The preferred operations and based aircraft forecast methodologies were based on consultation with the Airport Sponsor and population growth rates, resulting in a growth rate of 1.10% from 2018 – 2038.

Table 4.26 2019 Taxiway Relocation Pre-Design Study				
Planning Period	Itinerant		Local	Based Aircraft
	Air Taxi	GA	Civil	Total Based
2018-2038	1.10%	1.10%	1.10%	1.10%

JANUARY 2020 TERMINAL AREA FORECAST FOR MYL

The FAA TAF projects a growth rate similar to the one from the 2007 Airport Master Plan, which was shown earlier to be overly optimistic when compared to the historic growth rate. Like the 2007 Airport Master Plan, the TAF growth rate was calculated during a healthy economy just ahead of an economic downturn.

Table 4.27 Terminal Area Forecast				
Planning Period	Itinerant		Local	Based Aircraft
	Air Taxi	GA	Civil	Total Based
2010-2019	0.28%	0.28%	0.28%	-0.24%
2020-2040	2.24%	2.25%	2.26%	3.19%

CONCLUSION & SELECTION OF A FORECAST METHODOLOGY - OPERATIONS

There was an obvious downturn in the aviation industry due to the COVID-19 pandemic, as shown and described previously. Global aircraft operations rapidly decreased in April 2020, then steadily increased during the summer of 2020. Fuel volume sold at MYL during January through June of 2020 showed a decrease of approximately 30% in avgas and 3% in jet fuel, when compared to the same period in 2019, while flight plans filed increased slightly. During the past 20 years, there have been two shocks to the aviation system – September 11, 2001 and the Great Recession in 2007. In both cases, operations from general aviation pistons suffered during the shock event and the recovery period, while operations from turbine aircraft showed more resiliency. Historic operations at MYL from the FAA TAF showed an increase in activity following September 11, 2001, and a decrease following the Great Recession. Photo data showed a healthy level of activity from general aviation pistons, particularly during July 2020. This may be due to the location of McCall and the nature of the activity, where people are looking for ways to distance themselves by heading to a small town and the backcountry. Being a recreational destination places McCall and the airport in a better position for recovery. Indeed, as reported by Moody's Investor Service in its August 25, 2020 report, demand for leisure travel is expected to be stronger in the near term while business travel continues to lag. In the same report, Moody's predicts that substantial recovery for airline passenger demand to 2019 levels will not occur before 2023. Since McCall is a recreational destination not tied to airline service, recovery to 2019 levels is expected to occur sooner. For this forecast methodology, a recovery from the pandemic is expected to occur in 2022. Subsequently, a pre-COVID-19 growth rate of 0.28% will be applied over the rest of the planning horizon to 2040, as the economy moves past recovery and into a normal growth period. U.S. Forest Service operations are expected to continue and will remain flat for the purpose of this forecast. Military operation growth rates will also be reported as flat. Itinerant traffic is still expected to account for 74% of the total traffic at MYL, while 26% will be local. Of the itinerant traffic, 28% will continue to be from air taxi, while 72% will be general aviation.

Table 4.28 Recommended Operations Forecast for McCall Municipal Airport

Year	Itinerant Air Taxi	Itinerant GA	Itinerant Military	Total Itinerant	Local Civil	Local Military	Total Local	Total Operations	AAGR
2020	6,633	17,058	85	23,776	8,354	0	8,354	32,130	Baseline
2021	7,130	18,337	85	25,553	8,981	0	8,981	34,533	7.48%
2022	7,665	19,713	85	27,463	9,654	0	9,654	37,117	7.48%
2023	7,687	19,768	85	27,540	9,681	0	9,681	37,221	0.28%
2024	7,708	19,823	85	27,616	9,708	0	9,708	37,325	0.28%
2025	7,730	19,879	85	27,694	9,735	0	9,735	37,429	0.28%
2026	7,751	19,934	85	27,771	9,763	0	9,763	37,534	0.28%
2027	7,773	19,990	85	27,848	9,790	0	9,790	37,638	0.28%
2028	7,795	20,046	85	27,926	9,817	0	9,817	37,744	0.28%
2029	7,817	20,102	85	28,004	9,845	0	9,845	37,849	0.28%
2030	7,839	20,159	85	28,082	9,872	0	9,872	37,955	0.28%
2031	7,861	20,215	85	28,161	9,900	0	9,900	38,061	0.28%
2032	7,883	20,272	85	28,239	9,928	0	9,928	38,167	0.28%
2033	7,905	20,328	85	28,318	9,956	0	9,956	38,274	0.28%
2034	7,927	20,385	85	28,397	9,984	0	9,984	38,381	0.28%
2035	7,949	20,442	85	28,476	10,011	0	10,011	38,488	0.28%
2036	7,971	20,500	85	28,556	10,039	0	10,039	38,595	0.28%
2037	7,994	20,557	85	28,636	10,068	0	10,068	38,703	0.28%
2038	8,016	20,615	85	28,716	10,096	0	10,096	38,811	0.28%
2039	8,038	20,672	85	28,796	10,124	0	10,124	38,920	0.28%
2040	8,061	20,730	85	28,876	10,152	0	10,152	39,029	0.28%
CAGR	0.98%	0.98%	0.00%	0.98%	0.98%	0.00%	0.98%	0.98%	

Figure 4.32 Recommended Operations Forecast for McCall Municipal Airport

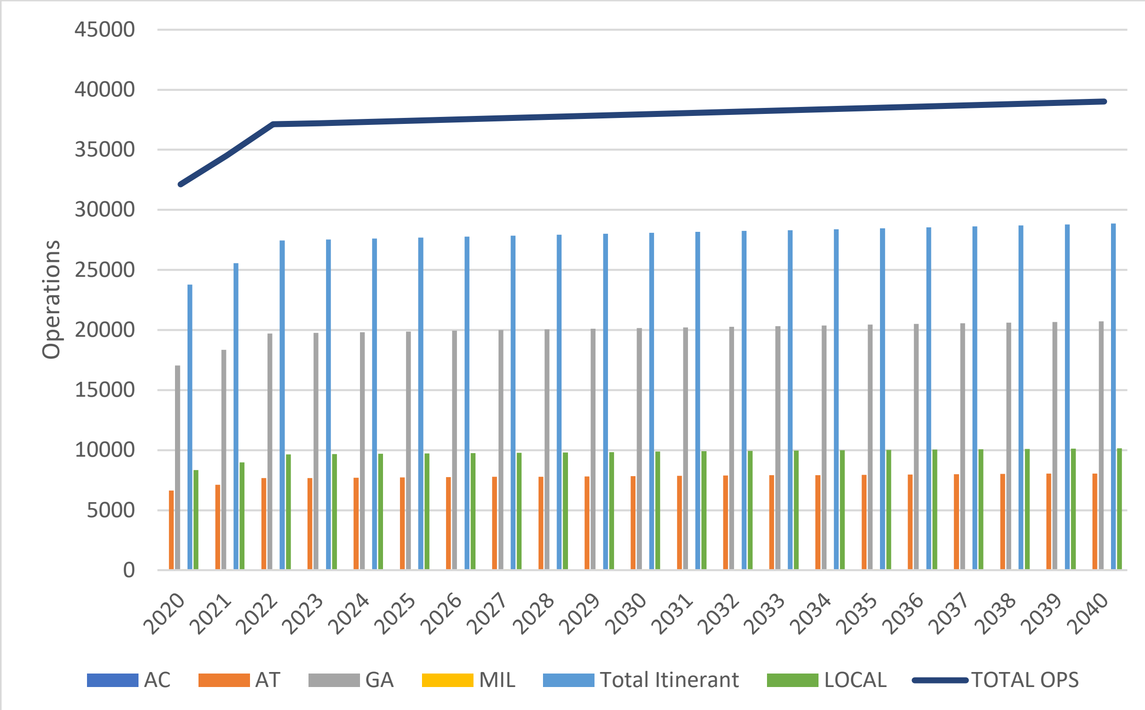
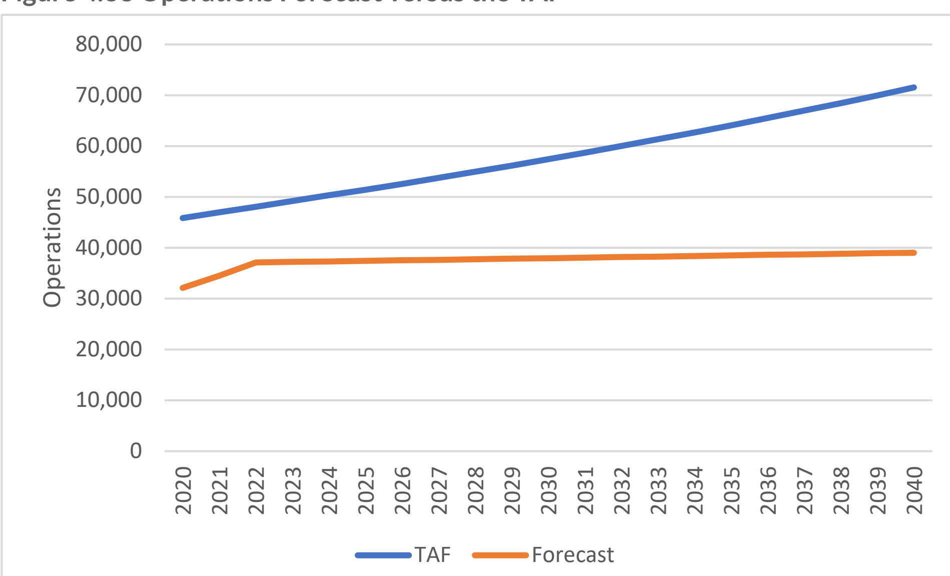


Table 4.29 2020 Recommended Operations Forecast Comparison to the TAF

Year	TAF	Forecast	% Difference
2020	45,836	32,130	-29.9%
2021	46,954	34,533	-26.5%
2022	48,072	37,117	-22.8%
2023	49,190	37,221	-24.3%
2024	50,308	37,325	-25.8%
2025	51,426	37,429	-27.2%
2026	52,573	37,534	-28.6%
2027	53,743	37,638	-30.0%
2028	54,939	37,744	-31.3%
2029	56,160	37,849	-32.6%
2030	57,409	37,955	-33.9%
2031	58,687	38,061	-35.1%
2032	59,991	38,167	-36.4%
2033	61,327	38,274	-37.6%
2034	62,691	38,381	-38.8%
2035	64,086	38,488	-39.9%
2036	65,512	38,595	-41.1%
2037	66,971	38,703	-42.2%
2038	68,458	38,811	-43.3%
2039	69,982	38,920	-44.4%
2040	71,539	39,029	-45.4%
CAGR	2.25%	0.98%	

Figure 4.33 Operations Forecast versus the TAF



CONCLUSION & SELECTION OF A FORECAST METHODOLOGY – BASED AIRCRAFT & FLEET MIX

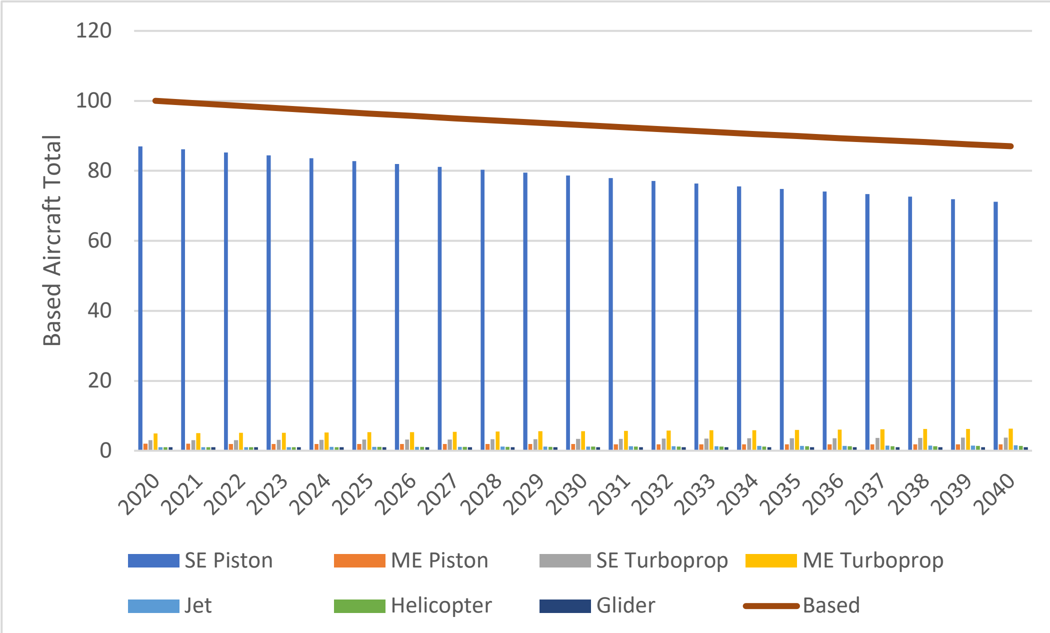
As described previously, there are 100 aircraft based at McCall Municipal Airport. This is more than what was previously reported on the Airport Master Record in July of 2019 (74), and more than what was estimated in the TAF for 2020 (96). This increase may be due to a more thorough research of based aircraft as part of this planning study, rather than an actual increase in based aircraft. Nonetheless, 100 aircraft is a large number relative to the size of McCall.

Following September 11, 2001, based aircraft at MYL remained steady at about 100. Following the Great Recession, based aircraft dropped from 134 to 85 between 2007-2013, or a rate of about 7.3%. The TAF for MYL predicted a positive growth rate of 3.19% between 2020-2040, which now appears to be overly optimistic, as there was a decrease of based aircraft at MYL between 2010-2019 by a rate of 0.24%. For 2020-2040, the FAA Aerospace Forecast predicts a decrease in the active fixed wing general aviation piston fleet by a rate of 1.0% and an increase in the fixed-fix turbine fleet by a rate of 1.8%. Absent other consistent data related to based aircraft at MYL, along with the uncertainty associated with COVID-19, the growth rates predicted in the FAA Aerospace Forecast will be used as the forecast methodology for based aircraft at MYL.

Table 4.30 Recommended Based Aircraft and Fleet Mix Forecast for McCall Municipal Airport

Year	SE Piston	ME Piston	SE Turboprop	ME Turboprop	Jet	Rotor	Glider	Total Based	AAGR
2020	87	2	3	5	1	1	1	100	Baseline
2021	86	2	3	5	1	1	1	99	-0.74%
2022	85	2	3	5	1	1	1	99	-0.74%
2023	84	2	3	5	1	1	1	98	-0.73%
2024	84	2	3	5	1	1	1	97	-0.73%
2025	83	2	3	5	1	1	1	96	-0.72%
2026	82	2	3	5	1	1	1	96	-0.72%
2027	81	2	3	5	1	1	1	95	-0.71%
2028	80	2	3	6	1	1	1	94	-0.71%
2029	79	2	3	6	1	1	1	94	-0.70%
2030	79	2	3	6	1	1	1	93	-0.70%
2031	78	2	3	6	1	1	1	92	-0.69%
2032	77	2	3	6	1	1	1	92	-0.68%
2033	76	2	4	6	1	1	1	91	-0.68%
2034	76	2	4	6	1	1	1	91	-0.67%
2035	75	2	4	6	1	1	1	90	-0.66%
2036	74	2	4	6	1	1	1	89	-0.66%
2037	73	2	4	6	1	1	1	89	-0.65%
2038	73	2	4	6	1	1	1	88	-0.64%
2039	72	2	4	6	2	1	1	88	-0.64%
2040	71	2	4	6	2	1	1	87	-0.63%
CAGR	-1.0%	-0.50%	1.20%	1.20%	2.20%	1.60%	0.10%	-0.69%	

Figure 4.34 Recommended Based Aircraft Forecast for McCall Municipal Airport



4.8 CRITICAL AIRCRAFT

The 2007 Airport Master Plan and 2019 Taxiway Relocation Pre-Design Study determined the critical aircraft for McCall Municipal Airport to be a Dassault Falcon 900, an ARC B-II Large aircraft. TFMSC data collected as part of this Airport Master Plan confirms the continued and future use of an ARC B-II Large aircraft, but not the Dassault Falcon 900. There was no single B-II Large aircraft that distinguished itself as a clear choice, rather it was a mix that included the Cessna Citation 560, Cessna Citation CJ3, Cessna Citation 550, Cessna Citation 560XL, Embraer Phenom 300, and the Shorts Sherpa from the U.S. Forest Service, among others. Absent a clear choice, this planning study referred to the FAA's Business Jet Report for August 2020. In the report, the top business jet aircraft for domestic operations between August 2019 and July 2020 was the Cessna Citation 560XL[2], or Citation Excel, which is a B-II Large aircraft. Since the aircraft was observed in the TFMSC and photo data for McCall Municipal Airport, the current version of the Cessna Citation Excel, called the Citation XLS+ will be used as the future critical aircraft for planning purposes.

Figure 4.35 Cessna Citation Excel

Source: T-O Engineers

CESSNA CITATION XLS+ CHARACTERISTICS

The specifications shown in *Table 4.31* were taken directly from Cessna's website, as well as FAA AC 150/5300-13A, Appendix 1 for the Citation XLS+[3] .

Table 4.31 Design Aircraft Specification	
Cessna Citation XLS+ Specifications	
Length	52 feet 6 inches
Height	17 feet 2 inches
Wingspan	56 feet 4 inches
Maximum Takeoff Weight	20,200 pounds
Useful Load	7,540 pounds
Maximum Range	2,100 nm
Maximum Passengers	12
Approach Speed	117 knots
Wheelbase	21 feet 11 inches
Cockpit to Main Gear	21 feet 11 inches
Main Gear Configuration	Single
Taxiway Design Group	2

Source: Cessna and FAA

Figure 4.36 Cessna Citation XLS+

Source: Cessna

4.9 SUMMARY

A summary of the recommended aviation forecast for McCall Municipal Airport is shown in *Table 4.32:*

Table 4.32 Recommended Aviation Forecast for McCall Municipal Airport					
	2020	**2025**	**2030**	**2035**	**2040**
Operations	32,130	37,429	37,955	38,488	39,029
Based Aircraft	100	96	93	90	87

The future critical aircraft is the Cessna Citation XLS+, an ARC B-II Large Aircraft.

REFERENCES

1 FAA Aerospace Forecast, Fiscal Years 2020-2040
2 FAA Business Jet Report for August 2020: https://aspm.faa.gov/apmd/sys/bjpdf/b-jet-202008.pdf
3 Cessna Website, September 2, 2020: https://cessna.txtav.com/en/citation/xls

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SECTION OVERVIEW

The Facility Requirements chapter describes the facilities required to safely accommodate the aircraft traffic forecasted for McCall Municipal Airport (MYL). FAA design standards for the airport's critical aircraft are detailed relative to the existing runway, taxiways, and other facilities.

5.1 GENERAL

The Facility Requirements chapter compares the current airport services and facilities at MYL to the needs of the users and requirements of existing and forecasted critical aircraft to identify any deficiencies that require remediation through the Capital Improvement Program (CIP). Most dimensional standards and recommendations listed are described in FAA Advisory Circular (AC) 150/5300-13A, *Airport Design*. Additional FAA Advisory Circulars and regulations are referenced where appropriate.

5.2 AIRPORT REFERENCE CODE, RUNWAY DESIGN CODE, AND TAXIWAY DESIGN GROUP

GENERAL DISCUSSION

The FAA has several coding systems including Aircraft Approach Category (AAC) and Airplane Design Group (ADG). The AAC is designated by a letter (A through E) and represents different levels of approach speed. The ADG is designated by a Roman numeral (I through VI), which represents aircraft wingspan and tail height. Each airport has a critical aircraft, typically defined as the most demanding aircraft (or combination of aircraft) that performs at least 500 operations annually. The combination of that aircraft's AAC and ADG (for example, A-I or B-II) signifies the Airport Reference Code (ARC).

Table 5.1 Airport Reference Code (ARC) Aircraft Approach Category

Category	Speed
A	less than 91 knots
B	91 knots or more, less than 121 knots
C	121 knots or more, less than 141 knots
D	141 knots or more, less than 166 knots
E	166 knots or more

Table 5.2 Airport Reference Code (ARC) Airplane Design Group (ADG)

Group #	Tail Height (Feet)	Wingspan (Feet)
I	<20	<49
II	20 - <30	49 - <79
III	30 - <45	79 - <118
IV	45 - <60	118 - <171
V	60 - <66	171 - <214
VI	66 - <80	214 - <262

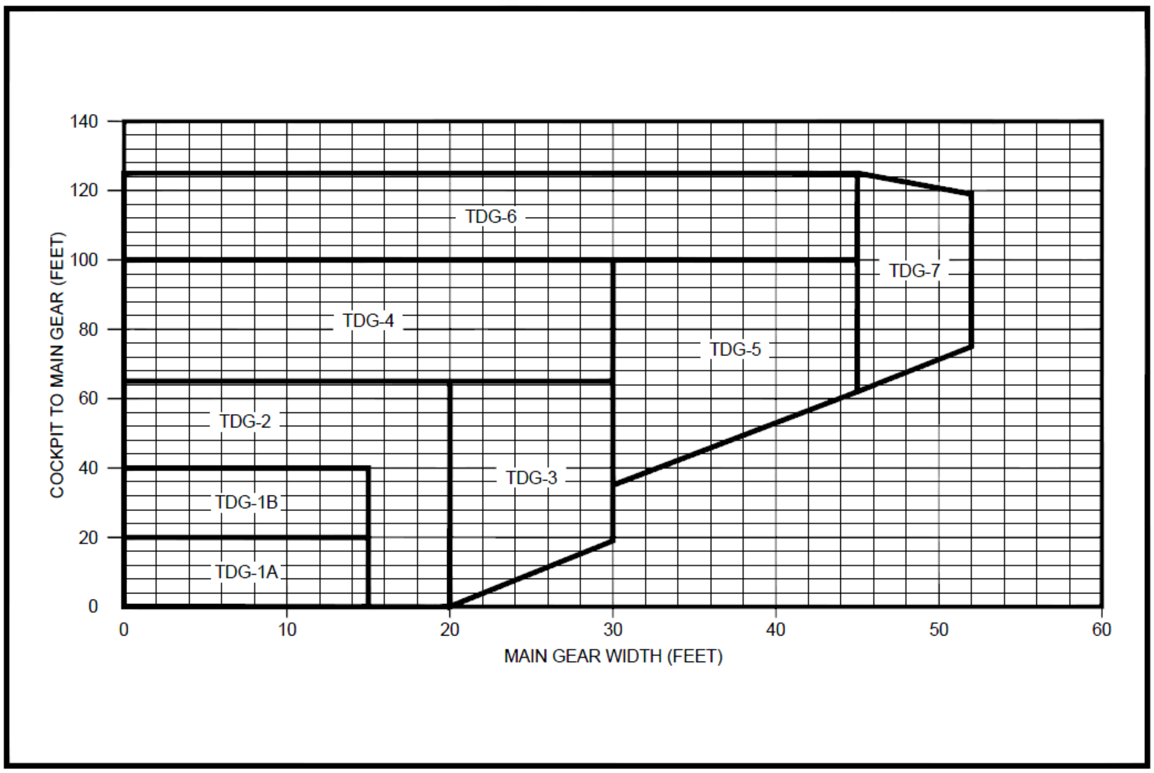
Each runway also receives a combined AAC and ADG designation for approach and departure operations, called the Runway Design Code (RDC). Each RDC also contains a third component based on visibility minimums (for example, B-II-4000). These categorizations are applied to individual runways, such that multiple runways at a single airport may have different RDCs. The ARC and RDC provide insights into the performance, design characteristics, and physical facility requirements of aircraft using components of an airport.

Table 5.3 Runway Visibility Range

RVR Value (Feet)	Visibility Minimum
1,200	<1/4 mile
1,600	1/4 mile - <1/2 mile
2,400	1/2 mile - <3/4 mile
4,000	3/4 mile - <1 mile
5,000	1 mile
VIS	Visual Approach Only

The design standard used for taxiway design is the Taxiway Design Group (TDG), a classification for airplanes based on outer to outer Main Gear Width (MGW) and Cockpit to Main Gear (CMG) distance. These measures are used because taxiways are designed for "cockpit over centerline" taxiing and such undercarriage dimensions must be considered for design of pavement fillets. The chart below outlines the measurements for all Taxiway Design Groups.

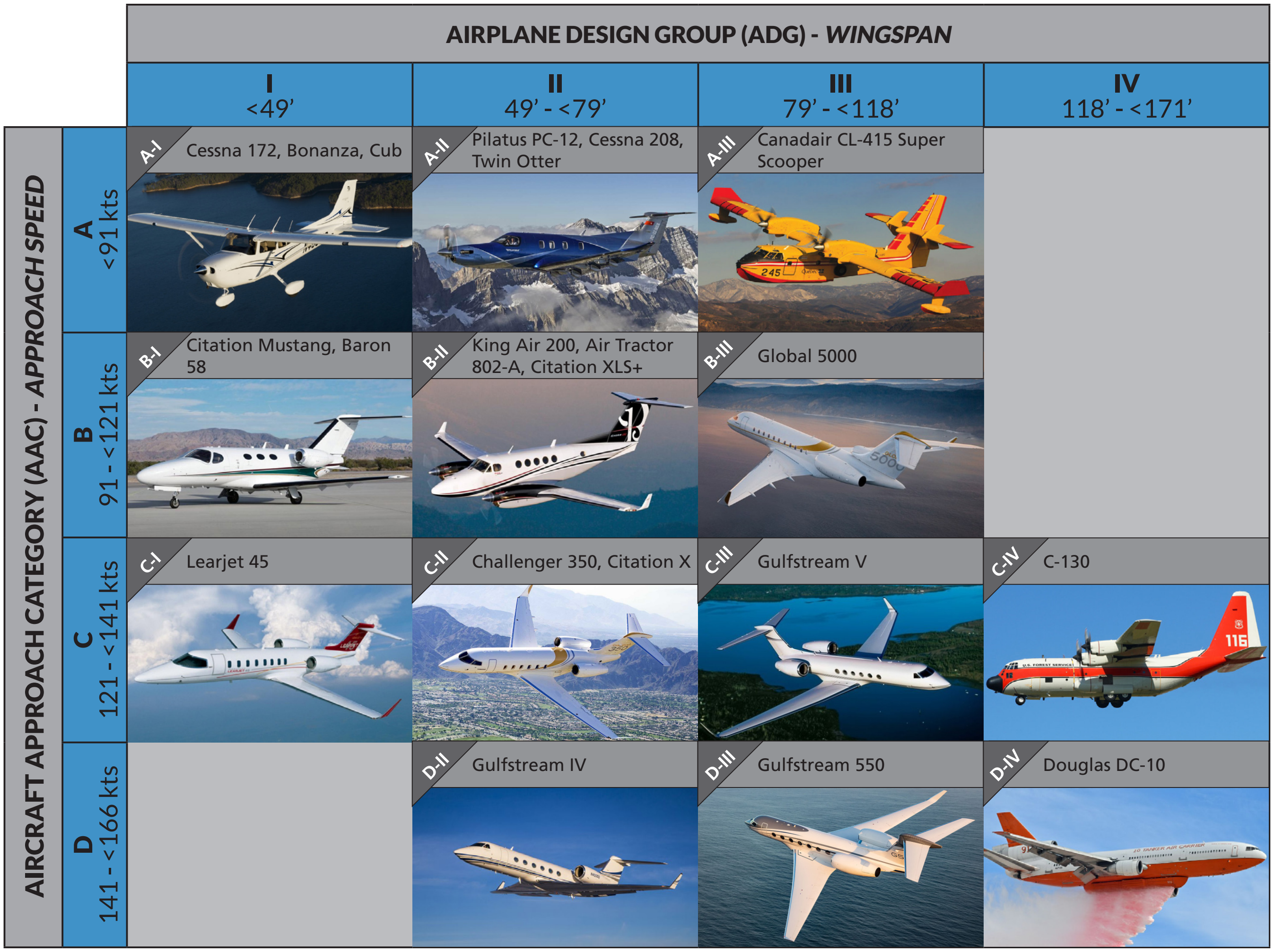
Figure 5.1 Taxiway Design Group Chart



Source: FAA AC 150/5300-13A, Figure 1-1

Figure 5.2 below shows a small selection of common aircraft and their respective ARC.

Figure 5.2 Example of Aircraft ARC



Source: T-O Engineers

This change might be to a larger, more demanding aircraft or to a smaller aircraft. If the forecast foresees a downward trend or a notable change, such as a major user leaving the facility, the future design aircraft might actually be in a lower category or group. Design standards for the current airport designation are shown as either *compliant* or as *deficient*.

DESIGN AIRCRAFT SPECIFICATION

The Forecast of Aviation Demand chapter established the current and future critical aircraft as the **Cessna Citation XLS+, a B-II Large Aircraft**. *Table 5.4* displays the specifications and applicable design standards for the design aircraft.

Table 5.4 Design Aircraft Specification	
Cessna Citation XLS+ Specification	
Wing span	56 ft. 4 in.
Tail height	17 ft. 2 in.
Approach speed (flaps down)	117 knots
Cockpit to Main Gear (CMG)	21 ft. 11 in.
Main Gear Width (MGW)	14 ft. 11 in.
Maximum Takeoff Weight	20,200 pounds
Applicable FAA Design Standards	
Aircraft Approach Category (AAC)	B
Airplane Design Group (ADG)	II
Taxiway Design Group (TDG)	2
Weight classification	Large

Source: FAA Aircraft Characteristic Database, 2018

AIRPORT REFERENCE CODE (ARC)

The wingspan and approach speed of the current and future critical aircraft result in McCall Municipal Airport being designated as ARC B-II. The ARC is not forecasted to change throughout the planning period.

TAXIWAY DESIGN GROUP (TDG)

TDG relates to the undercarriage dimensions of the aircraft and it is a classification of airplanes base on outer to outer Main Gear Width (MGW) and Cockpit to Main Gear (CMG) distance. MGW and CMG of the critical aircraft at McCall Municipal Airport result in a TDG-2 classification for the critical aircraft.

RUNWAY DESIGN CODE (RDC)

Generally, runway standards are related to aircraft approach speed, aircraft wingspan, and designated or planned approach visibility minimums. For an airport with a single runway, the Airport Reference Code (ARC) is the same as Runway Design Code (RDC). Runway 16/34 is paved asphalt and the only runway at McCall Municipal Airport. There are two published instrument approach procedures for the airport, both RNAV (GPS) approaches. The lowest visibility minimum for the RNAV (GPS) approach for Runway 16 is 1 mile. The lowest visibility minimum for the RNAV (GPS) approach for Runway 34 is 7/8 mile. This results in a RDC for Runway 16/34 of B-II-4000.

WEIGHT CLASS

There are two aircraft weight classes used by the FAA for planning: Small Aircraft and Large Aircraft. Small Aircraft have a maximum takeoff weight (MTOW) of 12,500 pounds or less, while Large Aircraft have a MTOW of greater than 12,500 pounds. Some FAA documentation uses the terms Utility and Other than Utility in place of Small Aircraft and Large Aircraft, respectively. The current and future weight class of McCall Municipal Airport is Large Aircraft. The runway pavement strength at McCall Municipal Airport is published at 86,500 pounds for single wheel, 141,000 pounds for double wheel, and 261,500 pounds for double tandem wheel configuration. The Cessna Citation XLS+ has a maximum takeoff weight of 20,200 pounds with a single wheel configuration.

5.3 AIRFIELD CAPACITY

Demand and capacity represent the relationship between forecasted aviation demand, especially during peak operational periods, and an airport's physical ability to safely accommodate that demand. The purpose of a demand and capacity analysis is to assess the ability of the airport's existing facilities to efficiently accommodate its day-to-day and long-term demand without undue delays or compromises to safety. The analysis also assists in determining when improvements are needed to meet specific operational demands.

At low activity airports, airfield capacity often far exceeds the anticipated level of demand. The most widely recognized and accepted capacity analysis methodology can be found in FAA Advisory Circular 150/5060-5, *Airport Capacity and Delay*, and yields hourly capacities and Annual Service Volumes (ASV). ASV is a reasonable estimate of an airport's annual capacity, accounting for differences in runway use, aircraft mix, and weather conditions that would be encountered over a year's time. For long range planning, AC 150/5060-5 provides hourly capacity and ASV charts for airports by using common runway configurations with certain operational assumptions, along with an aircraft fleet mix calculation. The calculations derived from this method may be used if the conditions at the airport do not significantly differ with the assumptions listed in AC 150/5060-5. Capacity assumptions are listed below:

- Runway Use Configuration: Any runway layout can be approximated by one of the 19 depicted runway-use configurations shown in the Advisory Circular (MYL uses configuration 1, which is a single runway).
- Percent Arrivals: Arrivals equal departures. MYL assumes this is the case.
- Percent Touch and Goes: The percent of touch and goes is within the limits shown in Table 2-1 of AC 150/5060-5. For MYL, touch and goes are assumed to be local operations, which account for 26% of the total operations. This is within the limits shown in Table 2-1 of AC 150/5060-5.
- Taxiways: A full-length taxiway with ample runway entrance/exit taxiways and no taxiway crossing problems. MYL meets this assumption.
- Airspace Limitations: There are no airspace limitations which would adversely impact flight operations or otherwise restrict aircraft which could operate at the airport. At MYL, there are assumed to be no airspace limitations.
- Runway Instrumentation: The airport has at least one runway equipped with an Instrument Landing System (ILS) and has the necessary air traffic control facilities and services to carry out operations in a radar environment. MYL does not completely meet this assumption as it does not have a control tower or ILS, but it does have published satellite-based instrument approach procedures.

ASV assumptions are listed below:

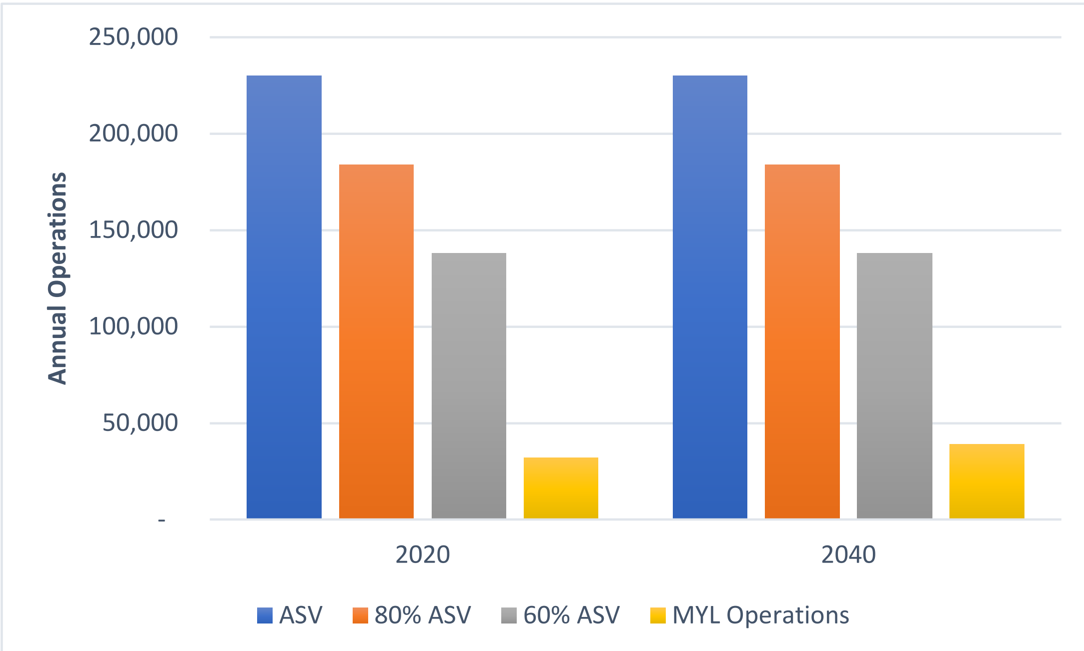
- IFR weather conditions occur roughly 10% of the time.
- Roughly 80 percent of the time the airport operates with the runway-use configuration which produces the greatest hourly capacity.

Aircraft mix is the relative percentage of operations conducted by each of four classes of aircraft (A, B, C, and D), excluding helicopter operations. These classes of aircraft are related to wake turbulence and not ARC. Classes A and B are those that weigh less than 12,500 pounds. Class C is composed of airplanes that weigh between 12,500 – 300,000 pounds. Class D are those aircraft that weigh over 300,000 pounds. There are no Class D aircraft operating at MYL. Mix index is a mathematical expression represented by the equation %(C+3D). Since there are no Class D aircraft, the equation becomes %(C) for MYL.

For calculating capacity at MYL, fleet mix percentages from the motion activated camera data obtained during the forecast analysis were used to calculate the mix index. Referring to *Table 4.18* in Chapter 3, as well as adding operations by USFS aircraft, all ARC A-I, A-II, and B-I are considered to be less than 12,500 pounds (2,136+126+87+10+102=2,461 operations). B-II operations were split in half since the King Air 200 weighs 12,500 pounds, and B-II jets weigh more than 12,500 pounds (104+56+2=162/2=81). The rest of the aircraft ARC B-III and above weigh more than 12,500 pounds (3+15+21+15+6=60). The total operations used for this calculation is 2,683. Of this number, 141 are over 12,500 pounds (81+60=141). The mix index for MYL is approximately 5.25% ((141/2,683)*100). Using runway configuration 1 (single runway) from Figure 2-1 of AC 150/5060-5, and the mix index of 5.25%, the hourly capacity (operations/hour) for MYL is 98 for VFR conditions and 59 for IFR conditions. The ASV for MYL is 230,000 operations.

From Chapter 3, *Aviation Forecast*, the 2020 baseline total operations for MYL is 32,130, which is approximately 14% of ASV. Forecasted operations in 2040 are 39,029, which is approximately 17% of ASV. For planning purposes, 60% of ASV is the threshold at which planning for capacity improvements should begin. At 80% of ASV, planning for capacity improvements should be complete and construction should begin. At 100% of ASV, the airport has reached capacity and capacity improvement should be made to avoid delays. Over the 20-year planning horizon, demand at MYL will remain well below 60% of ASV. Capacity improvements are not anticipated.

Figure 5.3 MYL Operations versus ASV



Source: T-O Engineers

5.4 FAA DESIGN STANDARDS

The FAA has established design standards for almost every aspect of airports, including relevant navigable airspace, airside facilities, and landside facilities. Once the existing and future designations are determined, the FAA uses these design standards to provide an acceptable level of safety on airports. These standards include runway width, other surface dimensions such as safety areas and various separations from fixed or movable objects, and other facets of the airport layout. By applying design standards to classes of aircraft, the Airport Sponsor can match the level of safety appropriately to the level of risk. This is an important core concept for every Airport Master Plan and is especially pertinent for potential future expansion. A key reason for Airport Sponsors to plan, develop, and maintain their airports to the FAA's design standards is to **improve safety** and **ensure compliance** with industry standards. Further, Airport Sponsors that receive federal funds, such as the City of McCall, are obligated by federal grant assurances to comply with all FAA safety regulations and standards.

The standards that apply to an airport and/or runway are determined by the relevant reference code. Subsequently, a comparison of B-II standards to airport conditions is critically important and is discussed in detail throughout this chapter. Based on previous planning efforts, McCall Municipal Airport is generally constructed to ARC B-II standards. Through the investigation of this Airport Master Plan, it was determined that the airport should plan to meet ARC B-II, Large Aircraft standards presently and throughout the planning period. *Table 5.5* lists the FAA design standards for runways compared to the existing runway dimensions.

Table 5.5 Runway Design Standards			
Design Criteria	**Actual Existing Runway 16/34**	**ARC B-II Standard**	**Compliance**
Runway length	6,108 feet	Discussed under Runway Length	Not a Design Standard
Runway width	75 feet	75 feet	Compliant with B-II Standards
Runway Safety Area (RSA) length beyond runway end	300 feet	300 feet	Compliant with B-II Standards
Runway Safety Area (RSA) width	150 feet	150 feet	Compliant with B-II Standards
Runway Object Free Area (ROFA) length beyond runway end	300 feet	300 feet	Compliant with B-II Standards
Runway Object Free Area (ROFA) width	500 feet	500 feet	Compliant with B-II Standards
Runway Obstacle Free Zone (ROFZ) length beyond runway end	200 feet	200 feet	Compliant with B-II Standards
Runway Obstacle Free Zone (ROFZ) width	400 feet	400 feet	Compliant with B-II Standards
Runway 16 Approach & Departure Runway Protection Zone (RPZ) length (Not lower than 1-mile visibility)	1,000 feet	1,000 feet	Compliant with B-II Standards
Runway 16 Approach & Departure RPZ Inner width (Not lower than 1-mile visibility)	500 feet	500 feet	Compliant with B-II Standards
Runway 16 Approach & Departure RPZ Outer width (Not lower than 1-mile visibility)	700 feet	700 feet	Compliant with B-II Standards
Runway 34 Approach RPZ Length (Not lower than 3/4-mile visibility)	1,700 feet	1,700 feet	Compliant with B-II Standards
Runway 34 Approach RPZ Inner Width (Not lower than 3/4-mile visibility)	1,000 feet	1,000 feet	Compliant with B-II Standards
Runway 34 Approach RPZ Outer Width (Not lower than 3/4-mile visibility)	1,510 feet	1,510 feet	Compliant with B-II Standards
Runway 34 Departure RPZ Length (Not lower than 3/4-mile visibility)	1,000 feet	1,000 feet	Compliant with B-II Standards
Runway 34 Departure RPZ Inner Width (Not lower than 3/4-mile visibility)	500 feet	500 feet	Compliant with B-II Standards
Runway 34 Departure RPZ Outer Width (Not lower than 3/4-mile visibility)	700 feet	700 feet	Compliant with B-II Standards

Source: FAA AC 150/5300-13A

CROSSWIND RUNWAY AND RUNWAY ORIENTATION

Wind analysis from Chapter 3 showed the existing runway at MYL provides greater than 95% wind coverage under all weather scenarios. As such, a crosswind runway is neither required nor recommended through the planning horizon.

Change in magnetic declination may dictate runway renumbering. A review of the geodetic and magnetic headings for Runway 16/34 indicates a new runway designation of Runway 17/35 is required. *Table 5.6* summarizes the runway orientation information.

Table 5.6 Runway 16/34 Orientation

Runway	16	34
Latitude	44° 53' 49.58149"	44° 52' 49.37477"
Longitude	116° 06' 07.33730"	116° 06' 05.27789"
Elevation	5,024.31	5,006.691
Geodetic Heading	178° 36' 26.2133"	358° 36' 27.6663"
Magnetic Heading	165° 13' 26.2133"	345° 03' 27.6663"
Magnetic Declination	13° 23' E	
Updated Runway Designation	**17**	**35**

Source: T-O Engineers

RUNWAY WIDTH

The FAA runway width design standard (FAA AC 150/5300-13A, Table A7-4) for an ARC B-II facility with not lower that 3/4-mile visibility minimum is 75 feet. Runway 16/34 is currently 75 feet wide, which meets ARC B-II standards for runway width.

RUNWAY LENGTH

Many factors determine the suitability of runway length for airplane operations. These factors include airport elevation above mean sea level, temperature, wind velocity, airplane operating weights, takeoff and landing flap settings, runway surface condition (dry or wet), effective runway gradient, presence of obstructions in the vicinity of the airport, and any locally imposed noise abatement restrictions. A given runway length may not be suitable for all aircraft operations. FAA AC 150/5325-4B, *Runway Length Requirements for Airport Design*, provides recommendations and guidelines for use in the design of civil airports. The use of the Advisory Circular is mandatory for airport projects receiving federal funding.

Runway length is an FAA recommendation, not a design standard. It is up to the pilot operating under the unique meteorological conditions and demands of a particular flight to determine the safety of the available runway length for the operation. However, it does remain a goal of the Sponsor to provide a safe environment suited for the aircraft regularly operating at the facility.

The calculations for recommended runway length are driven by the airport's critical aircraft. The current and future critical aircraft for MYL is the Cessna Citation XLS+, a B-II Large Aircraft. The existing runway length is 6,108 feet. The Cessna Citation XLS+ Flight Planning Guide was published to provide specific information for evaluating the performance of the Cessna Citation XLS+ (Model 560XL). Although the information contained in the guide was developed from data contained in the flight and operating manuals, the guide is not to be used in place of the flight and operating manuals. Nonetheless, the guide provides takeoff runway length requirements that can be useful for planning purposes. The takeoff field length for the Citation XLS+ is 5,970 feet (15° of flaps, dry runway, zero wind, anti-ice off, cabin bleed air on, over a 35-foot screen, 5,000-foot field elevation, 86 °F, and a maximum takeoff weight of 20,200 pounds). The existing runway meets the runway length requirements for the critical aircraft.

AC 150/5325-4B recommends runway length be determined according to the airport's ultimate development plan, thus ensuring a runway appropriate for the forecasted critical aircraft. By protecting for the future, the airport will avoid costly design and infrastructure upgrades.

Using the FAA's computer software program, runway lengths based on families of aircraft with performance characteristics similar to the critical aircraft were calculated. The results were divided into small aircraft (12,500 pounds or less) and large aircraft (between 12,500 pounds and 60,000 pounds). The weight classifications are further broken down into subdivisions indicating the percent of the fleet that could be accommodated by the recommended minimum runway length. For example, the recommended minimum runway length for 100% of the small aircraft fleet is 6,110 feet. The runway at MYL essentially meets this requirement, as it is only 2 feet short of the recommendation.

For large aircraft, the weight classification is subdivided into a percentage of useful load. The FAA defines useful load as the weight of the pilot, copilot, passengers, baggage, usable fuel, and drainable oil. The Citation XLS+ falls into the large aircraft classification with a maximum gross weight greater than 12,500 pounds. According to Table 3-1 of AC 150/5325-4B, the Cessna Citation 560XL (Excel) is listed among the aircraft comprising 75% of the fleet. The recommended minimum runway length for 75% of large airplanes at 60% useful load is 6,510 feet. This threshold is important because it is the minimum recommended runway length for a grouping of large aircraft at MYL. In this case, the existing runway is short by 402 feet. Additional runway length beyond that would provide more useful load for 75% of the large aircraft fleet, or accommodate the remaining 25% of the large aircraft fleet, which includes the Challenger 600, Falcon 900, and Hawker Horizon (aircraft which were observed at MYL by the motion activated cameras). A summary of the runway length recommendations is shown in *Table 5.7*.

Table 5.7 Runway Length recommendations	
Airport Elevation: 5,024 feet	
Mean Daily Maximum Temperature of the Hottest Month: 80 F	
Maximum Difference in Runway Centerine Elevation: 18 feet	
12,500 pounds or less with less than 10 passenger seats (Ex.: Beech King Air 200)	
75% of fleet	4,450 feet
95% fleet	5,930 feet
100% fleet	6,110 feet
12,500 pounds or less with 10 or more passenger seats	6,110 feet
Over 12,500 pounds but less than 60,000 pounds	
75% of fleet at 60% useful load	**6,510 feet**
75% of fleet at 90% useful load	8,730 feet
100% of fleet at 60% useful load	8,980 feet
100% of fleet at 90% useful load	10,860 feet
More than 60,000 pounds	6,780 feet approximately

Source: FAA Advisory Circular 150/5325-4B and FAA AD4.2 Program

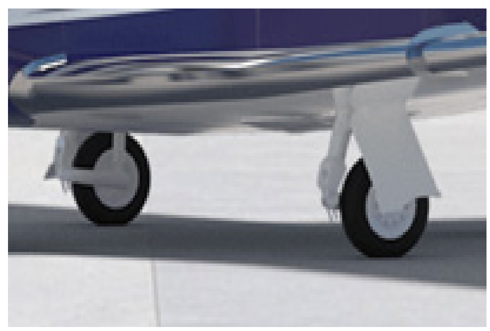
The existing runway at MYL is adequate for small aircraft operating at the airport, as well as the critical aircraft. However, it is insufficient to meet the minimum requirement for 75% of the large aircraft fleet at 60% useful load. The recommended minimum runway length for future planning is 6,510 feet. This would require a 402-foot runway extension.

RUNWAY PAVEMENT DESIGN STRENGTH

To meet the design life goals of the airport, runway pavements must be designed to physically withstand the weight of arriving, taxiing, and departing aircraft. This is calculated using a mix of aircraft. The maximum takeoff weight of the existing design aircraft and those aircraft forecasted to use the airport must be considered to determine pavement strength. The pavement must possess sufficient stability to withstand the abrasive action of traffic, adverse weather conditions, and other deteriorating influences.

Airport pavements degrade faster when over-stressed with loads beyond their design capability. Pavements are most stressed when aircraft loads are slowly applied, as in when an aircraft is taxiing or parked. Pavement loading is also a function of the number of pressure points, such that the more tires an aircraft has to distribute its load the less stress is exerted on the pavement. The current published weight bearing capacity of Runway 16/34 is 86,500 pounds for single wheel, 141,000 pounds for a double wheel, and 261,500 pounds for a double tandem wheel configuration. The maximum takeoff weight of the critical aircraft is 20,200 pounds with a single wheel configuration. The current pavement strength meets the requirements for the planning period.

Figure 5.4 Single Wheel Configuration



Source: Cessna

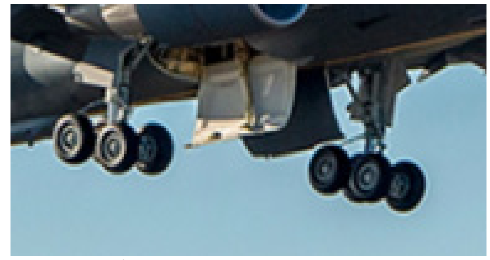
Figure 5.5 Double Wheel Configuration

Source: Cessna

While the pavement strength of the runway meets the requirements of the critical aircraft, heavier aircraft are known to use the airport. The largest aircraft observed during the data collection for the forecast was a Gulfstream 550, a D-III aircraft with a maximum takeoff weight of 91,000 pounds with double wheel configuration. The existing pavement strength at MYL accommodates this aircraft.

Potentially, the U.S. Forest Service could bring C-130's equipped for firefighting to MYL on a regular basis in the future, without any official commitments. The C-130 is an ARC C-IV aircraft with a single tandem wheel configuration and a maximum takeoff weight of 155,000 pounds. There is no published weight bearing capacity at MYL for a single tandem wheel configuration, but an analysis done by T-O Engineers in 2015 determined the weight bearing capacity of the runway at MYL to be 165,000 pounds at an operational frequency of 900 annual departures (10 departures per day for three consecutive months, annually). Consequently, the runway accomodates the C-130 under defined operational conditions.

Figure 5.6 Double Tandem Wheel Configuration



Source: Boeing

Figure 5.7 Single Tandem Wheel Configuration

Source: Lockheed Martin

RUNWAY GRADIENT

The elevation of the Runway 16 end is 5,024.31 feet, and the elevation of the Runway 34 end is 5,006.69 feet, which is a difference of 17.62 feet. This results in a runway gradient of 0.29%, which is well below the FAA 2% maximum gradient allowed for AAC-B aircraft.

RUNWAY SEPARATION STANDARDS

There are several standards for runway separation distance between other facilities on the airport, dictated by the design aircraft. The runway separation standards for a B-II facility, as well as the existing condition are shown in *Table 5.8*. The FAA generally supports and recommends that separation distances between runways and parallel taxiways be increased to standards for larger and heavier aircraft than the current design aircraft to protect for future expansion.

LINE OF SIGHT

According to FAA AC 150/5300-13A, for individual runways with a full parallel taxiway, any point five feet above the runway centerline must be mutually visible with any other point five feet above the runway centerline that is located at a distance that is less than one half the length of the runway. Runway 16/34 meets this requirement.

BLAST PAD

Paved runway blast pads provide blast erosion protection beyond runway ends during jet aircraft operations. The Airport Master Record remarks section for MYL indicates there is a marked 50-foot blast pad for Runway 16. Aerial imagery shows the blast pad is the same width of the runway (75 feet) and 50 feet beyond the end of the runway threshold. The FAA standards, per AC 150/5300-13A, for a blast pad for a B-II runway with not lower than ¾ mile visibility is 95 feet wide and 150 feet long. Any future runway rehabilitation projects should bring the blast pad up to current design standards.

Table 5.8 Runway Separation Standards			
Design Criteria	**Existing Runway 16/34**	**ARC B-II Standards**	**Compliance**
Runway centerline to parallel taxiway/taxilane centerline (General Aviation)	300 feet	240 feet	Compliant with B-II Standards
Runway centerline to parallel taxiway/taxilane centerline (USFS)	310 feet	240 feet	Compliant with B-II Standards
Runway centerline to general aviation aircraft parking area	387 feet	250 feet	Compliant with B-II Standards
Runway centerline to USFS aircraft parking area	310 feet	250 feet	Compliant with B-II Standards
Runway centerline to holding position markings (all)	200 feet	200 feet	Compliant with B-II Standards

Source: FAA Advisory Circular 150/5300-13A

RUNWAY MARKINGS, SIGNS, AND LIGHTS

At the time of this study, the runway markings were observed to be faded and difficult to see. The remarks section of the Airport Master Record also states this, which means it is a long-standing issue. This condition should be corrected during the next runway rehabilitation or maintenance project.

Runway lights have also been a long-standing concern as stated by airport management. Consideration should be given to a replacement of the existing lighting system, with the introduction of LED lighting. LED lighting would increase reliability, as well as sustainability.

TAXIWAY ANALYSIS

As stated in FAA AC 150/5300-13A, Section 405, a parallel taxiway eliminates using the runway for taxiing, thus increasing capacity, and protecting the runway under low visibility conditions. Additionally, a full-length parallel taxiway is required for instrument approach procedures with visibility minimums below one mile, which is the case at MYL. Taxiway A was relocated during the summer of 2020 to meet the runway centerline-to-taxiway centerline separation standards of a C-II aircraft, should the airport need to increase the ARC from a B-II to C-II in the future. Taxiway A is 50 feet wide, which is wider than the required 35 feet for a TDG-2 aircraft. The wider taxiway was justified previously due to the use of the airport by firefighting aircraft. There are five connector taxiways that provide access to Runway 16/34, designated A-1 through A-5, starting at the Runway 16 end. Taxiway A and the connectors are appropriately identified with signage. The taxiway does not have any lights, only reflectors at the Sponsor's prerogative. As Taxiway A and the connectors were relocated/reconstructed in 2020, there are no further improvements needed through the planning horizon other than periodic maintenance and surface treatments.

On the U.S. Forest Service side of the airport, there is a partial parallel taxiway locally known as Taxiway B, although it is officially undesignated. It is 1,700 feet long and 50 feet wide and connected to the Runway 16 end by a connector taxiway, B-1. Another taxiway connector, B-2, is located approximately 1,800 feet from the Runway 16 landing threshold. These taxiways do not meet the current design standard for taxiway fillets and should be corrected. It is recommended that this taxiway be given the official designation of Taxiway B on the ALP and appropriately identified by signage. The current standards for taxiways are shown in comparison to dimensions at MYL in *Table 5.9*.

Table 5.9 Taxiway Standards			
Design Criteria	**Existing Taxiways A and B, plus connectors**	**ADG II Standard**	**Compliance**
Taxiway Safety Area (TSA) width	79 feet	79 feet	Compliant
Taxiway Width	50 feet	35 feet (TDG 2 Standards)	Compliant
Taxiway Object Free Area (TOFA) Width	131 feet	131 feet	Compliant
Separation of Taxiway Centerline to Fixed or Moveable Object	Greater than 65.5 feet	65.5 feet	Compliant

Source: FAA Advisory Circular 150/5300-13A

The 2019 ALP identifies four additional taxiways located within the west side hangar area, Taxiways A, B, C, and E. These should be re-purposed as taxilanes, which are, by definition, designed for low speed and precise taxiing between taxiways and aircraft parking positions and other terminal areas. These taxilanes should meet the design standards for B-II aircraft and be re-designated with different names to avoid confusion with Taxiways A and B, which run parallel to the runway. Presently, Taxiway A, which runs east-west and connects with Taxiway A-2, does not meet the B-II taxiway centerline to fixed or movable object standards of 65.5 feet. Re-purposing this taxiway as a taxilane would remedy this deficiency. Additionally, replacement of the diagonal taxiway will assist in enhancing circulation through the terminal area.

Figure 5.8 Hangar Area Taxilanes

Source: T-O Engineers

An important aspect of taxiway design standards compliance is the clear zones provided through the Taxiway and Taxilane Object Free Area (TOFA). In general, when a runway or taxiway has a painted centerline, pilots should be able to assume that they have wingtip clearance and buffers based on the ADG of the airport. The taxilane running east-west between Hangars 211 and 212 does not meet the TOFA clearance for an ADG-I aircraft, as shown in *Figure 5.9*. It is less than 79 feet wide.

Figure 5.9 Nonstandard TOFA

Source: T-O Engineers

Table 5.10 Taxilane Standards			
Design Criteria	**ADG I Standards**	**ADG II Standard**	**Compliance**
Taxilane Object Free Area Width	79 feet	115 feet	Deficient

Source: FAA Advisory Circular 150/5300-13A

The FAA promotes taxiway design to adhere to the "three-node concept." This concept is meant to prevent any taxiway and taxilane intersections from becoming overly complex and potentially confusing for pilots. The three-node concept states that a pilot should have no more than three choices of direction at each intersection, ideally left, right, or straight. All intersections associated with Runway 16/34 and the taxiway connectors to Taxiways A and B meet the three-node concept.

Other measures that help reduce pilot confusion and reduce runway incursions are to avoid wide expanses of pavement at runway-taxiway intersections, limit runway crossings, avoid "high energy" runway crossing intersections, increase pilot visibility by using 90-degree turns at runway entrance or crossing points, and eliminate direct access from a parking apron to a runway without requiring a turn. Taxiway B-1 presently expands from 50-feet wide to over 150 feet wide starting just prior to the hold short line up to the entrance to Runway 16. This should be remedied by a future project. The runway crossing at Taxiways A-2 and B-2 is outside the middle third of Runway 16/34 and not considered a "high energy" crossing. The other runway crossing is at the Runway 16 threshold. All runway entrances and crossing points are at 90-degree angles. Taxiway B-2 provides direct access to Runway 16/34 from the U.S. Forest Service apron, while Taxiway A-2 provides direct access to the runway from the west side hangar area as shown in *Figure 5.10*. Future runway and taxiway projects should consider ways to correct this condition.

Figure 5.10 Direct Access to Runway from Parking Area

Source: T-O Engineers

NAVIGATIONAL AIDS

Aids to navigation provide pilots with information to assist them in locating the airport and to provide horizontal and/or vertical guidance during landing. Navigational Aids (NAVAIDS) also permit access to the airport during poor weather conditions.

There are multiple NAVAIDS installed at McCall Municipal Airport to increase pilot safety. Runway 16/34 is equipped with Medium Intensity Runway Lights (MIRLs) and Runway End Identifier Lights (REILs). Both are pilot controlled, so a pilot can activate the system and vary the lighting intensity by keying their microphone while on the Common Traffic Advisory Frequency (CTAF).

Runway 16 is equipped with a 2-light Precision Approach Path Indicator (PAPI), while Runway 34 is equipped with a 2-light Visual Approach Slope Indicator (VASI). Both systems enhance safety by providing beneficial visual approach slope guidance to assist pilots in flying stabilized approaches. VASI systems are now considered obsolete. The 2-light PAPI system is normally installed on runways without electronic guidance and at non-commercial airports. 4-light PAPI systems should be installed on runways with jet operations[1], as is the case with MYL. Consequently, the existing VASI and PAPI systems should be upgraded to a 4-light PAPI for each runway end. Past obstruction surveys have shown obstructions by numerous trees off the Runway 16 end, rendering the Runway 16 PAPI out of service for several years. If it is determined through a new obstruction analysis that the trees are still obstructions, it will be necessary to have the obstructions removed during a future airport project.

There is a lighted windcone and segmented circle located in the terminal area of the airport near the touchdown zone of Runway 16. Both were newly constructed as part of a taxiway project in the summer of 2020. Secondary windcones are located adjacent to the touchdown zone for Runway 34 and off the end of Runway 16. The segmented circle and windcones meet current design standards.

An Automated Surface Observation System (ASOS) is located in the terminal area near the segmented circle. According to the *Federal Standard for Siting Meteorological Sensors at Airports* (FCM-S4-1994), for airports with only visual and/or nonprecision runways, the preferred siting of the cloud height, visibility, and wind sensors and associated data collection platform is adjacent to the primary runway, 1,000 to 3,000 feet down the runway from the threshold, and between 500 to 1,000 feet from the runway centerline. The current location of the ASOS at MYL meets the preferred siting criteria; however, it is also in a location that inhibits development of future hangars, taxilanes, and tiedowns in the terminal area. Future siting options will be explored during the alternatives development process.

5.5 AIRSPACE AND APPROACHES

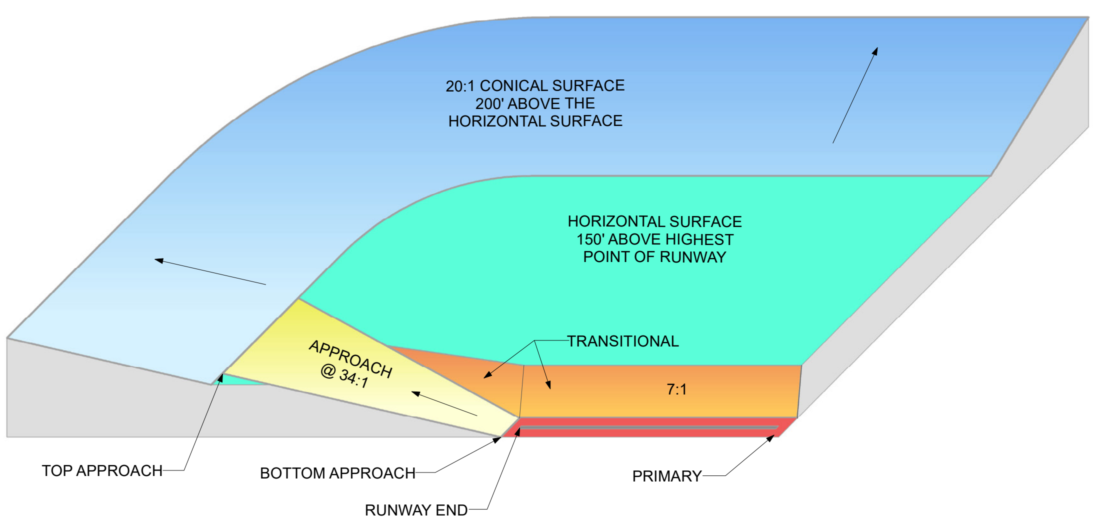
This section provides guidance on issues pertaining to airspace clearing and obstacle standards.

14 CFR PART 77 SURFACES (PART 77)

Title 14 of the Code of Federal Regulations (CFR), Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace*, establishes standards for determining obstructions in navigable airspace. Part 77 describes imaginary surfaces that surround each airport and are defined relative to the specific airport and each runway. The imaginary surfaces vary in size and configuration based on the category of each runway. The runway category is determined by the types of approaches that exist or are proposed for that runway.

The most precise existing or proposed approach for the specific runway end determines the slope and dimensions of each approach surface. Any object, natural or man-made, that penetrates these imaginary surfaces is an obstruction. *Figure 5.11* is a graphical illustration of these surfaces.

Figure 5.11 Part 77 Surfaces



Source: T-O Engineers

Primary surface: A surface longitudinally centered on a runway. When the runway has a specially prepared hard surface, the primary surface extends 200 feet beyond each end of that runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline.
Horizontal Surface: A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of a specified radii from the center of each end of the primary surface of each runway of each airport and connecting the adjacent arcs by lines tangent to those arcs.
Conical Surface: A surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.
Transitional Surface: These surfaces extend outward and upward at right angles to the runway centerline and the runway centerline extended at a slope of 7 to 1 from the sides of the primary surface and from the sides of the approach surfaces.
Approach Surface: A surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. An approach surface is applied to each end of each runway based upon the type of approach available or planned for that runway end.

Table 5.11 Part 77 Dimensions at MYL	
Conical Surface	
Length	4,000 feet
Slope	20:1
Transitional Surface	
Slope	7:1
Primary Surface	
Width	500 feet
Length Beyond Runway End	200 feet
Horizontal Surface	
Height Above Airport Elevation	150 feet
Radius Arc	10,000 feet
Approach Surface	
Inner Width	500 feet
Outer Width	3,500 feet
Length	10,000 feet
Slope	34:1

Source: 14 CFR Part 77

INSTRUMENT APPROACHES

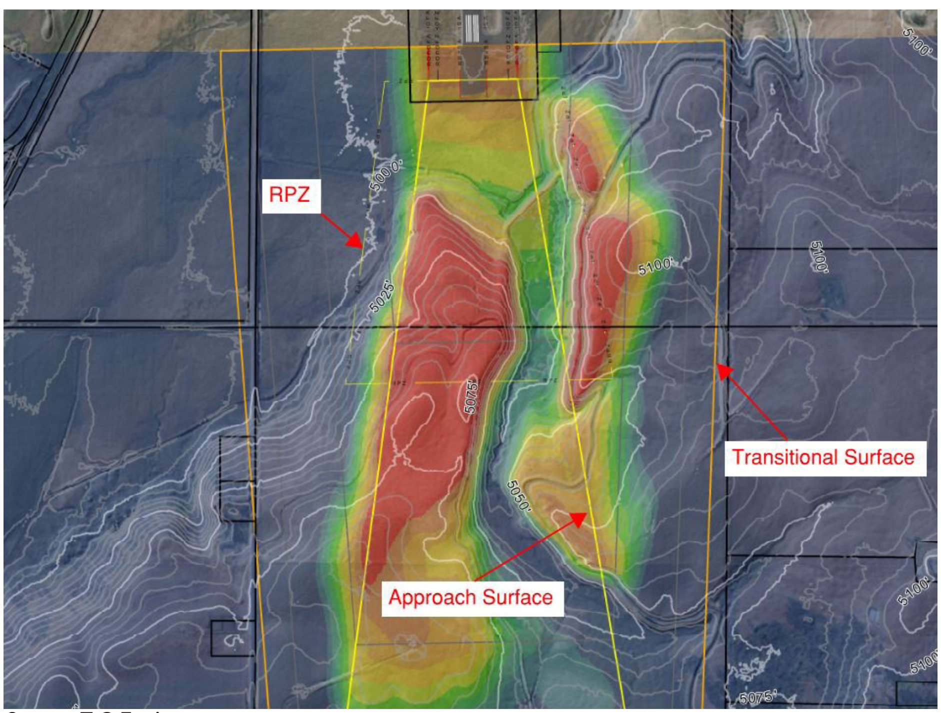
McCall Municipal Airport has two instrument approach procedures, one to each runway end. Both are RNAV(GPS) approaches and are considered nonprecision approaches. The lowest minimums for the RNAV (GPS) Runway 16 approach, aircraft categories A and B, are a Minimum Descent Altitude (MDA) of 5,520 feet MSL and 1 statute mile visibility (the field elevation is 5,024 feet MSL). For category C aircraft, the MDA is 5,520 feet MSL and 1 3/8 statute miles visibility. Category D aircraft are not authorized for this approach. Due to the tree obstructions north of Runway 16, this instrument approach procedure is currently not available at night. The lowest minimums for the RNAV (GPS) Runway 34 approach, aircraft categories A – D, are an Decision Altitude (DA) of 5,318 feet MSL and 7/8 statute mile visibility. There are no expected changes in the instrument approaches for the airport, unless there are changes to the runway length or new obstructions are identified. Removal of existing obstructions should be made a priority to allow for full use of the instrument approach procedures.

OBSTRUCTIONS

The FAA recommends that all obstructions to the imaginary surfaces be mitigated if possible. The approach zones and RPZs define the most heavily used airspace around an airport and every effort should be made to minimize obstruction within these areas. However, sometimes it is impossible to achieve a completely obstruction-free airspace because of excessive costs or other considerations. The obstructions that cannot be removed, or those obstructions that cause the FAA to reduce the approach minimums, should be marked or lighted in accordance with FAA Advisory Circular 70/7460-1L, *Obstruction Marking and Lighting*. As mentioned previously, there are tree obstructions north of Runway 16 that need to be removed.

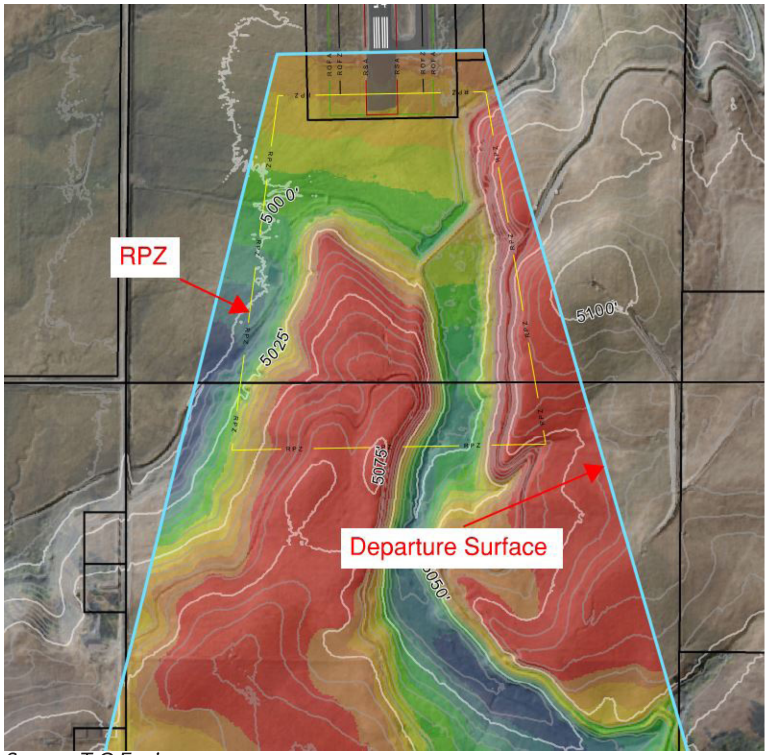
The 2007 Airport Master Plan identified terrain penetrations of the Part 77 surfaces and instrument departure surface south of Runway 34 and east of the airport (Timber Ridge). Any proposed runway extensions or improvements to instrument approach minimums would require removal of these terrain penetrations.

Figure 5.12 Runway 34 Approach Surface/Transitional Surface Terrain Penetrations (Existing)



Source: T-O Engineers

Figure 5.13 Runway 16 Departure Surface Terrain Penetrations (Existing)



Source: T-O Engineers

5.6 RUNWAY PROTECTION ZONE

The Runway Protection Zone (RPZ) is a portion of the inner approach zone projected onto the ground surface. While the RPZ provides additional value to the pilot, its main function is to enhance the protection of people on the ground. It is a ground-surface-level zone and begins 200 feet beyond the end of the area usable for takeoff or landing. The RPZ is trapezoidal in shape and centered around the extended runway centerline.

The RPZ dimensions are determined by the design aircraft ARC, aircraft weight, type of operation (approach or departure), and approach visibility minimums. Land uses prohibited within the RPZ include residences and places of public assembly, including schools, hospitals, office buildings, churches, shopping centers, and other uses with similar concentrations of people. Fuel storage facilities, as well as the storage or use of significant amounts of materials which are explosive, flammable, toxic, corrosive, or otherwise exhibit hazardous characteristics are prohibited within the RPZ.

Allowable uses include those that do not attract wildlife, do not interfere with navigational aids, and are located outside of the Runway Object Free Area. Automobile parking lots are allowable only if they are located outside of the central portion of the RPZ (which is equal to the width of the Object Free Area).

Table 5.12 Runway Protection Zone Dimensions

	Approach Visibility Minimums	Inner Width	Outer Width	Length
Runway 16	Not Lower than 1 mile	500 feet	700 feet	1,000 feet
Runway 34	Not Lower than ¾ mile	1,000 feet	1,510 feet	1,700 feet

Source: FAA Advisory Circular 150/5300-13A

Whenever possible, the FAA recommends fee simple Sponsor ownership of the RPZ for complete control of the land uses in these areas. An avigation easement is recommended where fee simple Sponsor ownership is not possible.

Deinhard Lane passes through the RPZ for Runway 16. FAA *Interim Guidance on Land Uses Within a Runway Protection Zone*, dated September 27, 2012, states that certain new or modified land uses in the RPZ, such as a public road, require the FAA Regional and Airports District Office (ADO) to consult with the National Airport Planning and Environmental Division (APP-400) of the FAA prior to approving an Airport Layout Plan (ALP) containing the proposed land use addition or modification. Should the City of McCall modify the section of Deinhard Lane that passes through the RPZ in the future, it would trigger the requirement for FAA coordination prior to any future ALP approval.

5.7 LAND USE ZONING

Effective compatible land use planning around airports addresses airspace, safety, and noise considerations. In many instances, the community's willingness to take a proactive approach in establishing compatible land use policies around the airport prevents the need to be reactive and mitigate more severe conflicts in the future. Effective comprehensive land use compatibility plans take such considerations into account and incorporate both height restrictive and basic land use restrictions via zoning. Coupled with other proactive measures, such as voluntary noise abatement programs and selective fee-simple land acquisition, proactive planning around the airport protects both the airport and the surrounding community.

It is important to point out there is a difference between height restrictive zoning and basic land use zoning. As its name implies, height restrictive zoning to protect airport airspace generally conforms to Part 77, with the intent of protecting the airspace around an airport from objects or structures which may pose hazards to aircraft operations. On the other hand, the intent of land use zoning is to prevent incompatible land uses near an airport where the impacts of airport operations, such as noise, dust, fumes, or aircraft accidents, can have a potentially negative impact on that land use, or the impact of the incompatible land use can have a potentially negative impact on the airport. In 2016, ITD Aeronautics published the *Idaho Airport Land Use Guidelines* to inform and assist airport sponsors with their planning efforts and meeting State of Idaho regulatory requirements for local planning. Regulatory requirements include, but are not limited to, protecting public airports, including a Public Airport Facilities Section (q) in comprehensive plans, notifying an airport operator of a pending land use action, and preventing the creation or establishment of aviation hazards. Additionally, when an Airport Sponsor enters into an agreement that accepts grant funding from ITD Aeronautics, it agrees to comply with grant assurances. ITD Aeronautics Grant Assurance 23 states: *SPONSOR will have compatible land use and height zoning for the airport to prevent incompatible land uses and the creation or establishment of structures or objects of natural growth which would constitute hazards or obstructions to aircraft operating to, from, on, or in the vicinity of the subject airport. Idaho Statute 67-6508q.* The 2018 McCall Area Comprehensive Plan, *McCall In Motion*, contains a Public Airport Facilities section within the Dive Deep chapter. While not labeled specifically as a section "q" with respect to the *Idaho Airport Land Use Guidelines*, it meets the State of Idaho requirements for addressing compatible land use planning around McCall Municipal Airport.

City of McCall Ordinance Title III, *Planning and Zoning, Chapter 6, Civic, Airport and Agricultural/Forest Zones*, establishes an Airport Zone (AP), an Airport Perimeter Zone (APP), which is located on the internal 150 feet of the AP zone edge, and an Airport Internal Zone (API), which is the remainder of the interior of the AP Zone. Section 3.6.02 of this chapter identifies uses within the zones that are permitted or conditionally permitted. Periodic review of this chapter should be done to ensure it remains current. Chapter 7, *Special Districts*, Section 3.7.05, *McCall Municipal Airport Influence Overlay Zones*, is intended to protect airport users and property inhabitants in the vicinity of the airport by setting forth height limitations and compatible land uses. Airport Operation Protection Zones are described in Section 3.7.051, which were established based on a utility runway. Utility runways are intended for use by aircraft that weigh less than 12,500 pounds. Since the runway at MYL accommodates large aircraft (those heavier than 12,500 pounds) and jets, the current overlay zones do not fully protect for the existing traffic at MYL. The overlay zones should be updated based on the preferred alternative selected as part of this Airport Master Plan.

5.8 GENERAL AVIATION REQUIREMENTS

HANGARS

General aviation hangar preferences and requirements are a function of the number and type of based aircraft and the local climate. As mentioned in Chapter 3, McCall experiences cold snowy winters and warm dry summers. As such, all based aircraft are enclosed in a hangar during the winter. During the summer, seasonal based aircraft park outside on the transient apron, then relocate to warmer climates during the winter. Data collected during the summer for this study revealed 100 based aircraft at MYL, which includes three USFS aircraft not considered for this hangar requirements analysis.

Valley County Assessor maps were reviewed for this study and revealed a total of 83 general aviation hangars, 79 of which were private hangars and four which belonged to McCall Aviation, Sawtooth Flying Service, and the Pioneer Hangar. The total square footage of hangar space is currently 247,733 square feet, with the average hangar size being 2,985 square feet. The average size of the private hangars is 2,821 square feet. To calculate the hangar requirements for MYL, the based aircraft numbers were used from the forecast for 2020 and 2040, along with the following assumptions for hangar size requirements (not the actual existing sizes):

- Single-engine piston (SR-22) @ 1,250 square feet
- Multi-engine piston (C-310) @ 1,400 square feet
- Small turbine (Meridian) @ 1,500 square feet
- Large turbine (PC-12/King Air 200) @ 3,000 square feet
- Medium Jet (Citation XLS+) @ 3,600 square feet
- Large Jet (Gulfstream 450) @ 10,000 square feet
- Helicopter (R-44) @ 800 square feet
- Glider (Trailer) @ 200 square feet

Figure 5.14 Private Hangar Area

Source: T-O Engineers

Using these assumptions result in an excess of hangar square footage at MYL of 121,083 square feet in 2020, and an excess of 132,983 square feet in 2040. This condition does not mean there is a surplus of hangars at MYL, only a surplus of hangar square footage – the result of the existing hangars being larger than what is required for the based aircraft types. Indeed, there was a hangar wait list of 60 people at the time of this analysis, and for those on the wait list who listed a hangar size, the average size was approximately 3,300 square feet/hangar, with most of the aircraft types being single engine pistons.

Despite the surplus of hangar square footage, there is a current demand of at least 60 hangars. There is also an opportunity to expand the hangar options at MYL to include small hangars specifically targeted for single engine piston aircraft, and to capture the seasonal based aircraft to perhaps make them permanent based aircraft. Further, removing the seasonal based aircraft from the transient apron would free up space for what the transient apron is intended for – transient aircraft parking. Additional hangars at the airport would also promote financial self-sustainability. Hangar options and configurations will be explored during the development alternatives analysis.

TRANSIENT AIRCRAFT PARKING APRON

A taxiway relocation project occurred during the summer of 2020, which resulted in a loss of transient parking space, as well as the loss of the diagonal taxiway. Consequently, the transient parking apron was configured with four large spaces nearest the taxiway, and 89 small aircraft parking spaces for a total of 93 marked parking spaces. The average size of each large parking space is 7,250 square feet, while the average size of each small parking space is 1,208 square feet. All of the previous medium sized parking spaces were eliminated due to the taxiway relocation project, leaving none presently.

Aerial imagery was used to measure and calculate the square footage of transient parking apron space, resulting in 29,000 square feet dedicated to large aircraft, and 107,500 square feet dedicated to small aircraft for a total of 136,500 square feet of dedicated parking space.

Figure 5.15 Transient Parking Apron

Source: T-O Engineers

In order to determine parking requirements at MYL, forecasted operations were used to generate peak hour demand of itinerant operations, since itinerant operations were assumed to be using the transient apron, while local operations were assumed to use hangars. Itinerant operations were broken down between air taxi and general aviation. All general aviation itinerant operations were assumed to require 1,500 square feet, while air taxi itinerant operations were assumed to require 3,600 square feet. Itinerant air taxi operations at MYL can range from a single engine Cessna 206 to large business jets. The air taxi space assumed the square footage required by the critical aircraft, a Citation XLS+.

From the forecast data, the peak month for operations is August, the peak day of the week is Sunday, and the peak hour is 10:00 a.m. In 2020, there were 6 air taxi and 15 general aviation itinerant operations during the peak hour. In 2040, there are forecast to be 7 air taxi and 18 general aviation itinerant operations during the peak hour. Consequently, there is sufficient transient apron space to accommodate the existing and forecast peak hour itinerant traffic, absent overnight and seasonal based aircraft. In 2020, the equivalent space remaining to accommodate overnight and seasonal based aircraft is 7 spaces for medium jets (Citation XLS+), and 45 single engine piston spaces. In 2040, the equivalent space remaining is equal to 7 medium jets and 41 single engine piston spaces.

AIRPORT ACCESS AND VEHICLE PARKING

Access to McCall Municipal Airport's east terminal area, the general aviation side, is by way of State Highway 55 (SH-55), also known as S. 3rd Street, and Deinhard Lane. Southbound SH-55 has a right turn lane into the airport that begins at the intersection of SH-55 and Deinhard Lane and ends at the airport entrance next to the Sawtooth Flying Service hangar, approximately 800 feet south of the intersection. Travelers are met with an automated vehicle gate leading to the aircraft apron or a hairpin turn that heads north on an unpaved road toward McCall Aviation and the main parking lot, past the Pioneer Hangar and fuel farm. Northbound travelers on SH-55 may access the same airport entrance via a center turn lane.

There are three access points from Deinhard Lane. The first entrance from the Deinhard Lane/SH-55 intersection is into the main parking lot, which is approximately 330 feet west of the intersection. There is no dedicated turn lane for the airport entrance. As a result, westbound travelers wishing to turn into the airport may cause traffic to back up into the busy intersection. The second access is to the airport administration office, which contains a small parking lot with five spaces and an automated vehicle gate leading to the aircraft apron. The third access point is to an automated emergency access gate, directly across from the McCall Fire Department. There are no dedicated turn lanes afforded to drivers in either direction on Deinhard Lane. Any future widening of Deinhard Lane should take this into consideration.

For the U.S. Forest Service complex on the west side of the airport, access is by way of Mission Street. There is a viewing area and Smokejumper Base interpretive site located near the reload area. This analysis does not consider vehicle parking requirements for the U.S. Forest Service side of the airport.

The primary parking area for vehicles in the east terminal area is an unpaved parking lot at the intersection of Deinhard Lane and SH-55. It has an irregular shape, and the spaces are not marked. The parking lot is approximately 14,300 square feet and can accommodate approximately 50-65 vehicles in its current configuration. The McCall Aviation FBO has approximately 12 paved parking spaces adjacent to the main parking lot. The Sawtooth Flying Service hangar area has space inside and outside the airport operating area fence for approximately 14 vehicles, although there are no marked spaces. In total, there are approximately 91 vehicle parking spaces available.

Figure 5.16 Vehicle Parking (Red)

Source: T-O Engineers

Vehicle parking demand is based on peak hour itinerant operations, which is discussed in section 5.8.2. It is assumed that based aircraft operators will park their vehicle(s) in their assigned aircraft parking space or hangar, not in the dedicated parking lots. For itinerant traffic, four people per operation are assumed for each air taxi operation, while two people are assumed for each general aviation operation. One vehicle parking space is assumed for every three people. In 2020, 54 people needed to be accommodated during the peak hour, resulting in 18 parking spaces needed. For 2040, the projected demand is to accommodate 64 people and 21 parking spaces during the peak hour. Consequently, there is enough vehicle parking space though the planning horizon to accommodate peak hour itinerant traffic and leave space for other airport users.

Despite the adequate space, there are efficiencies that can be gained by configuring and marking designated parking areas at the airport in accordance with the City of McCall Design Guidelines, City Code, and McCall Airport Minimum Standards. Doing so would not only improve efficiency, but would incorporate other City of McCall initiatives, such as the Pathways Master Plan, scenic routes, and public transportation.

GENERAL AVIATION TERMINAL

There is no general aviation terminal provided by the City of McCall at MYL. That service is provided by the FBO. McCall Aviation has a passenger facility at their FBO building that is approximately 1,940 square feet. Airport Cooperative Research Program (ACRP) Report 113, *Guidebook on General Aviation Facility Planning*, provides guidance on general aviation terminal size requirements. For planning purposes, terminal square footage requirements can be calculated using the peak hour transient operations, the number of passengers during the peak hour, and an assumption of 150 square feet of terminal space required per person. Using the passenger numbers calculated in section 5.8.3, there were 54 passengers during the peak hour in 2020, and 64 passengers forecast during the peak hour in 2040. This translates into a general aviation terminal square footage requirement of 8,100 square feet in 2020, and 9,600 square feet in 2040. Consequently, there is a general aviation terminal square footage deficit of 6,160 square feet in 2020, and a deficit of 7,660 square feet in 2040.

5.9 SUPPORT FACILITIES

DEICING

There are no deicing facilities at MYL. McCall Aviation offers deicing services by way of a deicing truck.

AVIATION FUEL FACILITIES

McCall Aviation is the current fuel provider at MYL. Their fuel capacity is stated below:

- Two 12,500-gallon above ground Jet A tanks
- One 10,000-gallon underground Jet A tank
- One 10,500-gallon above ground 100LL tank
- One 2,500-gallon above ground 100LL tank
- One 5,000-gallon Jet A truck
- One 3,000-gallon Jet A truck
- One 1,200-gallon 100LL truck
- One 2,400-gallon 100LL truck

This results in a total capacity of 43,000 gallons of Jet A and 16,600 gallons of 100LL. Fuel capacity requirements were calculated using 2019 totals and peak month operations (August). In 2019, McCall Aviation reported a total of 247,803 gallons sold. Assuming Jet A made up 67% of the total fuel volume sold, 100LL made up 33% of the total fuel volume sold, and August was 19.3% of the total annual operations in 2019 (37,800 from the forecast), the result is approximately 32,000 gallons of Jet A and approximately 15,800 gallons of 100LL were consumed in August of 2019. This means that prior to the 2020 COVID-19 pandemic, McCall Aviation had enough capacity to accommodate the busiest month of 2019.

Applying the fuel consumption percentages to August operations in 2019 yields a fuel consumption per operation value of 2.16 gallons/operation for 100LL and 4.40 gallons/operation for Jet A. If it is assumed over the planning horizon the consumption rate per operation decreases for 100LL and increases for Jet A, 2040 rates will be calculated at 2 gallons/operation for 100LL and 5 gallons/operation for Jet A. Using projected operations for August 2040 (7,533) with the assumed fuel consumption per operation rates results in approximately 15,000 gallons of 100LL and approximately 37,660 gallons of Jet A needed for the busiest month expected in 2040. McCall Aviation still has the capacity to accommodate this demand.

At the time of this study, Sawtooth Flying Service gained approval to sell 100LL at MYL from a 10,000-gallon tank. In addition to adding capacity to the fuel demands of the airport, it will provide another fuel option for airport users.

AIRCRAFT MAINTENANCE

DEW Aircraft, Inc. provides aircraft maintenance services at MYL. They are currently operating out of the McCall Aviation hangar but have an agreement with the City of McCall to develop a new maintenance facility west of the SRE building and airport administration offices, known locally as the Deinhard 1/Hangar 98 Project.

AIRCRAFT RESCUE AND FIRE FIGHTING (ARFF)

McCall Municipal Airport does not have its own ARFF capabilities, as it is not required. However, the McCall Fire Department is located across the street from the airport on Deinhard Lane, with an airport emergency access gate directly across from the station. According to the McCall Fire & EMS website[2], the vehicles at the station include:

- Engine #11: Type 1 with 1,500 gallons/minute of foam and 750 gallons of water.
- Engine #12: Type 1 with 1,750 gallons/minute of foam and 500 gallons of water.
- Truck #11: Ladder truck with 1,500 gallons/minute of foam and 500 gallons of water.
- Pumper Tender #1: Type 2 with 1,500 gallons/minute of foam and 3,000 gallons of water.
- ARFF #1: Type 2 airport crash truck with 1,250 gallons/minute of foam and 1,500 gallons of water.

The station also has three command vehicles, four ambulances, and one snowmobile.

SNOW REMOVAL EQUIPMENT (SRE)

According to FAA AC 150/5220-20A, *Airport Snow and Ice Control Equipment*, non-commercial service airports with more than 10,000 annual operations and at least 15 inches of annual snowfall should have a minimum of one high-speed rotary snow plow, supported by two snow plows of equal snow removal capacity. Current SRE at MYL consists of:

- 2006 John Deere 644J loader with snow bucket, snow blade, and general-purpose bucket.
- 2009 New Holland TV6070 bidirectional tractor with towed 12-foot rotary broom.
- 1992 Rolba rotary snow plow.
- 2016 Henderson dump truck with 20-foot plow.

The equipment is stored in an SRE building that was constructed in 2011 using FAA grant funding. The building is approximately 4,300 square feet and has four bays. The airport manager office is also located in the SRE building.

With the high volume of snowfall in McCall, the storage of snow during the winter is a challenge. As the snow is removed from the aircraft operating surfaces, it must be placed in a manner to not cause damage to aircraft as they taxi, takeoff, or land. Any future development must consider snow storage options.

AIR CARGO

There are no dedicated air cargo operations or facilities at the airport, and none anticipated through the planning horizon.

COURTESY BICYCLES

The Idaho Aviation Association has a "Borrow-A-Bike" program, which provides bicycles for visiting pilots at certain airports in Idaho, McCall being one of them. The bicycle shelter is located next to the vehicle access gate at the McCall Aviation FBO.

FIREFIGHTING ACTIVITIES

Aerial firefighting operations routinely uses the general aviation terminal area as overflow for both fixed-wing aircraft and helicopters, along with their associated service equipment. While these services are essential to the community, they use space that is otherwise intended for general aviation aircraft. Further, large firefighting helicopters create additional issues with rotor wash and blowing debris. Consideration should be given to space for large helicopter parking and service equipment that is separated from light general aviation parking areas. This will be looked at during the development alternatives analysis.

Figure 5.17 Fire Helicopter on Transient Aircraft Parking Apron

Source: T-O Engineers

5.10 UTILITIES

City of McCall GIS mapping was reviewed to identify utilities on the airport. It should be noted that the maps may be incomplete, although efforts were in progress at the time of this study to fill in any missing data. A summary of the utility services is listed in *Table 5.13*.

Table 5.13 McCall Municipal Airport Utilities

Utility	Provider	Location
Electrical	Idaho Power	Terminal Area/Hangars
Fiber	City of McCall – Information Systems	Deinhard Lane
High-Speed Data	Frontier Communications	Terminal Area/Hangars
Water	City of McCall – Public Works	Terminal Area/Hangars
Sewer	City of McCall – Public Works	Hangars/West Infield
Storm Water	City of McCall – Public Works	Terminal Area/Hangars/Runway
Irrigation	City of McCall – Parks & Recreation	Frontage at Deinhard Lane/SH-55

Source: City of McCall

Underground utilities (water, power, sewer) pass east-west just north of the Runway 16 threshold. Any future development will likely require an extension of desired utilities.

5.11 SPONSOR'S STRATEGIC VISION

The City of McCall's vision is articulated in the 2018 McCall Area Comprehensive Plan. The vision is, "*McCall is a diverse, small town united to maintain a safe, clean, healthy, and attractive environment. It is a friendly, progressive community that is affordable and sustainable.*"

There are three vision themes contained in the Dive Deep section of the comprehensive plan, labeled *Our Character, Our Economy, and Our Connections*. Under the Our Character theme, Land Use element, the comprehensive plan states, "*The future land uses of McCall should…capitalize on the airport as an economic catalyst.*" Under the Our *Economy* theme, Economic Development element, Goal 2, Balance and diversify the local economy while maintaining environmental compatibility, Policy 2.3 states, "*Promote and utilize the airport, public parks, pathways, waterfronts, the McCall Public Library, and the golf course as economic assets and incentives for business/property development and redevelopment.*"

The *Airport Facilities* element is located within the Our Connections vision theme and describes the goals and policies of the City of McCall as they relate to the McCall Municipal Airport. The goals and policies are as follows:

Goal 1: Continue to proactively protect the health, safety, and general welfare of both airport users and surrounding neighbors.

Policy 1.1: Operate, maintain, and develop the McCall Municipal Airport to ensure safe and efficient aeronautical facilities for all aviation users per City and FAA standards and requirements.

Policy 1.2: Operate and develop the airport in such a manner that it remains a safe and good neighbor by establishing compatible land uses around the airport.

Goal 2: Maintain and improve air service at the airport.

Policy 2.1: Continue proactive efforts with commercial operators and the community to maintain and improve air service options.

Policy 2.2: Continue planning and development of the airport to provide facilities that support services such as aerial firefighting, life flight, and business activity that are valued by the community.

Goal 3: Continually monitor and plan for future aeronautical and land use needs of the airport.

Policy 3.1: Adhere to the Airport Master Plan and associated approved Airport Layout Plan.

Policy 3.2: Develop available airport space based on aeronautical needs to support airport self-sufficiency.

Goal 4: Continue to integrate the airport into City transportation infrastructure and planning.

Policy 4.1: Plan transportation facilities to ensure adequate access to the airport and support the airport as an inter-modal hub, consistent with the Transportation Master Plan.

Goal 5: Plan land uses near the airport so that they are compatible with airport functions, compliant with FAA regulations, and do not negatively impact the safety of operations of the airport. Require aviation easements where needed.

Policy 5.1: Purchase (in fee simple) lands as recommended in Chapter 6 of the Airport Master Plan, Alternative Airport Concepts, and as shown on the Airport Layout Plan.

Policy 5.2: Maintain existing agricultural ground and open space in the vicinity of the airport, especially in key areas off the runway approach and departure corridors to reduce the safety risks for people and property on the ground and in the air.

Policy 5.3: Discourage high-density residential development and encourage commercial and industrial uses in the proximity of the airport that benefit from and do not conflict with aircraft operations.

Policy 5.4: Require Fair Disclosure Notification for new or substantial redevelopment of lots, buildings, structures, and certain activities near the airport notifying developers of the potential of low overhead flights, noise, dust, fumes, and other potential aviation impacts.

Goal 6: Account for the current and future economic benefit to the community when planning and developing on and around the airport.

Policy 6.1: Recognize the airport as an essential service and major contributing factor to economic development in McCall.

Policy 6.2: Encourage aviation related economic development opportunities in appropriate locations on or surrounding the airport.

Policy 6.3: In general, allow uses on and around the airport that promote the efficient mobility of goods and services consistent with regional economic development and transportation goals.

Policy 6.4: Connect the airport to downtown and commercial areas with safe, multimodal transportation options.

Goal 7: Continue to integrate the airport into the local McCall community.

Policy 7.1: Utilize the airport by hosting tours and events for the community.

Policy 7.2: Partner with the McCall-Donnelly School District to provide opportunities for Science, Technology, Engineering, and Math (STEM) education and instruction.

Policy 7.3: Promote a public education campaign to publicize what services the airport offers.

5.12 ACCESS CONTROL CONSIDERATIONS

Access to the terminal area of the airport is controlled by a combination of six-foot fencing topped with barbed wire, vehicle gates, and pedestrian gates. On the west side of the airport, access is controlled by the U.S. Forest Service. The south part of the airport is surrounded by wildlife fencing in various states of condition. Motion activated cameras used during the forecast data collection captured multiple crossings of the taxiway by large game animals just south of the hangar area. The taxiway relocation project installed new 10-foot wildlife fencing along the east side of the new taxiway. This fence should be extended around the south and west side of the runway as part of a future project.

Figure 5.18 Wildlife Intrusion

Source: T-O Engineers

5.13 FACILITY REQUIREMENTS SUMMARY

McCall Municipal Airport, classified as an ARC B-II, Large aviation facility, meets the majority of FAA design standards and recommendations. Identified deficiencies and other considerations are listed below.

Deficiencies:

- Runway Extension to 6,510 feet, to the south.
- Update runway designation to Runway 17/35.
- Increase size of Runway 16 Blast Pad to meet standard dimensions.
- Repaint faded runway markings.
- Replace and upgrade runway lighting to LED.
- Designate Taxiway B as such.
- Upgrade Taxiways B-1 and B-2 to meet current taxiway fillet standards.
- Repurpose general aviation hangar area taxiways as taxilanes, and designate them appropriately to avoid confusion with Taxiways A and B.
- Remedy the nonstandard TOFA between Hangars 211 and 212.
- Eliminate wide expanse of pavement at Taxiway B-1 and Runway 16.
- Remedy direct runway access at Taxiways A-2 and B-2.
- Replace existing PAPI and VASI with 4-light PAPI system.
- Complete wildlife fencing/fill in wildlife fence gaps.
- Remove tree obstructions north of Runway 16 and terrain obstructions in the Part 77 surfaces and instrument departure surface south of Runway 34 and east of the airport.

Considerations:

- Explore ASOS relocation options.
- Update the Airport Influence Overlay Zones to reflect the updated ALP.
- Explore additional hangar options, including T-hangars.
- Upgrade and reconfigure vehicle parking options.
- Explore general aviation terminal options.
- Explore snow storage areas.
- Identify additional helicopter parking areas.
- Replace the diagonal taxiway to improve circulation efficiency.

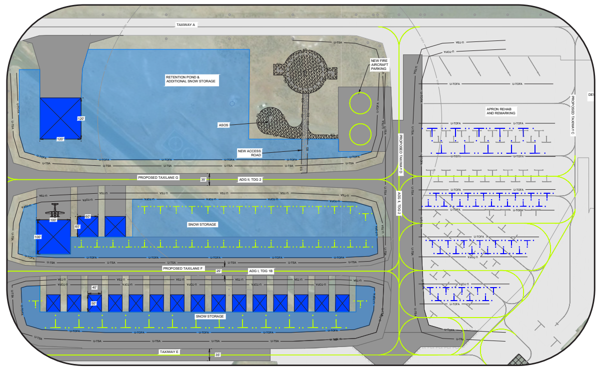
REFERENCES

1 Federal Aviation Administration Advisory Circular 150/5340-30J, Design and Installation for Airport Visual Aids, 2018. Accessed November 2020 at: https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5340-30J.pdf

2 McCall Fire & EMS Website. Accessed November 2020 at: https://www.mccallfire.com/apparatus.html

SECTION OVERVIEW

Chapter 6 identifies and evaluates different alternatives to meet the needs of the Airport Sponsor and users. A key element is addressing the previously identified facility requirements. Alternatives selected by the Airport Sponsor are summarized at the end of the chapter.



6.1 GENERAL

Previous chapters outlined the existing airport setting and infrastructure, current and future aviation activity, and airport deficiencies. This chapter examines development concepts to meet the facility requirements and accommodate future aviation demand. Final alternatives, as well as preliminary concepts, were reviewed. Multiple criteria were used in development and evaluation of alternatives for MYL:

- Existing Infrastructure: Described in Chapter 3, *Inventory*, conceptual alternatives weighed the condition or lack of existing facilities at the airport.
- Future Aviation Activity: Detailed in Chapter 4, *Forecast of Aviation Demand*, conceptual alternatives considered the forecast operations and type of aircraft for the next 20 years.
- FAA Design Standards: Outlined in Chapter 5, *Facility Requirements*, alternatives addressed FAA design standards and recommendations.
- Community and Airport Goals: Conceptual alternatives were designed based on feedback from the City of McCall and airport users, and support community and economic goals.
- Compatible Land Use: Alternatives were designed to ensure compatible land use.
- Efficiency: Alternatives aimed to utilize existing space in the most efficient manner, balancing airfield traffic, hangar access, safety areas, and utility lines.
- Reasonable and Justified: Only alternatives that progressed toward a reasonable and justified goal were evaluated.
- Idaho State System Plan: Design of alternatives incorporated Idaho State System Plan goals and objectives.

6.2 SPONSOR AND USER INPUT

Airport stakeholders contributed input to the development of alternatives by way of airport advisory committee meetings, direct communication, and a public open house.

6.3 NEEDED IMPROVEMENTS SUMMARY

Chapter 5, *Facility Requirements*, identified airport deficiencies and considerations. Based on this information, needed improvements are summarized on the next page.

To enhance safety and meet FAA design standards:

- 402-foot runway extension to the south for a future runway length of 6,510 feet.
- Update runway designation to 17/35 due to magnetic declination.
- Increase size of Runway 16 blast pad to standard dimensions.
- Repaint faded runway markings.
- Replace and upgrade runway lighting to LED.
- Designate Taxiway B as such.
- Complete wildlife fencing and/or fill in wildlife fence gaps.
- Upgrade Taxiways B-1 and B-2 to meet current taxiway fillet standards.
- Repurpose general aviation hangar area taxiways as taxilanes and designate them appropriately.
- Remedy nonstandard TOFA between Hangars 211 and 212.
- Eliminate wide expanse of pavement at Taxiway B-1 and Runway 16 (runway incursion mitigation measure).
- Remedy direct runway access at Taxiways A-2 and B-2.
- Replace existing PAPI and VASI with 4-light PAPI system.
- Remove tree and terrain obstructions.

Considerations to improve efficiency, compatibility, and financial sustainability:

- Relocate the ASOS.
- Update Airport Influence Area Overlay Zones to reflect the updated ALP.
- Explore additional hangar options, including T-hangars.
- Upgrade and reconfigure vehicle parking options.
- Explore general aviation terminal options (Idaho Airport System Plan objective).
- Improve circulation and efficiency within the Terminal Area.
- Identify additional helicopter parking areas.
- Explore snow storage areas.

6.4 RUNWAY ALTERNATIVES

CROSSWIND RUNWAY

A crosswaind runway was not pursued, as the primary runway provides greater than 95% wind coverage for all weather, IFR, and VFR conditions. As such, a crosswind runway is not justified

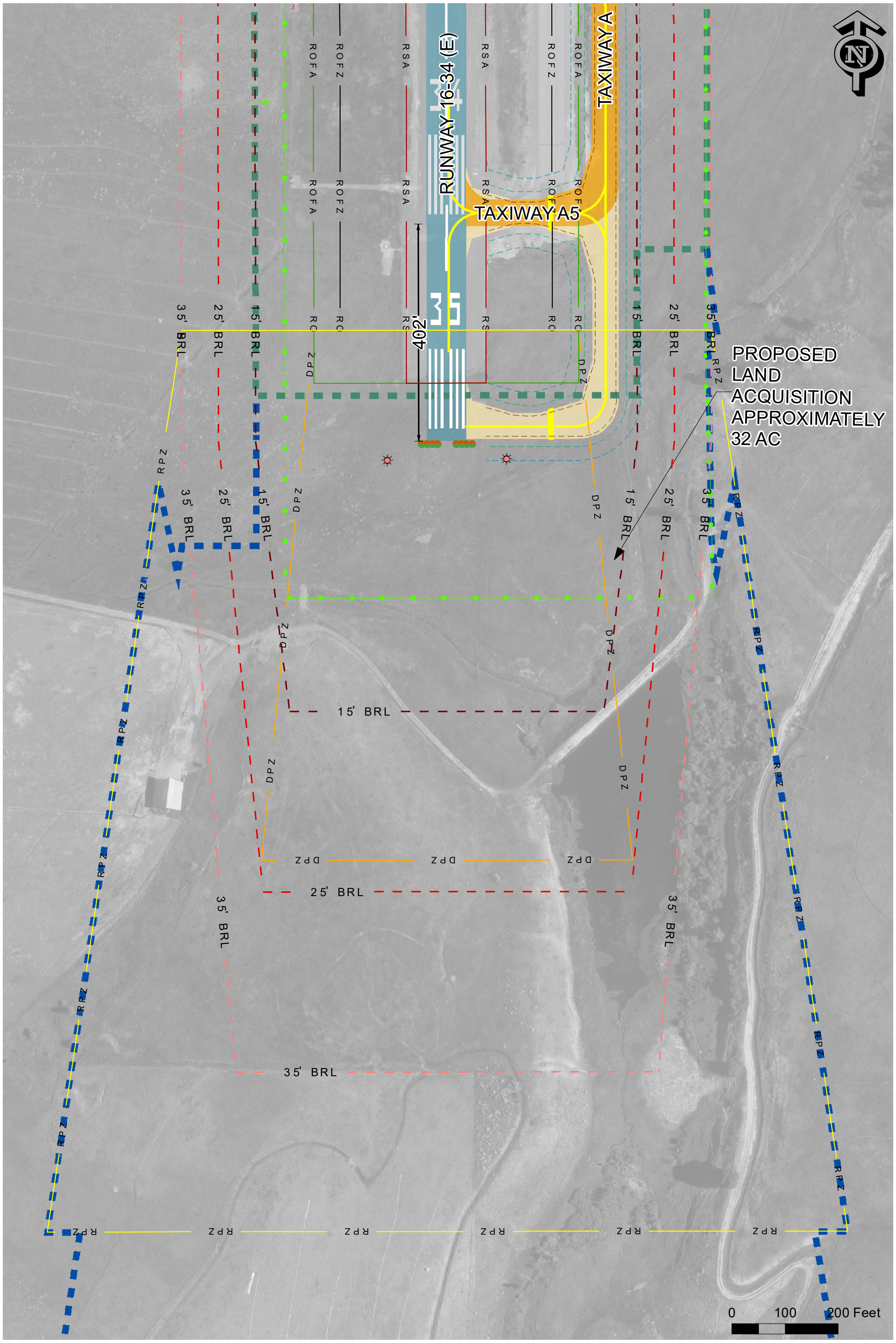
TURF SECONDARY RUNWAY

A turf secondary runway was suggested by the airport users, as the airport is used by aircraft suited for backcountry operations from unimproved airstrips. This alternative was not pursued, due to the primary runway providing adequate capacity for the forecast activity, and dimensional limitations within the existing airport footprint precluding a secondary runway from meeting airport design standards.

RUNWAY EXTENSION

To meet the minimum runway length recommendation of 6,510 feet, a runway extension of 402 feet is shown to the south. This requires land acquisition of approximately 32 acres to account for the space needed for the runway, parallel taxiway extension, and protection of the RPZ that sits within the City's jurisdiction. Terrain obstructions to the south complicate the runway extension, which become more prominent as the runway extends to the south. Extending the runway north was not feasible due to Deinhard Lane and other obstructions.

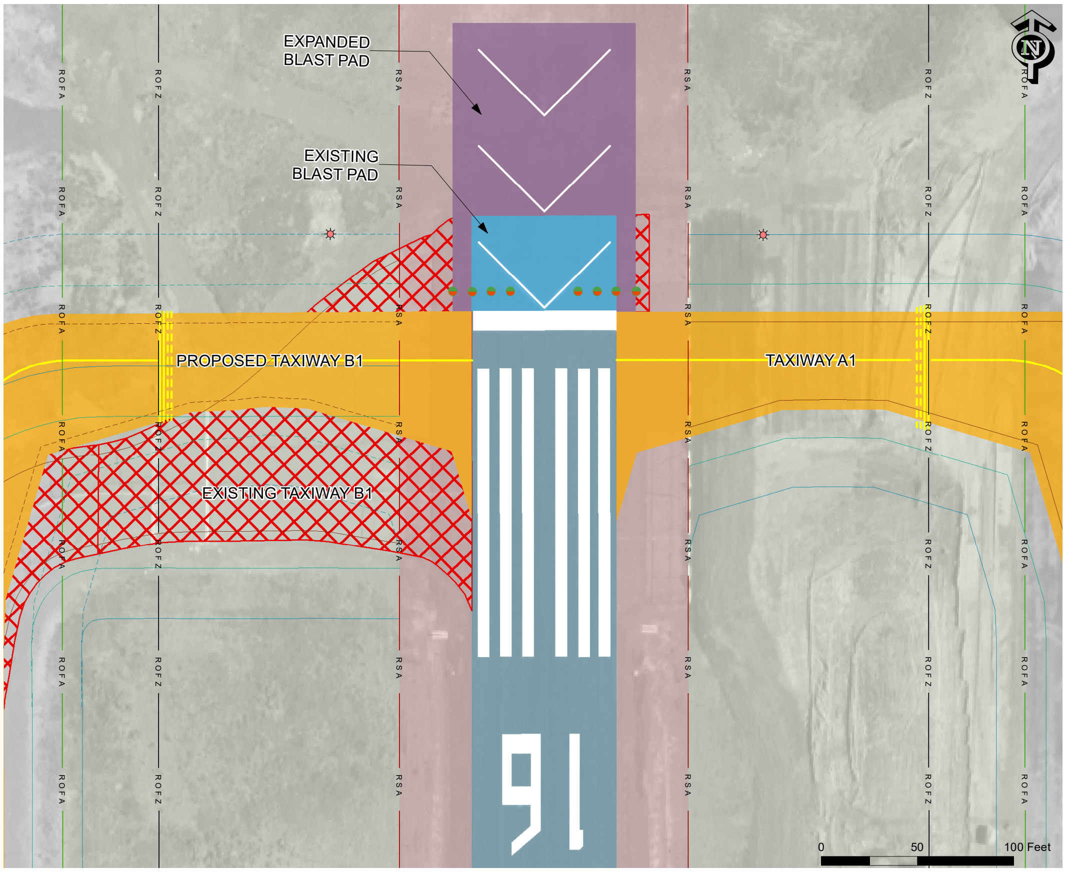
Figure 6.1 Runway Extension with Land Acquisition



BLAST PAD

The current blast pad at Runway 16 does not meet current dimensional standards. This alternative expands the blast pad to meet standards and reduce the effects of jet blast off the end of the runway.

Figure 6.2 Expanded Blast Pad



6.5 TAXIWAY ALTERNATIVES

TAXIWAYS A-2 AND B-2

Taxiways A-2 and B-2 currently do not meet taxiway fillet standards and provide direct access to the runway from an apron, contributing to the possibility of runway incursions. This alternative corrects the taxiway fillet design deficiency and installs elevated runway guard lights at the runway hold lines to help prevent runway incursions.

TAXIWAY B-1

Taxiway B-1 does not meet current taxiway fillet standards and has a wide expanse of pavement leading onto the runway. This alternative corrects these deficiencies by realigning the runway entrance and the turn from Taxiway B.

Figure 6.3 Taxiways A-2 and B-2

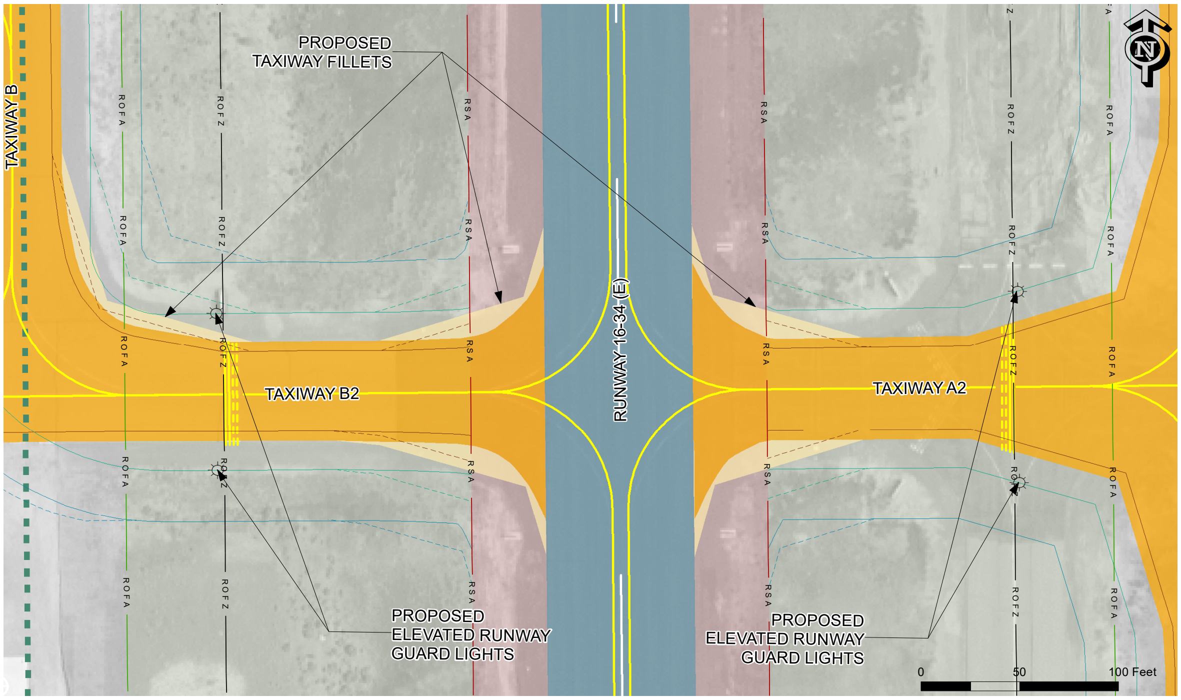
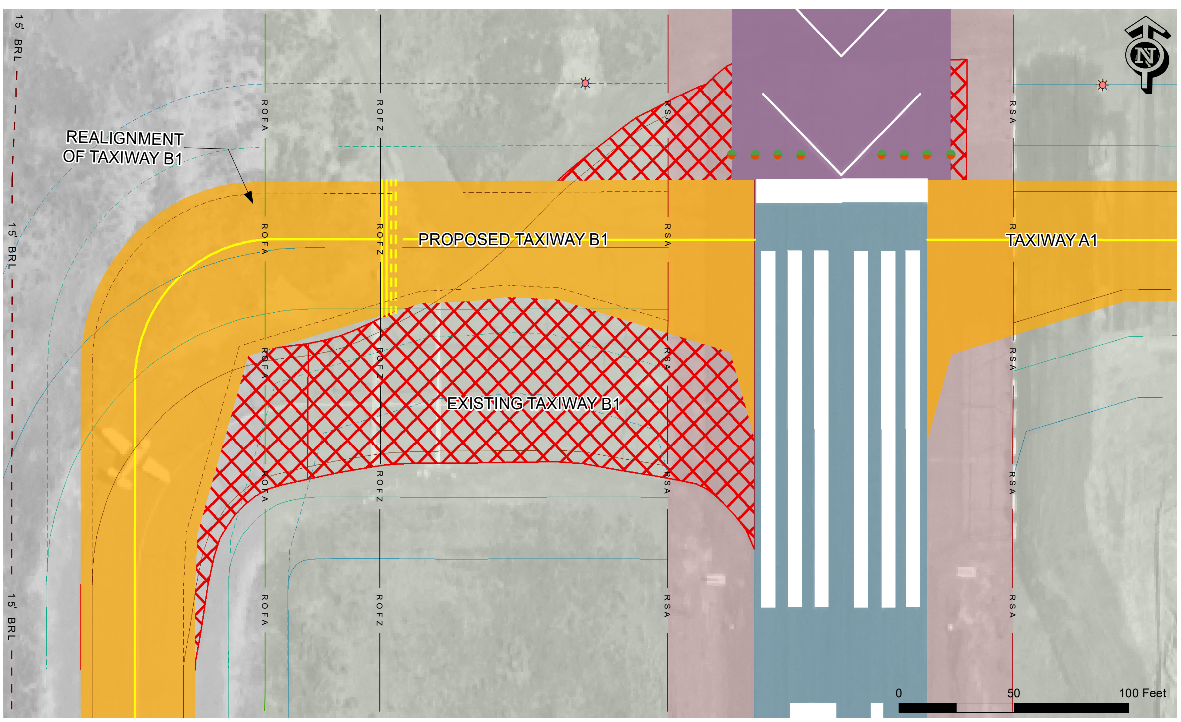


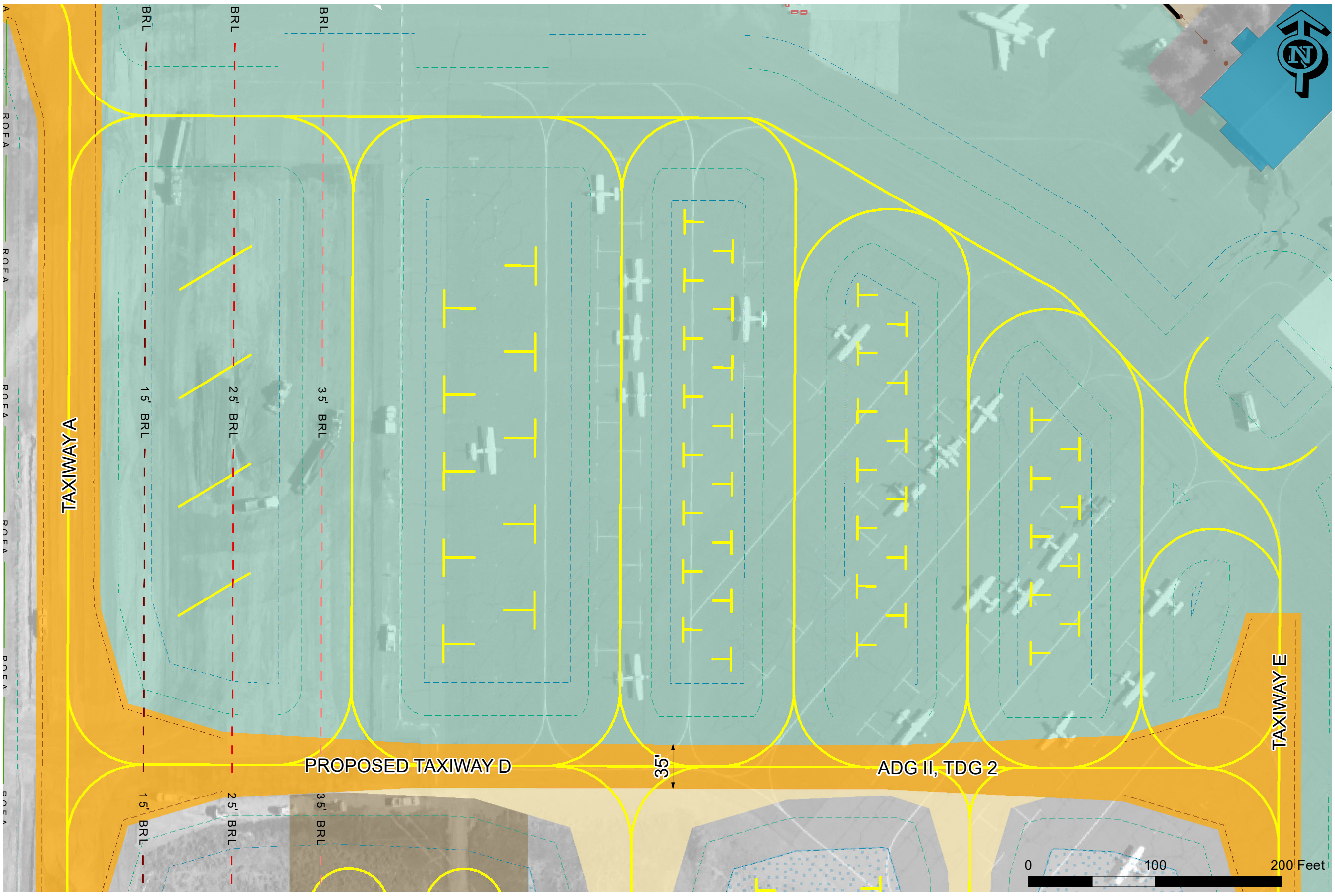
Figure 6.4 Taxiway B-1



PROPOSED TAXIWAY D

As a result of the relocation of parallel Taxiway A in 2020, the diagonal taxiway within the terminal area was eliminated. To provide enhanced safety, circulation, and efficiency, a replacement was desired. This alternative installs a new east-west taxiway, proposed Taxiway D, along the southern edge of the existing transient apron, connecting Taxiway A to Taxiway E. This location ties into an existing stub from Taxiway A and avoids the segmented circle, ASOS, proposed fire aircraft parking apron, and choke points along Taxiway E. Proposed Taxiway D would be designed and built to ADG-II standards to allow free-flow of all aircraft expected to use the airport.

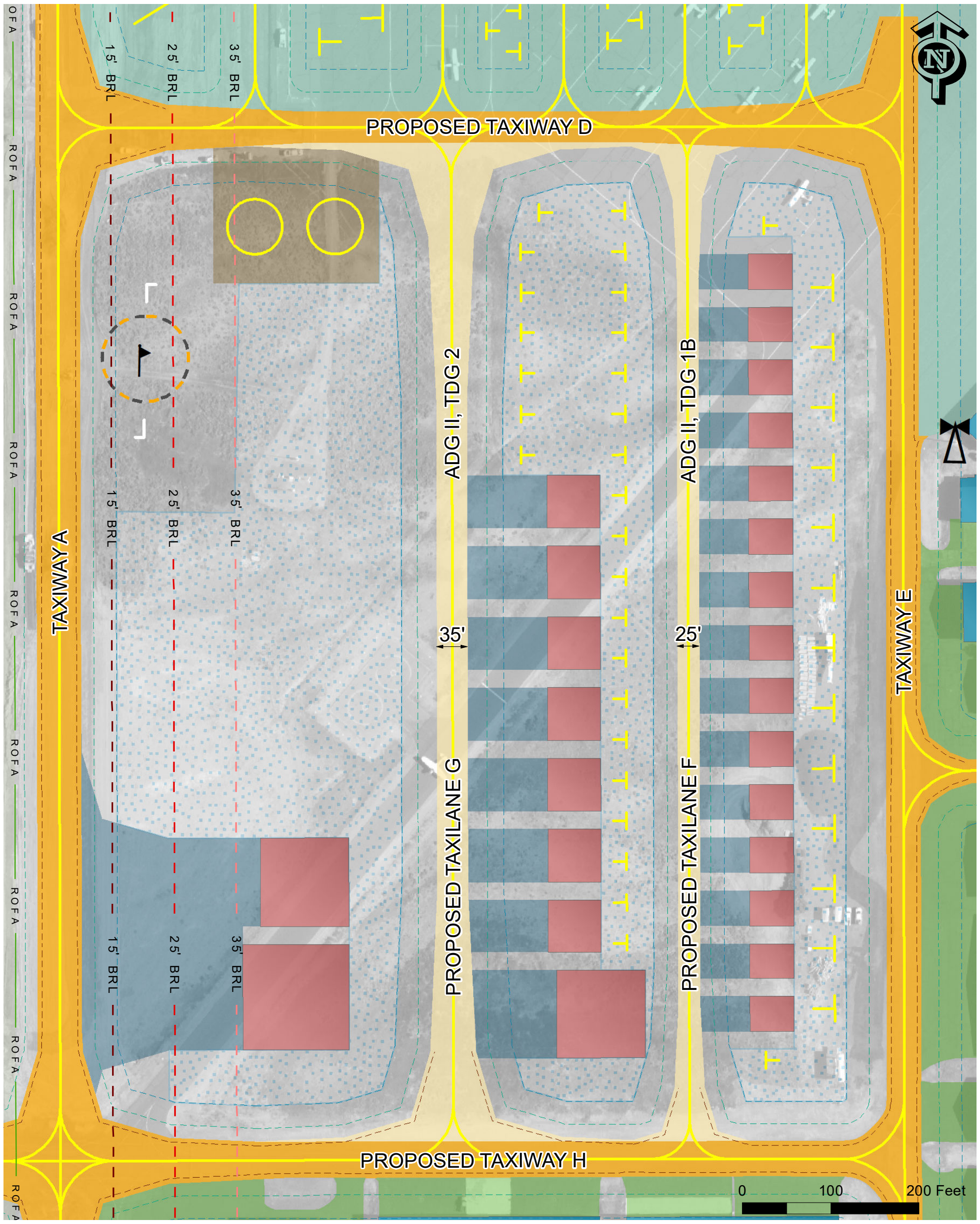
Figure 6.5 Proposed Taxiway D



PROPOSED TAXILANES F AND G

Two new taxilanes are proposed as part of this alternative to allow access to future development in the infield of the terminal area. These north-south taxilanes would be designated Taxilane F and G, with Taxilane F designed and constructed to ADG-I standards, and Taxilane G designed and constructed to ADG-II standards. This would maximize space and establish separate areas for small and medium-to-large aircraft.

Figure 6.6 Proposed Taxilanes F and G



TAXIWAY NOMENCLATURE

This alternative remedies confusion associated with the naming of taxiways and taxilanes currently on the airport. Moving forward, taxiways and taxilanes will be arranged in a logical order, per FAA Engineering Brief 89, *Taxiway Nomenclature Convention*.

Taxiway B is a partial parallel taxiway on the west side of the airport with two connectors, B-1 and B-2, starting at the Runway 16 end. Taxiway A is a full parallel taxiway that was relocated in 2020 on the east side of the runway. It has five connectors, A-1 through A-5, starting at the Runway 16 end. Portions of the connectors were reconstructed in 2020 as part of the Taxiway A project. A runway extension to the south would require an extension of Taxiway A and an additional connector, A-6.

Within the terminal area, taxiway and taxilane designations begin with Taxiway C on the north end of the apron and progress through Taxilane K on the south end of the hangar complex. Taxilanes E-1 through E-3 identify the hangar rows east of Taxiway E.

Figure 6.7 Proposed Taxiways C and D

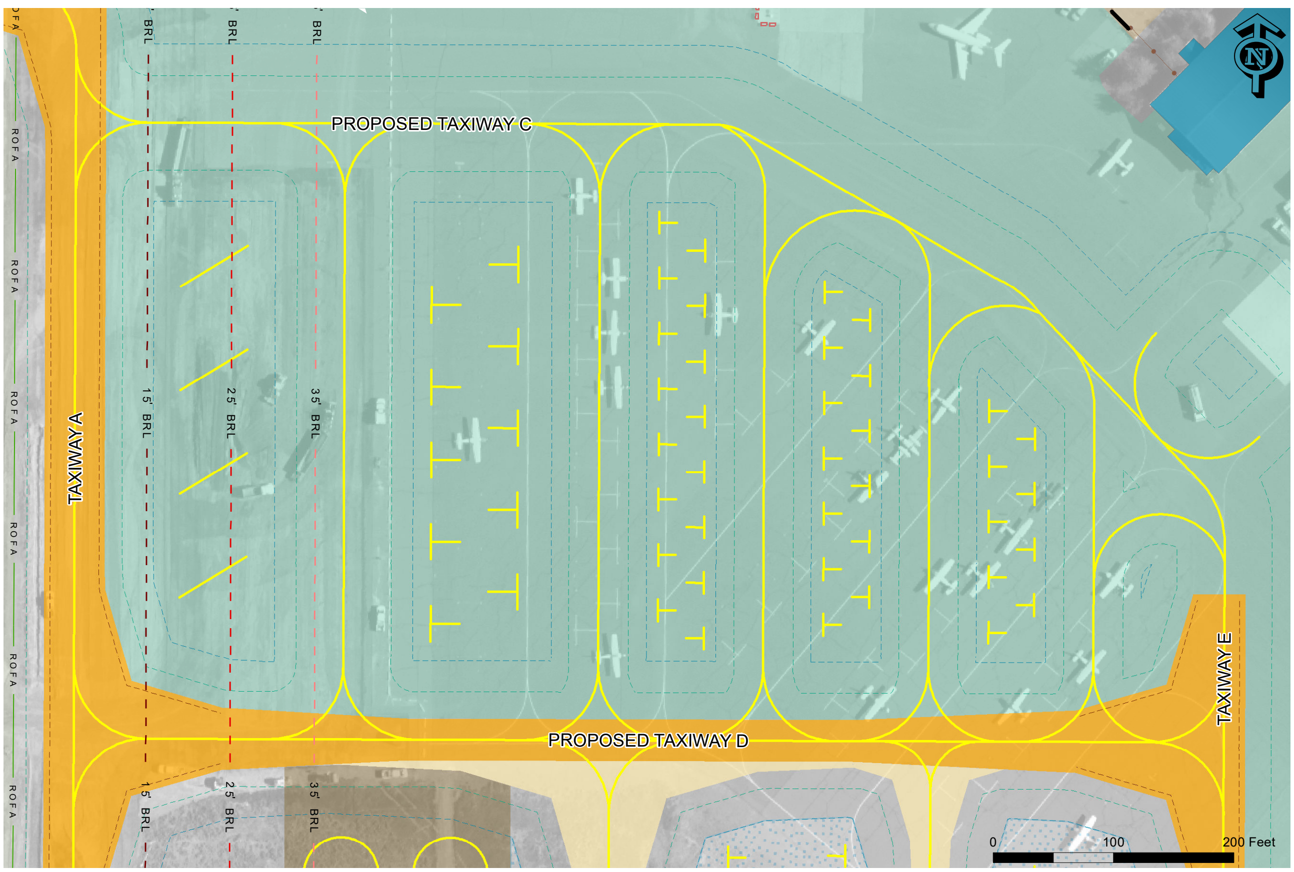
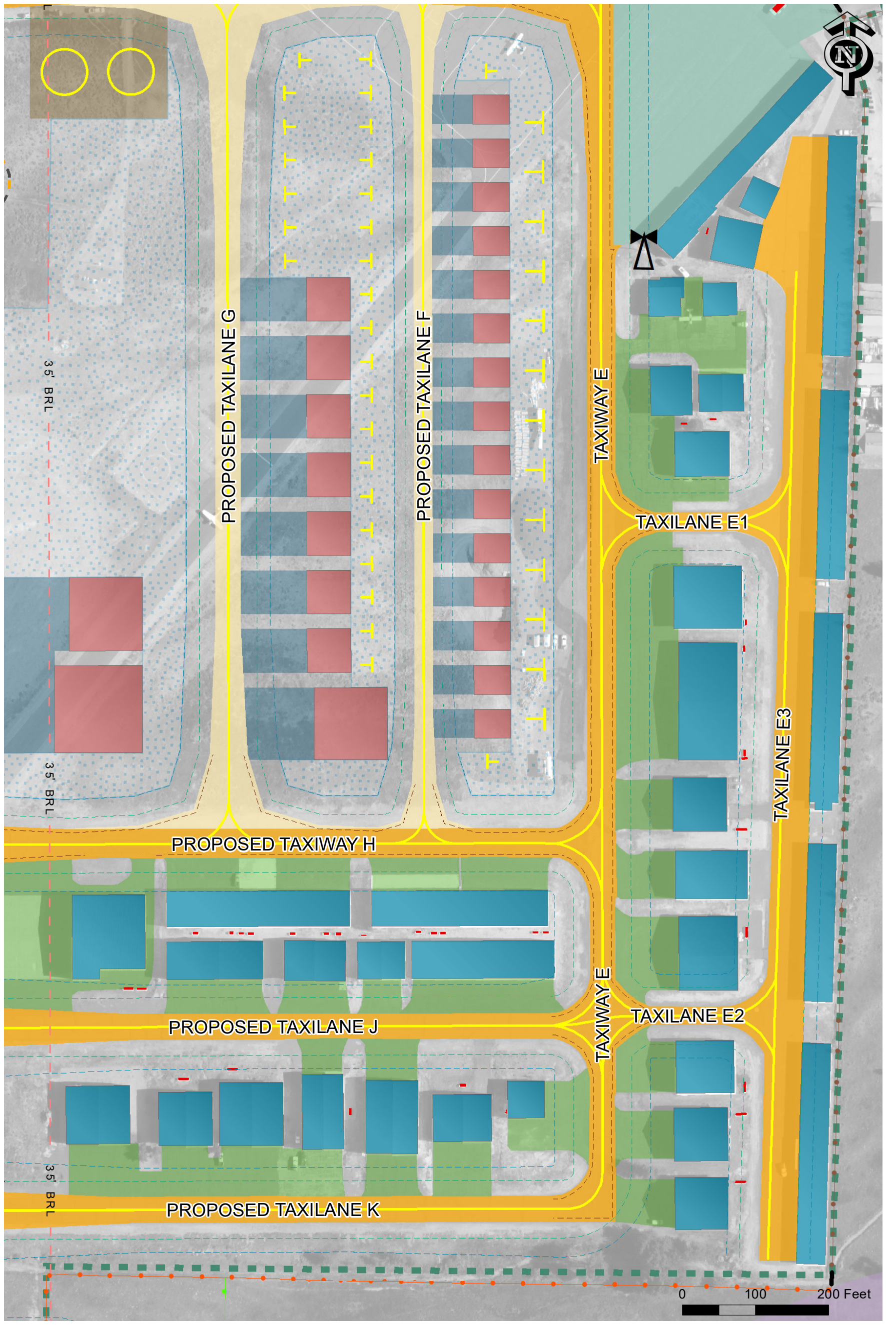


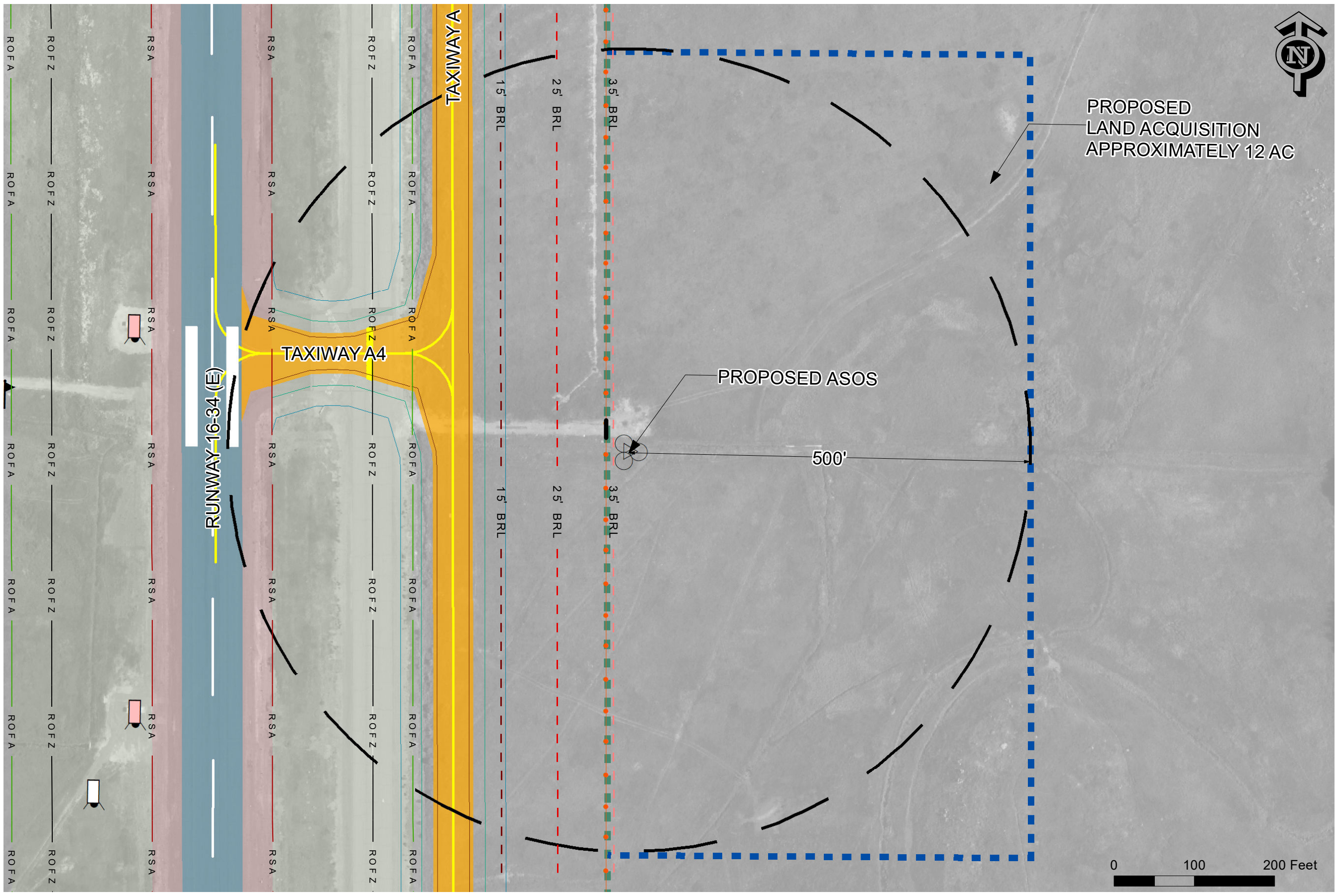
Figure 6.8 Hangar Area Taxiways and Taxilanes



6.6 ASOS RELOCATION

The current ASOS location inhibits development of the infield area due to a 1,000-foot diameter (500-foot radius) critical area. This alternative proposes relocating the ASOS south to its previous position east of Taxiway A. This location was selected because it has an easement, utilities, and meets the ASOS siting criteria for the existing and future runway length. Moving the ASOS to this location requires land acquisition of approximately 12 acres to ensure full protection of the ASOS critical area.

Figure 6.9 Proposed ASOS Location with Land Acquisition



6.7 GENERAL AVIATION TERMINAL

The purpose of having a general aviation terminal at MYL is to have an official "store front" for the City at the airport. This would allow consolidation of City administrative offices and provide opportunities to lease office and counter space to seasonal or perennial aviation providers. The terminal would also include a pilot lounge, waiting room, and passenger amenities.

The existing terminal area is constrained and does not provide enough space to construct a new general aviation terminal with adequate aircraft parking apron and space for vehicle parking, without having to remove existing tenants or tie-down spaces. To provide maximum access to the public, the general aviation terminal should be placed on the airport near Deinhard Lane or State Highway (S.H.) 55 and have direct access to the taxiway system. As such, from a geographic standpoint the best location for the general aviation terminal is east of Taxiway A, south of the existing terminal area. This alternative requires approximately 17 acres of land acquisition and an extension of Krahn Lane west of S.H. 55. The acquisition would accommodate a 9,600 square foot general aviation terminal, parking apron and taxiway access meeting ADG-II standards, 13 parking spaces for medium-sized jets and turboprops, vehicle parking with 20 spaces, and room for future expansion.

Figure 6.10 General Aviation Terminal

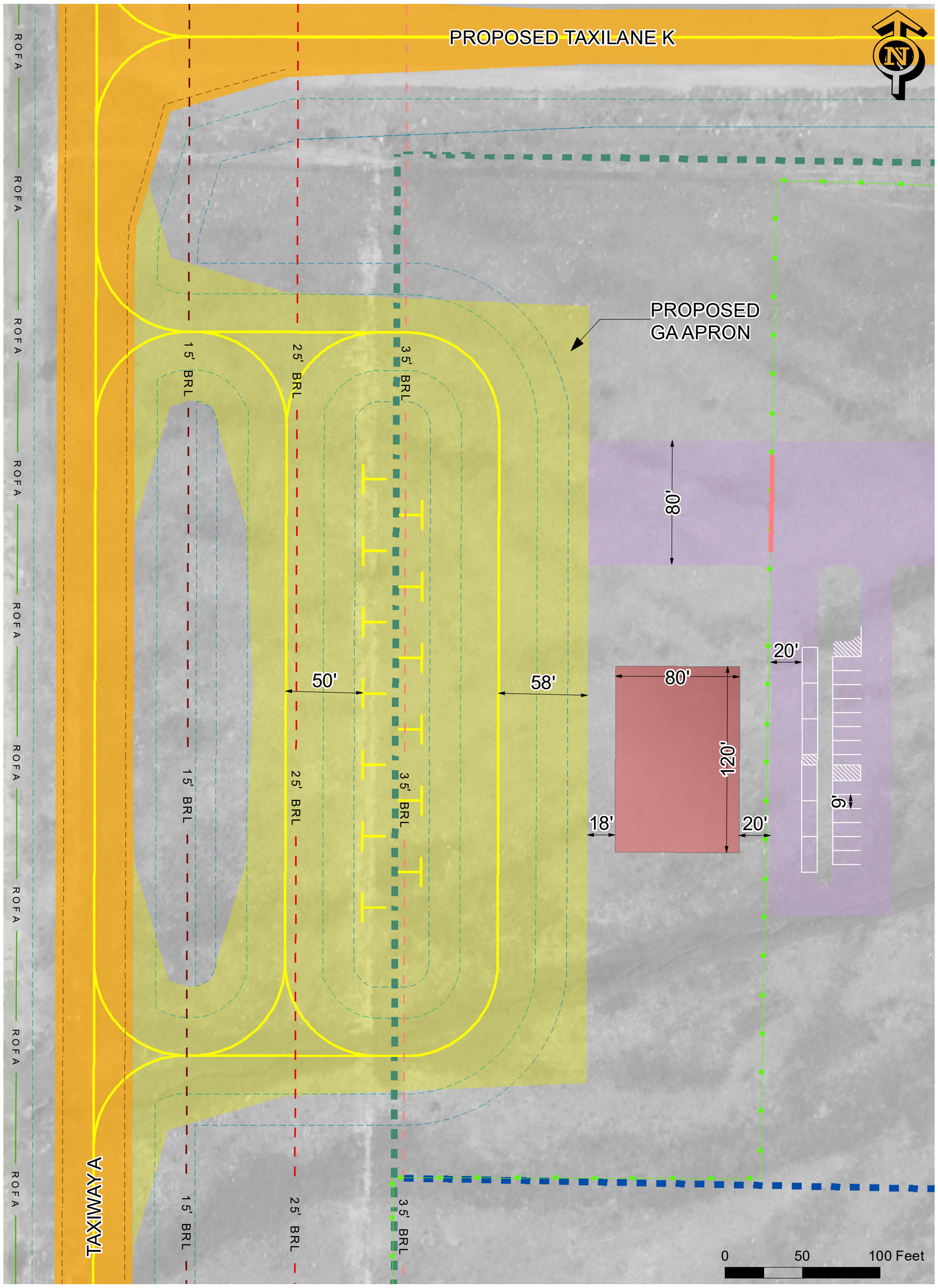
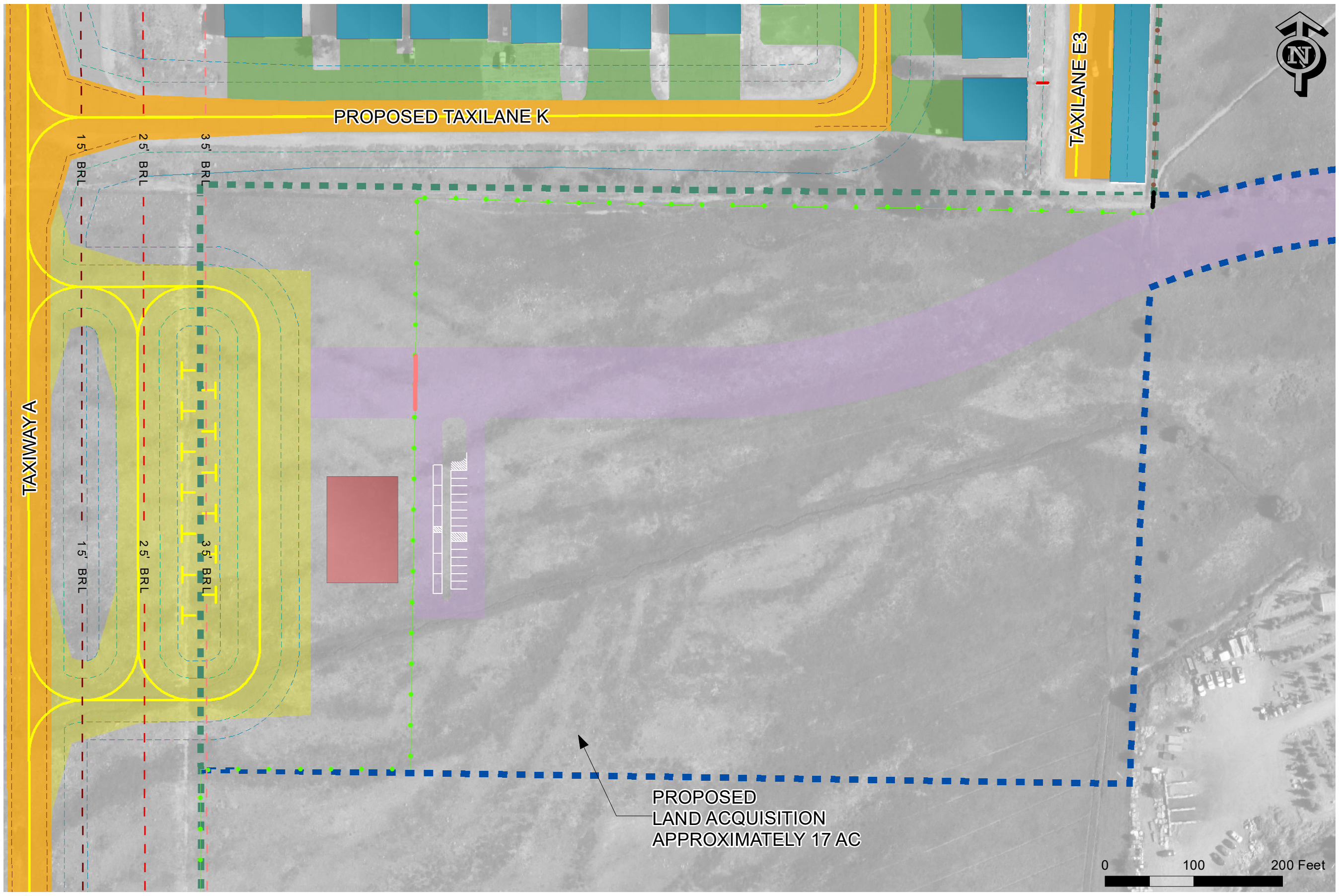


Figure 6.11 General Aviation Terminal Land Acquisition



6.8 INFIELD DEVELOPMENT

The addition of Taxilanes F and G in the infield create opportunities for development of hangars to meet the demand posed by the hangar wait list. Due to the present position of the ASOS, and its associated critical area, hangar development is constrained to those areas outside of the critical area until the ASOS can be relocated. As a result, two development alternatives were created for the infield – Phase 1, which maintains the ASOS in situ, and Ultimate, which assumes the ASOS is relocated to another place on the airport in the future.

PHASE 1

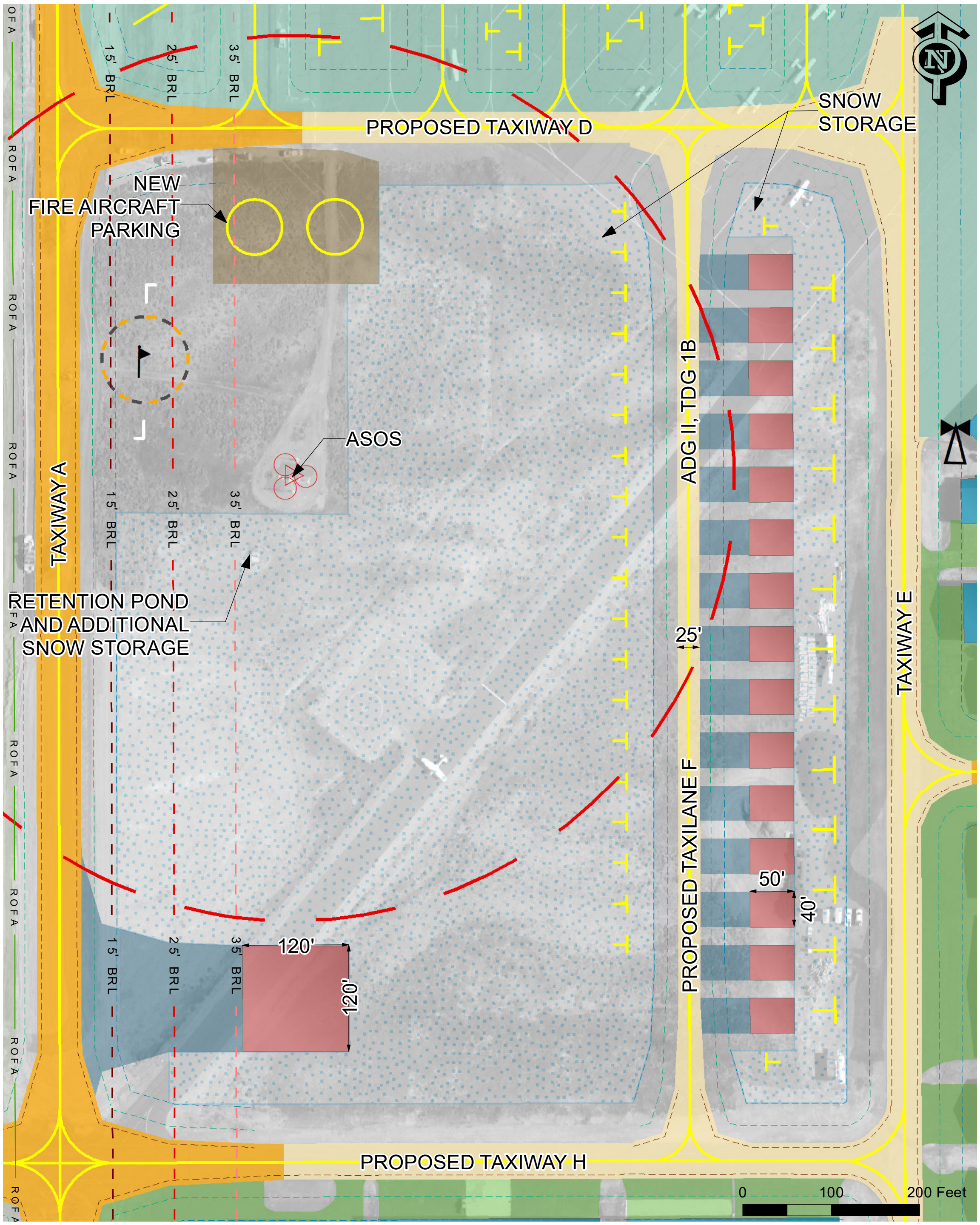
The east side of the development area, between Taxilane F and Taxiway E, is intended strictly for small, piston aircraft. Outside of the ASOS critical area, there is space for up to 15 small (40' x 50') box hangars, opening to the west onto Taxilane F. The remaining space is filled with seasonal tie-downs, paved or unpaved, which would be used as snow storage in the winter.

The center section of the development area, between Taxilanes F and G, is intended for small and medium-size aircraft. Large (up to 100' x 100') and medium (60' x 60') box hangars are positioned at the south end of the infield opening west onto Taxilane G. The remaining space is filled with seasonal tie-downs that would be used for snow storage in the winter. Tie-downs could be paved or unpaved.

The western portion of the infield is reserved for one large hangar, up to 120' x 120', opening directly onto Taxiway

A. The existing retention basin remains in place, but will require modification to attain future drainage requirements. A new parking pad that can be used for overflow firefighting aircraft is added between the segmented circle and proposed Taxiway D. The pad is large enough for two heavy firefighting helicopters and support equipment, or one Canadair CL-215 "Super Scooper" firefighting aircraft, plus support equipment. The access road to the ASOS and segmented circle is realigned to avoid the new parking pad.

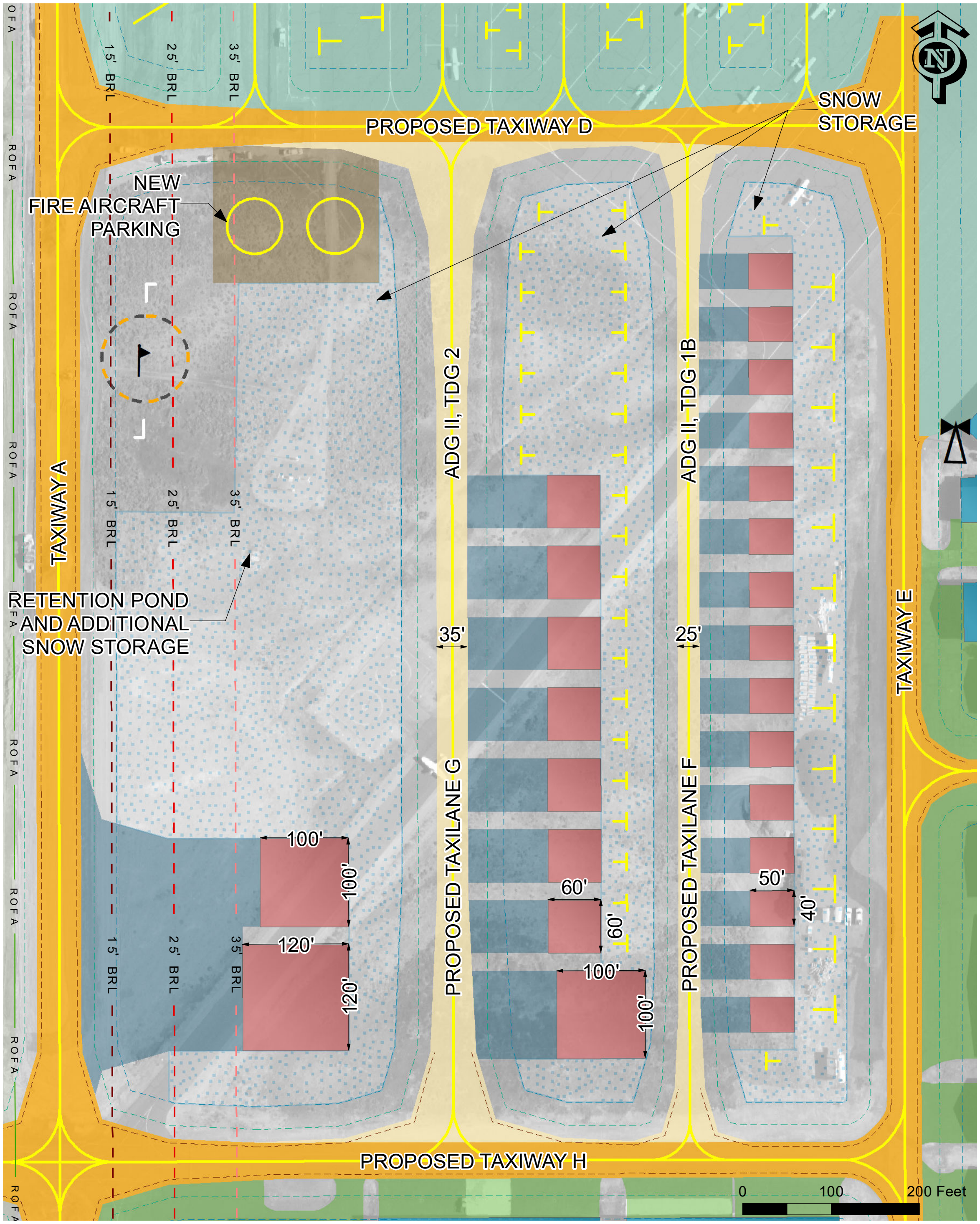
Figure 6.12 Infield Development Overview - Phase 1



ULTIMATE

The Ultimate layout of the infield development alternative differs from Phase 1 only in that the ASOS has been relocated elsewhere, allowing additional hangars to populate the infield, as needed.

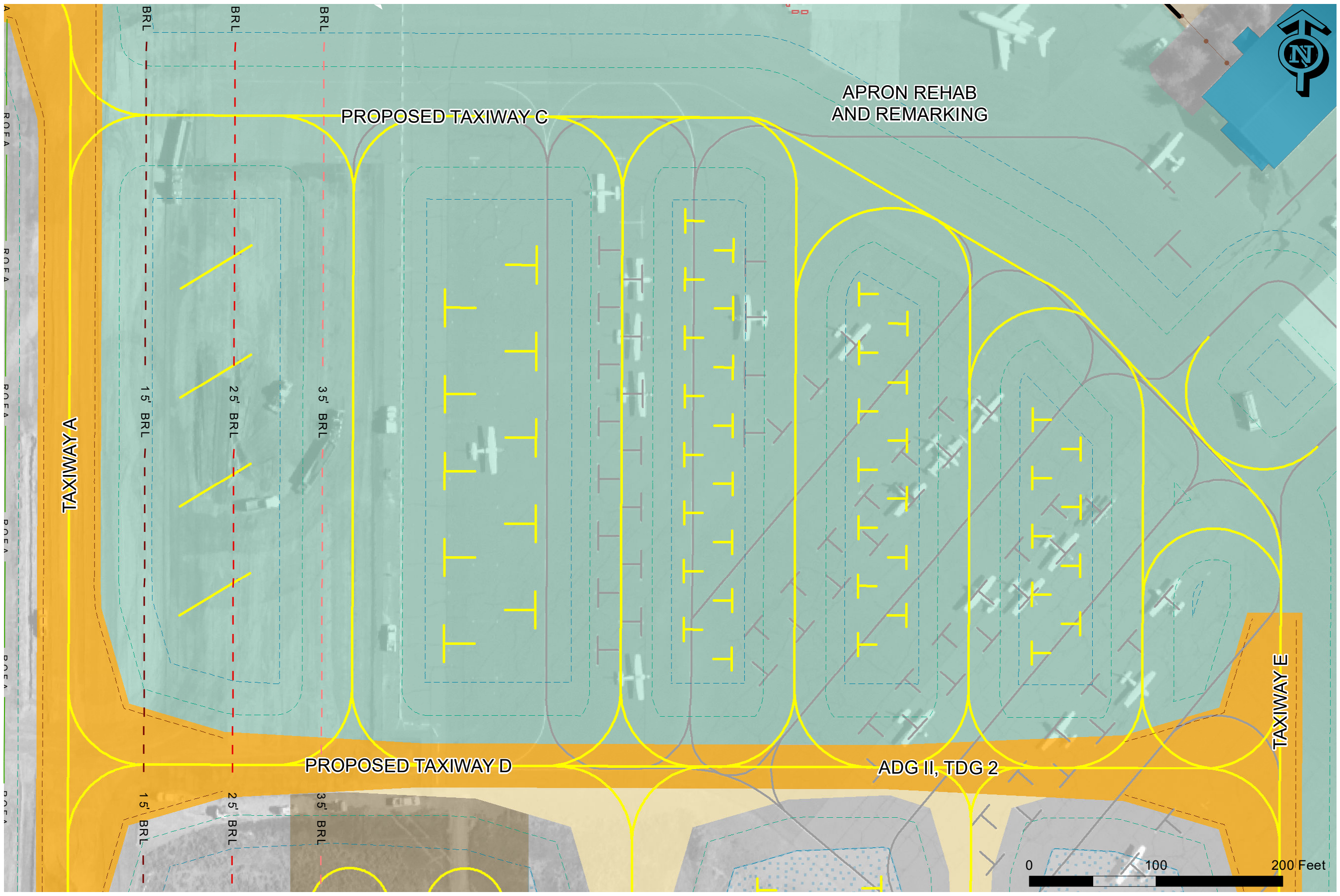
Figure 6.13 Infield Development Overview - Ultimate



6.9 TRANSIENT APRON RECONFIGURATION

With the addition of proposed Taxiway D, the parking spaces on the Transient Apron should be reconfigured to eliminate angles and gaps to maximize efficient use of space. This alternative creates parallel rows and adds 10 spaces for medium-sized jets and turboprops.

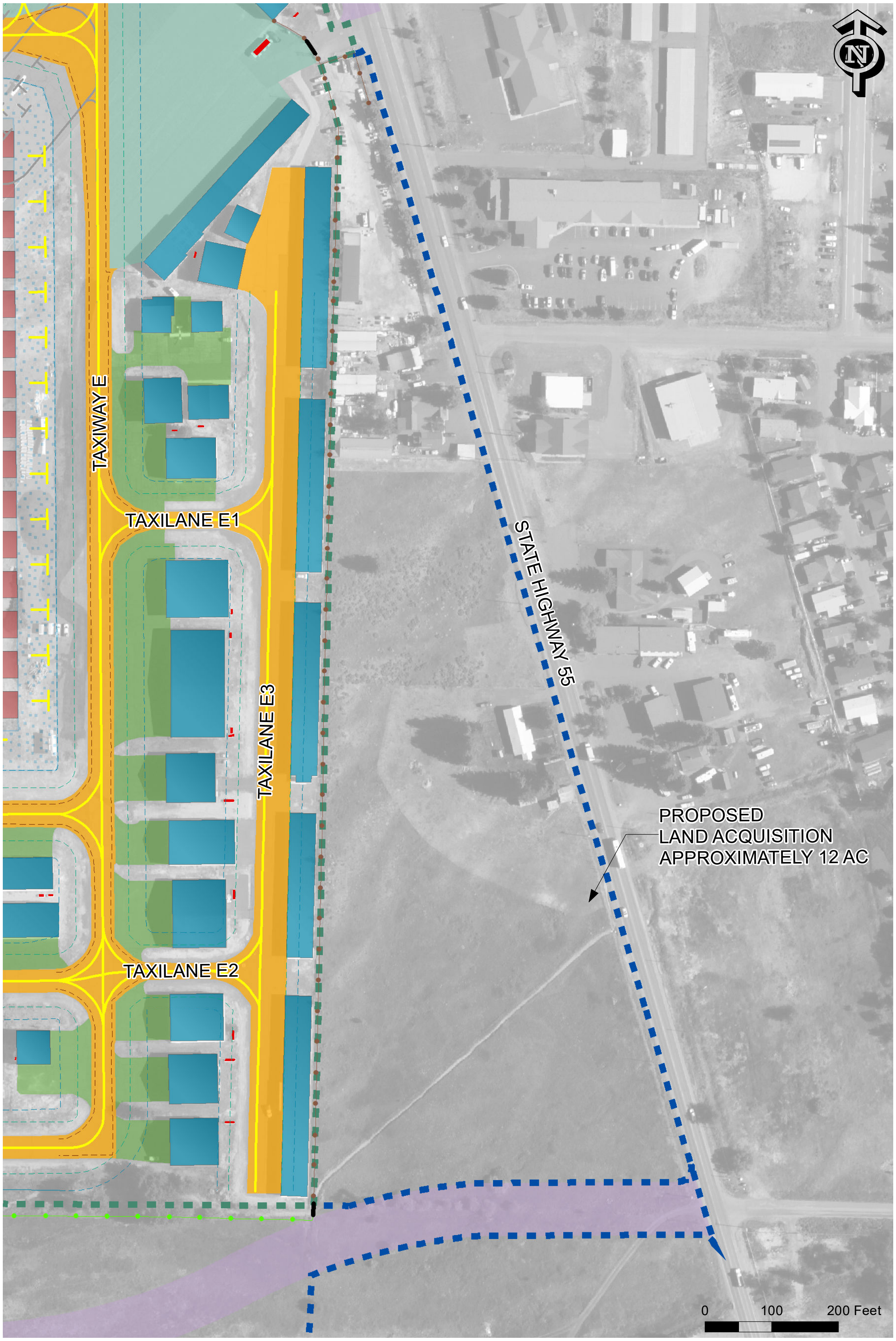
Figure 6.14 Transient Apron Reconfiguration



6.10 ADDITIONAL LAND ACQUISITION

There is a triangular-shaped parcel of approximately 12 acres between the east hangar row and S.H. 55 that presents a revenue-generating opportunity for the City to provide a mix of aeronautical and non-aeronautical municipal uses, and create a compatibility buffer zone for the airport. The parcel is currently zoned as Community Commercial and Industrial.

Figure 6.15 Additional Land Acquisition



6.11 OBSTRUCTIONS

During the Airport Master Plan study, the FAA conducted a survey of obstructions around MYL and identified numerous obstructions, mostly trees, north, south, and east of the airport (this survey was conducted outside of the Airport Master Plan, but parallel to it). Consequently, the FAA modified the instrument approach procedures for both runway ends, rendering the Runway 34 LPV and LNAV/VNAV, Runway 16 straight-in at night, and Runway 16 circling approaches at night unavailable. Also, the Runway 16 PAPI had been permanently turned off due to obstructions. In June 2021, the Runway 16 PAPI was removed from the airport. Any future visual glide slope system installation, for either runway end, will need to resolve the obstruction issue prior to installation.

6.12 ALTERNATIVES SUMMARY

As previously stated, numerous criteria were used to design the future development alternatives for MYL. These designs were tailored to suit the airport, given MYL's geometry, climate, aviation traffic, and the unique goals and financial capabilities of the local community. Effective planning is necessary to ensure development can occur in an orderly and focused manner. Airport Master Plans, such as this one, facilitate the process. Ultimately, reasonable alternatives were developed to address the short- and long-term needs of MYL.

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SECTION OVERVIEW

This chapter presents environmental considerations and factors pertinent to the McCall Municipal Airport, with an emphasis on proposed development. Information is compiled from numerous sources, notably multiple governmental agencies.

7.1 GENERAL

The purpose of considering environmental factors in airport master planning is to help the Airport Sponsor evaluate potential development alternatives and expedite future environmental evaluations. Airport planning provides the basis for a project's purpose and need and aids in completing an environmental evaluation to fulfill requirements set forth by the National Environmental Policy Act (NEPA) of 1969.

NEPA PROCESS

The NEPA process evaluates the environmental effects of a federal undertaking, including its alternatives. There are three levels of analysis: categorical exclusion (CATEX) determination; preparation of an environmental assessment/ finding of no significant impact (EA/FONSI); and preparation of an environmental impact statement (EIS).

- CATEX: An undertaking may be categorically excluded from a detailed environmental analysis if it meets certain criteria that a federal agency has previously determined as normally having no significant environmental impact.
- EA/FONSI: At the second level of analysis, a federal agency prepares an EA to determine if a federal undertaking would significantly affect the environment. If the answer is no, the agency issues a FONSI, which may include measures to mitigate potentially significant impacts.
- EIS: If the EA determines that the environmental consequences of a proposed federal undertaking may be significant, an environmental impact statement (EIS) is prepared. An EIS is a more detailed evaluation of the proposed action and alternatives.

7.2 AIR QUALITY

The Clean Air Act (CAA) is the primary statute related to air quality. The CAA regulates air pollutant emissions from stationary and mobile sources and authorizes the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) for six pollutants, called criteria air pollutants. The criteria pollutants include carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO2), ozone (O3), particle pollution (PM-10 and PM-2.5), and sulfur dioxide (SO2).[1]

McCall Municipal Airport is in attainment for all criteria pollutants.[2] The projects proposed in this Airport Master Plan are unlikely to cause or create a reasonably foreseeable increase in air emissions, as the projects are not anticipated to increase or change aircraft operations. Temporary air quality impacts during construction would be short-term and of local impact. Emission reduction strategies will be employed to minimize air quality impacts, such as re-using materials onsite, using locally sourced materials to reduce the number of vehicle trips and trip lengths, and using dust control measures during construction.

7.3 BIOLOGICAL RESOURCES

FEDERALLY LISTED SPECIES AND CRITICAL HABITATS

Section 7 of the Endangered Species Act (ESA) applies to the actions proposed or performed by federal agencies and sets forth requirements to determine if the proposed action(s) may impact endangered or threatened species. In accordance with Section 7 of the ESA, the FAA must initiate consultation with the U.S. Fish and Wildlife Service (USFWS) and/or National Marine Fisheries Service (NMFS) if the FAA determines that an action may affect a threatened or endangered species or designated critical habitat.[3]

The Information, Planning and Conservation (IPaC) online system provides information regarding federally designated proposed, candidate, threatened, and endangered species, final critical habitats, species of conservation concern, and service refuges that may occur in an identified area or may be affected by proposed activities.[4]

The McCall Municipal Airport Master Plan project IPaC resource report identified one threatened species that may occur within the airport property or vicinity: northern Idaho ground squirrel. The northern Idaho ground squirrel occupies dry montane meadows, such as open areas of grasses and forbs surrounded by Ponderosa pine or Douglas fir.[5] A field survey for presence/absence of northern Idaho ground squirrel was conducted by Dr. Yensen (Department of Biology, The College of Idaho, Caldwell) in June 2009 within the vicinity of the Taxiway A relocation project.[6] The survey did not identify any northern Idaho ground squirrels, nor any burrows or signs of the species' presence within the taxilane project area. The report noted that flood irrigation practices surrounding the airport is unsuitable for the species. Likewise, the projects proposed for this Airport Master Plan are mostly in areas that are already developed, with a high level of disturbance and impervious surfaces. At the south end of Runway 34, wetlands likely occur; however, these wetland habitats are not suitable for northern Idaho ground squirrel. Due to lack of suitable habitat, the projects proposed in this Airport Master Plan are expected to have no effect on northern Idaho ground squirrel.

STATE LISTED SPECIES

In 2011, an Environmental Assessment was performed for the Taxiway A relocation project. As a part of this project, the Idaho Department of Fish and Game (IDFG) provided a list of "Species of Greatest Conservation Need" that have been reported to occur within a 5-mile radius of the airport. These species included: spur-throat grasshopper, bald eagle, black-backed woodpecker, blue grosbeak, Columbia spotted frog, common loon, flammulated owl, Gillette's checkerspot, great gray owl, merlin, mountain quail, northern goshawk, pristine pyrg, pygmy nuthatch, shiny tightcoil, thinlip tightcoil, upland sandpiper, western toad, and white-headed woodpecker.

The EA determined the following species are unlikely to occur due to lack of presence or lack of suitable habitat: spur-throat grasshopper, black-backed woodpecker, blue grosbeak, Columbia spotted frog, common loon, flammulated owl, Gillette's checkerspot, merlin, northern goshawk, pristine pyrg, pygmy nuthatch, shiny tightcoil, thinlip tightcoil, upland sandpiper, or white-headed woodpecker.

MIGRATORY BIRDS

Birds are protected by the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act

(BGEPA). Work that could lead to the take of an avian species protected under the MBTA and/or the BGEPA, their young, eggs, or nests, should be coordinated with the USFWS before any actions are pursued. The IPaC Report identified the following species in *Table 7.1* as Migratory Birds of Conservation Concern that may occur within airport property or vicinity.

Table 7.1 Migratory Birds of Conservation Concern		
Common Name	**Scientific Name**	**Breeding Season**
Bald Eagle	Haliaeetus leucocephalus	Jan 1 to Aug 31
Cassin's Finch	Carpodacus cassinii	May 15 to Jul 15
Clark's Grebe	Aechmophorus clarkii	Jan 1 to Dec 31
Golden Eagle	Aquila chrysaetos	Jan 1 to Aug 31
Lesser Yellowlegs	Tringa flavipes	Elsewhere
Marbled Godwit	Limosa fedoa	May 1 to Jul 31
Olive-sided Flycatcher	Contopus cooperi	May 20 to Aug 31
Rufous Hummingbird	selasphorus rufus	Apr 15 to Jul 15

Source: USFWS Information for Planning and Consultation (IPaC)

Of the birds listed in *Table 7.1*, there is a lack of suitable habitat at the airport for bald eagles, Cassin's finch, marbled godwit, Clark's grebe, and golden eagles; therefore, the proposed projects in the Airport Master Plan are not expected to impact these species. However, the runway extension and GA terminal projects may impact, but would not likely contribute to a trend towards federal listing or loss of viability for lesser yellowlegs and rufous hummingbirds. The hangar development proposed for this Airport Master Plan occurs in an area previously disturbed; these projects are expected to have no impact these species.

WILDLIFE HAZARDS

FAA AC 150/5200-33C, *Hazardous Wildlife Attractants on or Near Airports* recommends a separation distance of 5,000 feet at airports serving piston-powered aircraft and 10,000 feet at airports serving turbine-powered aircraft from hazardous wildlife attractants.[7] For all airports, the FAA recommends five statute miles between the farthest edge of the airport's operating area and hazardous wildlife attractants.

McCall Municipal Airport conducted a Wildlife Hazard Site Visit (WHSV) at the airport and five-mile radius in October 2018. Pictures from game cameras that were deployed from 2015 to 2018 were also used as a part of the WHSV study. The study observed 25 species of birds and 10 species of mammals, including American black bear, mule deer, white-tailed deer, elk, coyote, domestic dog, red fox, domestic cat, striped skunk, and yellow-pine chipmunk. Game trail transects revealed that deer and other mammals habitually cross the airport to access water resources and habitat to the west. The North Fork Payette River is approximately a 0.25-mile west of the airport and serves as a wildlife attractant for mammals and waterfowl. The river and surrounding mixed conifer habitat support a wide variety of birds and other wildlife.

The FAA Wildlife Strike Database did not identify any wildlife strikes for McCall Municipal Airport between 2010 and 2020.[8]

7.4 CLIMATE

The Intergovernmental Panel on Climate Change (IPCC) estimates that aviation accounted for 4.1 percent of global transportation Greenhouse Gass (GHG) emissions.[9] Discussion of potential climate impacts should be documented in a separate section of the NEPA document, under a heading labelled "Climate." For FAA project level actions, the Affected Environment section for climate is dependent on the project and is defined as the entire geographic area that could be directly or indirectly affected by the project. For airport actions, the study area should reflect the full extent of aircraft movements. The FAA's Air Quality Handbook provides more information on defining the study area.

Analysis of GHG emissions should be quantitatively assessed (measured or counted) in certain circumstances but may be assessed qualitatively (based on traits and characteristics). Where the analysis is quantitative, the Affected Environment section for climate should provide the quantitative data for the no action alternative, serving as a baseline. Where the analysis is qualitative, the Affected Environment section should by tailored to the qualitative analysis. The Affected Environment section should also discuss the level of preparedness within the study area with respect to climate change, such as frequency and strength of storms and wildfires.

Presently, there are no significant thresholds for aviation related GHG emissions, nor has the FAA identified specific factors to consider in making a significant determination for GHG emissions. There are currently no accepted methods of determining significance applicable to aviation projects. CEQ has noted that it is not currently useful for the NEPA analysis to attempt to link specific climatological changes, or the impacts thereof, to a particular project, as direct linkage is difficult to isolate and understand. While GHG emissions reduction for FAA actions contribute toward the goal of reducing aviation's impacts on climate, GHG emission reduction is not mandated and, in some situations, not possible.

The 2018 City of McCall Comprehensive Plan, Environmental & Natural Resources Goals and Policies includes the following:

- Goal 3: Promote, encourage, and maintain the highest standards of air quality.
- Policy 3.4: Promote reductions in air pollution to minimize the impact to human health, sustain or improve the local economy, improve air quality, and reduce the impact of greenhouse gas emissions.
- In 2019, the City of McCall embarked on a greenhouse gas emission inventory to assess local government and residential emissions. The airport will be included in this inventory effort.

7.5 DEPARTMENT OF TRANSPORTATION ACT 4(f)

Section 4(f) of the Department of Transportation Act, states that the Secretary of Transportation will not approve any program or project that requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge or historic site of national, state, or local significance as determined by the officials having jurisdiction thereof, unless there is no feasible and prudent alternative and the project includes all possible planning to minimize harm resulting from the use.[10]

A property must be a significant resource for Section 4(f) to apply. Any part of a Section 4(f) property is presumed to be significant unless there is a statement of insignificance relative to the entire property by the federal, state, or local official having jurisdiction over the property. Section 4(f) protects only those historic or archaeological properties that are listed or eligible for inclusion on the National Register of Historic Places (NRHP), except in unusual circumstances.

Review of structures at the airport showed that one of the hangars constructed in 1932 is listed in the National Register of Historic Places (building #38). The nearest recreational resource is Riverfront Park owned by the City of McCall, approximately 0.3 miles west of the airport. There are no recreational resources on airport property. None the proposed alternatives will require the physical use or constructive use of any public property as defined by Section 4(f) standards.

7.6 FARMLANDS

The Farmland Protection Policy Act (FPPA) regulates Federal actions with the potential to convert farmland to non-agricultural uses. Farmland includes prime farmland, unique farmland, and land of statewide or local importance. For McCall Municipal Airport, the NRCS Soil Resource Report identified six soil types, listed in *Table 7.2*.

Table 7.2 Prime and Other Important Farmlands

Map Symbol	Map Unit Name	Farmland Classification
16	Donnel sandy loam, 0 to 2 percent slopes	Farmland of statewide importance if irrigated
17	Donnel sandy loam, 2 to 4 percent slopes	Farmland of statewide importance if irrigated
22	Gestrin loam, 0 to 2 percent slopes	Farmland of statewide importance if irrigated
23	Gestrin loam, 2 to 4 percent slopes	Farmland of statewide importance if irrigated
31	McCall complex, 5 to 50 percent slopes	Not prime farmland
34	Melton loam	Not prime farmland

Source: NRCS Web Soil Survey

Donnel sandy loam and Gestrin loam are considered farmland of statewide importance, if irrigated. These soils are not irrigated, and therefore, do not meet statewide importance criteria. The other two soil types located in the project area are not considered prime, unique, or statewide important farmland. None of the soils meet criteria for prime farmland, unique farmland, or land of statewide or local importance that are subject to the FPPA.

Figure 7.1 NRCS Soil Map for MYL

Source: NRCS Web Soil Survey

7.7 HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION

HAZARDOUS MATERIALS

Federal, state, and local laws, including the Resource Conservation Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended (also known as the Superfund), and the Idaho Rules and Standards for Hazardous Waste (IDAPA 58.01.05), regulate hazardous materials use, storage, transport, and disposal. RCRA set up a framework for the proper management of hazardous waste. From this authority, EPA established a comprehensive regulatory program to ensure that hazardous waste is managed safely from "cradle to grave" meaning from the time it is created, while it is transported, treated, and stored, and until it is disposed.[11]

The EPA maintains a list of superfund sites called the National Priorities List (NPL) in accordance with CERCLA. These sites have known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout United States and its territories. There is one superfund site in Valley County, Idaho, the Stibnite/Yellow Pine Mining Area approximately 37 miles east of McCall.

The Facility Mapper (Terradex Idaho) shows the location and details regarding remediation sites and facilities managed by the regulatory programs within the Idaho Department of Environmental Quality (IDEQ) Waste Management and Remediation Division. *Table 7.3* lists active sites identified by Terradex on airport property.

Table 7.3 Facility Mapper Sites on McCall Municipal Airport

Type	ID	Substance	Cleanup Complete	Facility Name
Underground Storage Tanks (UST)	3-430619	Jet Fuel	-	McCall Aviation
Leaking Underground Storage Tanks (LUST)	1733	-	01/07/2010	McCall Aviation

Source: Terrandex, IDEQ Underground Storage Tank Database

According to AC 150/5100-17, *Land Acquisition and Relocation Assistance for Airport Improvement Program (AIP) Assisted Projects*, as part of the project planning and environmental assessment phases, the Airport Sponsor should have an adequate due diligence environmental audit conducted for the presence of hazardous materials and contamination on property needed for a project.[12] Contaminated property must be avoided as is feasible, or the use minimized to avoid excessive project costs for the clean-up and remediation of hazardous materials. These audits include Phase I and Phase II Environmental Site Assessments, which should identify quantities of any hazardous materials located at the proposed project site or in the immediate vicinity of a project site.

POLLUTION PREVENTION

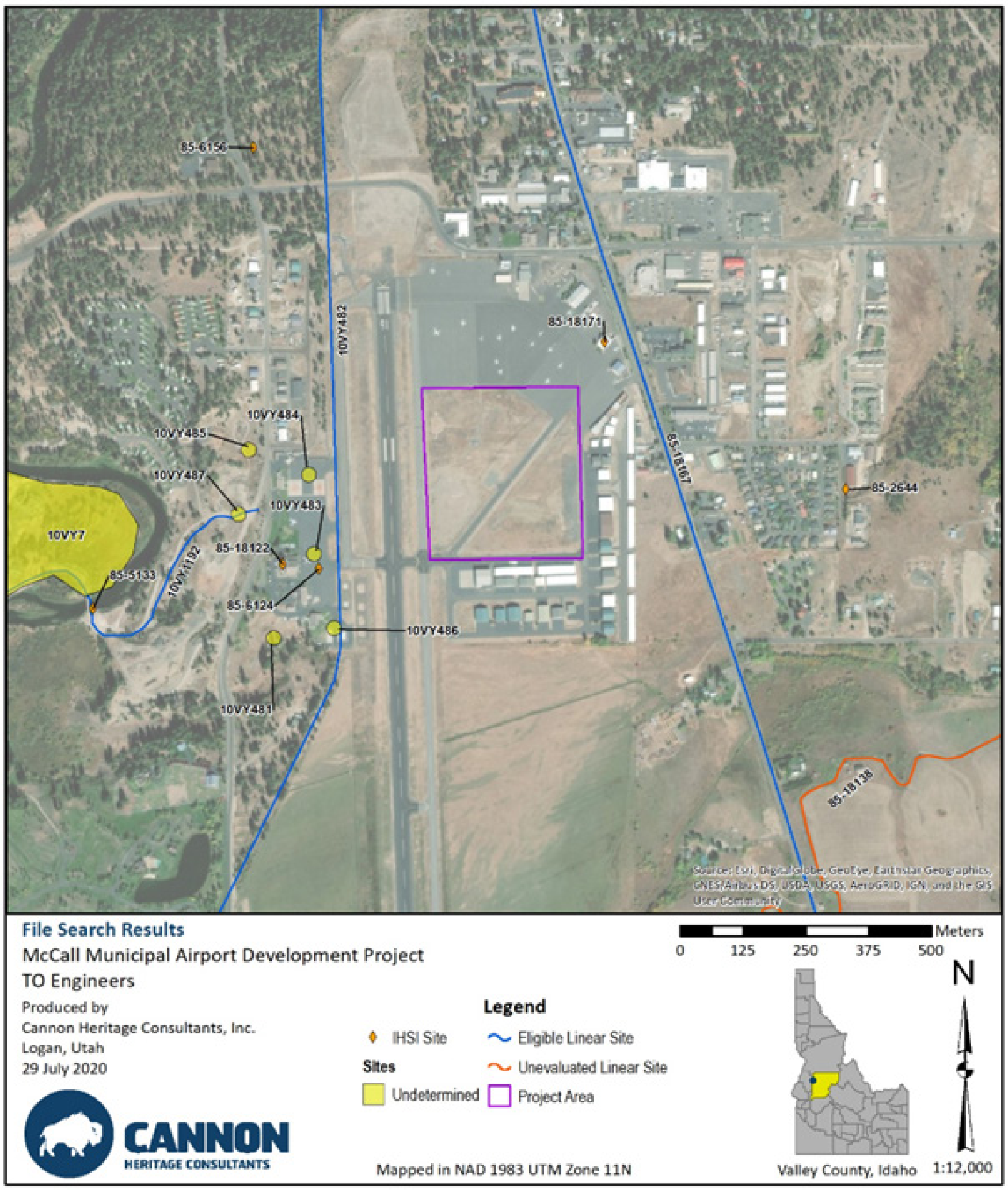
There are many local, state, and federal regulations that address the impacts of construction activities, including noise, dust, disposal of construction debris, air pollution, and water pollution. Construction activities on airports should comply with FAA AC 150/5370-10H, *Standards for Specifying Construction of Airports* and FAA AC 150/5370-2G, *Operational Safety of Airports During Construction*. Permits may be required for air and water quality.

7.8 HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

The National Historic Preservation Act (NHPA) establishes the Advisory Council on Historic Preservation (ACHP) and the National Register of Historic Places (NRHP) within the National Park Service (NPS).[13] Section 106 of the NHPA requires federal agencies to consider the effects of their undertaking on properties on or eligible for inclusion in the NRHP. According to the NRHP, there are 25 sites in Valley County listed on the national register, eight of which are in McCall, and one on the airport.[14] The Johnson Flying Service Hangar (Reference #100004675) is located on the airport property.[15]

A Class III cultural resource inventory was performed by Cannon Heritage Consultants, Inc. (CHC) in August 2020. CHC conducted an intensive pedestrian survey of the hangar development project APE, as shown in *Figure 7.2*. The survey identified no cultural resources sites or relevant cultural materials. CHC recommended a finding of no historic properties for the surveyed area and no additional archaeological work would be required for development plans within the surveyed areas. Any projects that may cause disturbance to structures or ground outside the surveyed area, such as the runway extension and GA terminal projects, would require additional investigation regarding cultural resources.

Figure 7.2 Class III Cultural Resource Inventory Survey Area



7.9 LAND USE

FAA Order 1050.1F states that the compatibility of existing and planned land uses in the vicinity of an airport are usually associated with the extent of the airport's noise impacts.[16] Order 1050.1F requires documentation to support the required Sponsor's assurance under 49 USC 47107(a)(10) that appropriate action, including the adoption of zoning laws, has been or will be taken, to the extent reasonable, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations for existing and planned land uses.[17]

The McCall Municipal Airport is located approximately one mile southwest of downtown McCall. The Code of McCall, Idaho ("the Code") is a compilation of permanent laws currently in effect in McCall. Title 3 Chapter 7 of the Code outlines requirements for land uses compatibility that prevent the creation or establishment of airport hazards.[18] The Code discourages the siting of incompatible land uses where there is a general aviation airport located, through its comprehensive plan and development regulations. Please see Chapter 3, Airside and Landside Inventory of this Master Plan for more details on Land use.

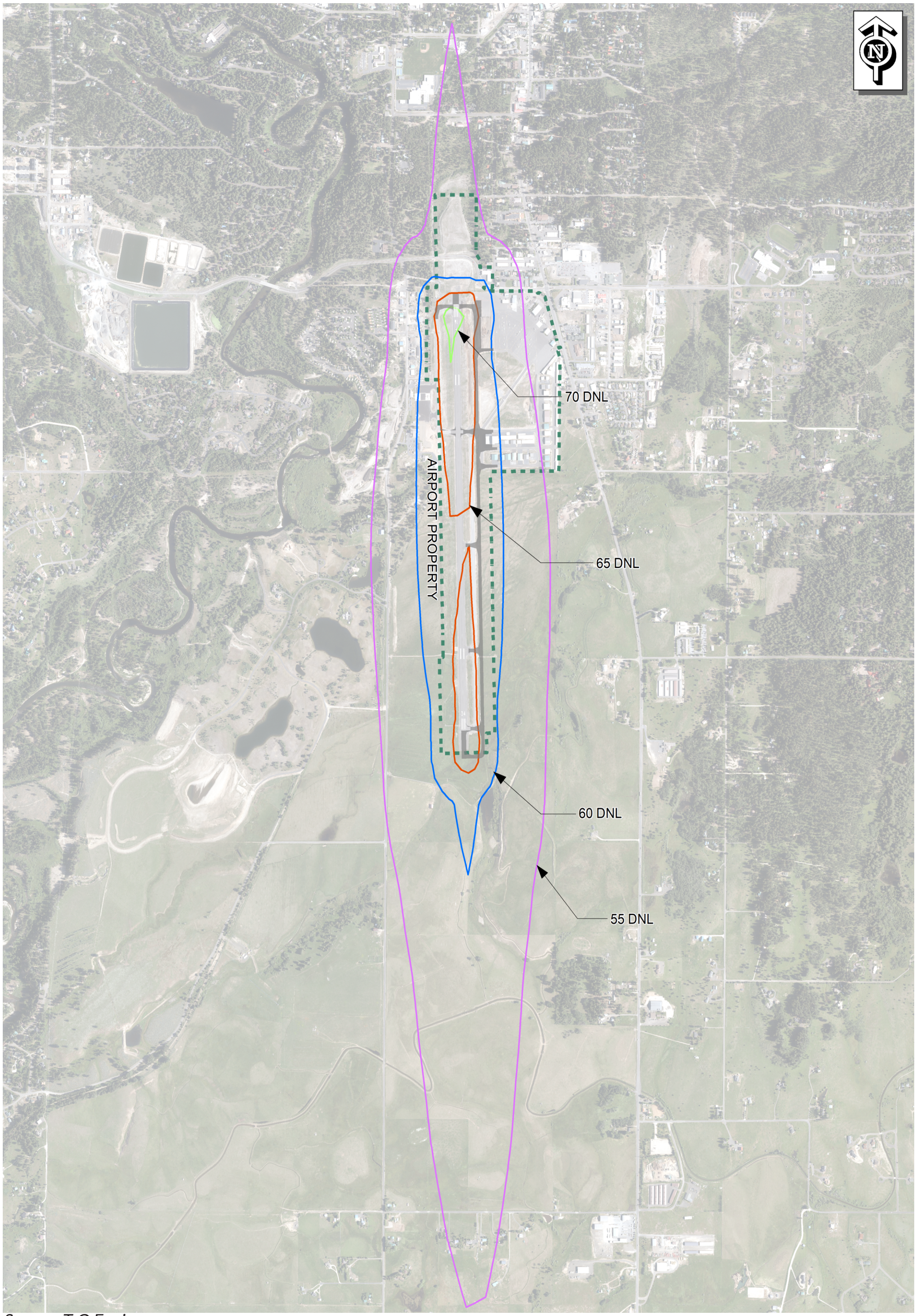
7.10 AIRCRAFT NOISE

Noise levels are measured in Day/Night Levels (DNL). A DNL is an average of day and nighttime levels of sound and is computed so that nighttime sound levels are given more weight. The FAA and EPA have set the guideline at 65 DNL to determine compatible land use around airports. On noise contour maps, the louder rings will be at the core of the airport around the runway(s) and decrease as they move outward.

For this Airport Master Plan, noise contours for 55, 60, 65, and 70 DNL were generated for the 20-year forecasted operations by using the FAA's Aviation Environmental Design Tool (AEDT) and assuming a 402-foot future runway extension, along with operational data collected during the forecast in chapter 4. Since the runway extension project requires property acquisition south of the existing Runway 34 end, the future 65 DNL noise contour would remain within the future airport property boundary. *Table 7.4* outlines the operational assumptions used in the noise model, using forecast operations data from the approved forecast.

Table 7.4 Noise Model Operational Assumptions							
2040 Forecast Conditions: 39,029 total annual operations, with a daily average of 107 operations							
Aircraft Type (% of total ops)	AEDT Representative Aircraft	Average Daily Operations by Runway (% of total Ops)					
		16 Arrival (33.5%)	16 Departure (33.5%)	34 Arrival (33.5%)	34 Departure (33.5%)	Total (100%)	Night Ops (2%)
Single Engine Piston (85%)	Cessna 206	30.47	30.47	15.01	15.01	90.95	0.00
Single Engine Turboprop (4%)	Pilatus PC-12	1.43	1.43	0.71	0.71	4.28	0.00
Multi-Engine (6%)	King Air 200	2.15	2.15	1.06	1.06	6.42	1.00
Jet (4%)	Citation Excel	1.43	1.43	0.71	0.71	4.28	1.00
Helicopter (1%)	A-Star 350	0.36	0.36	0.18	0.18	1.07	0.00
Total		35.85	35.85	17.66	17.66	107.00	2.00

Figure 7.3 Future Noise Contours for McCall Municipal Airport



Source: T-O Engineers

7.11 SOCIOECONOMIC IMPACTS, ENVIRONMENTAL JUSTICE, AND CHILDREN'S HEALTH AND SAFETY RISKS

SOCIOECONOMICS

A socioeconomic analysis evaluates how elements of the human environment such as population, employment, housing, and public services might be affected by a proposed action or alternative. According to the 2019 American Community Survey (ACS) five-year estimates, McCall has a population of 3,347 people, with the median age being 48.9 years old.[19] The unemployment rate is 2.4% with 65.1% of the population that is capable of working maintaining employment[20]. The average median household income for McCall is $50,711, which is lower that Valley County ($64,475).

ENVIRONMENTAL JUSTICE

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, ethnicity, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. The 2019 ACS five-year estimates report that almost 12.7% of population in McCall are living below poverty line, while almost 7% of Valley County population are living below poverty line. *Table 7.5* shows the population distribution by race.

Table 7.5 McCall Population Distribution by Race

Race	Total
White alone	3,324
Black or African American alone	0
American Indian alone	4
Asian alone	18
Native Hawaiian and Other Pacific Islander alone	0
Some Other Race alone	0
Two or More Races	1

Source: U.S. Census Bureau 2019 ACS Five Year Estimates

Proposed projects associated with this Airport Master Plan would provide positive long-term health and safety benefits around the airport, for example fire protection and medical transport, to all persons equally, regardless of race or socioeconomic status. No concentrations of minority populations have been identified that would be disproportionally affected by the proposed projects. That being said, it should be acknowledged that the airport sits upon Native American ancestral lands of the Nimiipuu (Nez Perce) that was ceded to the U.S. in June 1855 via Cession number 366, and the City of McCall is grateful for the opportunities afforded on said land.

CHILDREN'S HEALTH AND SAFETY RISKS

Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks requires agencies to make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children. According to the 2019 ACS five-Year estimates, approximately 15.2% of the population of McCall, which includes the McCall Municipal Airport, are under 18 years old.[21] Consequently, actions at the airport are not expected to disproportionately affect children.

7.12 VISUAL EFFECTS

FAA Order 1050.1F Desk Reference states that visual, or aesthetic impacts are inherently more difficult to define because of the subjectivity involved. Visual effects deal broadly with the extent to which the proposed action or alternatives would either produce light emissions that create annoyance or interfere with activities or contrast with, or detract from, the visual resources and/or the visual character of the existing environment. The FAA has not established a significance threshold for light emissions and visual resources/visual character.

Development of hangars and a GA terminal would change the appearance of the area during and after construction. The presence of structures would result in a temporary change to the visual character of the area, but development would be consistent with the style and uses of existing structures at the airport. The hangar development area is in proximity to the existing historic hangar; therefore, SHPO should be contacted prior to any development that may indirectly affect the visual resources of the Johnson Flying Service Hangar or other above-ground structures older than 45 years. The runway extension project and GA terminal are not expected to affect the visual character of the area, as they are consistent with existing airport infrastructure.

7.13 WATER RESOURCES

Water resources are surface waters and groundwater that are important in providing drinking water and in supporting recreation, transportation and commerce, industry, agriculture, and aquatic ecosystems. Disruption of any one part of this system can have consequences to the functioning of the entire system.[22]

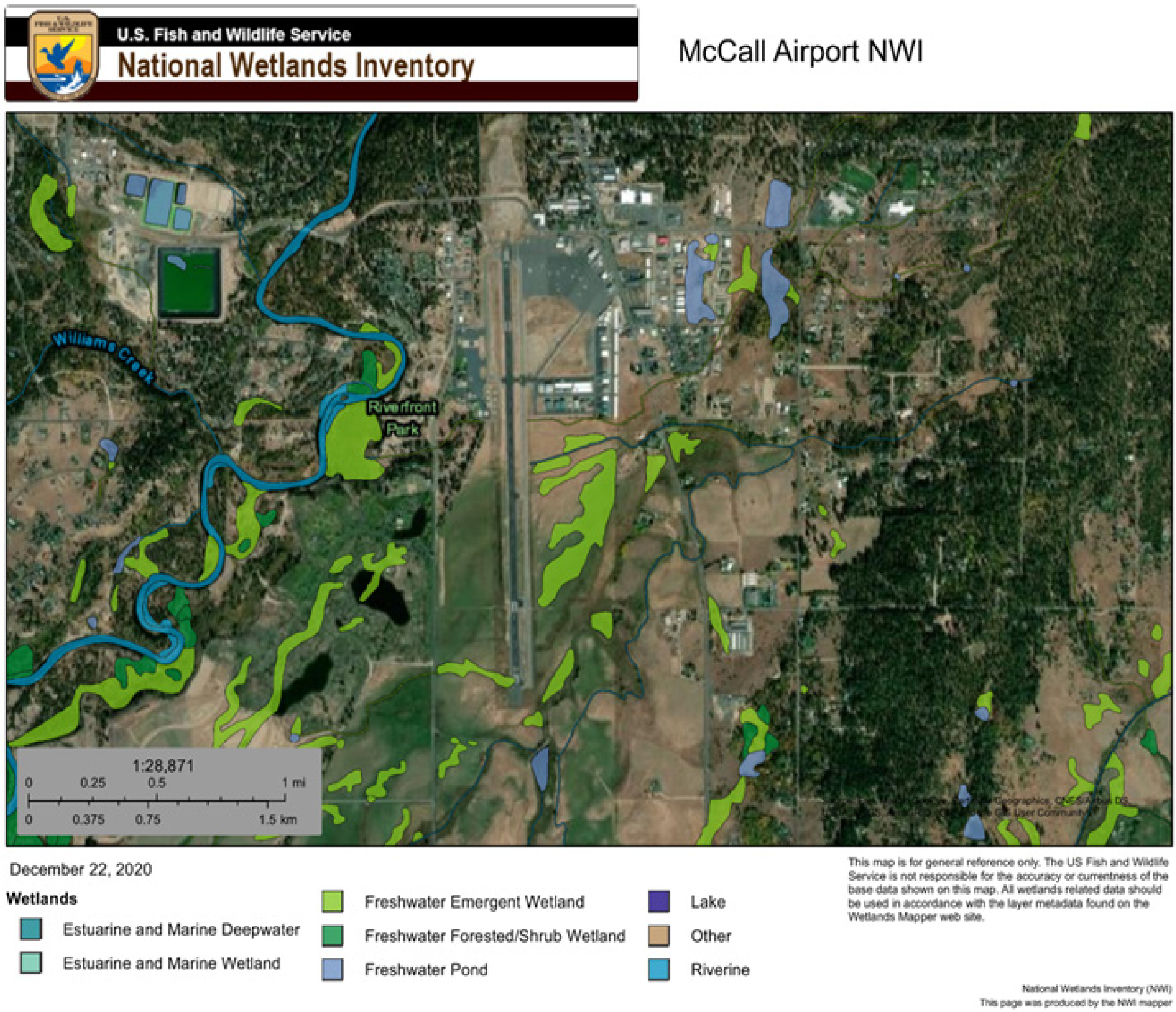
WETLANDS

Jurisdictional wetlands are federally protected under Section 404 of the Clean Water Act (CWA) , which regulates the discharge of dredge or fill material into Waters of the United States, including wetlands. Under the CWA, the term wetlands are defined as areas that, under normal circumstances, support a prevalence of vegetation typically adapted for life in saturated soil conditions.[23]

Valley County Land Use and Development Ordinance requires approval of the USACE under the CWA for any grading or disturbance of wetlands. The federal permit issued by the USACE shall be part of the Conditional Use Permit.[24]

A review of the USFWS National Wetland Inventory (NWI) Map, *Figure 7.4*, identified intermittent stream and palustrine emergent wetlands associated with the Stringer Irrigation Canal system on the east and North Fork Payette River on the west side of the airport. As it is shown in the NWI map, development proposed for hangar area is outside of wetland areas. A wetland delineation was performed in 2019 that identified wetlands along the eastern side of Taxiway A; these wetlands likely extend south and east of Runway 34.[25] The NWI Map also shows wetlands within this area. Therefore, the runway extension and GA terminal projects may have potential impacts to the wetlands. A wetland delineation, avoidance and minimization measures, permitting, and/or mitigation measures may be required for these projects.

Figure 7.4 McCall Municipal Airport Wetlands



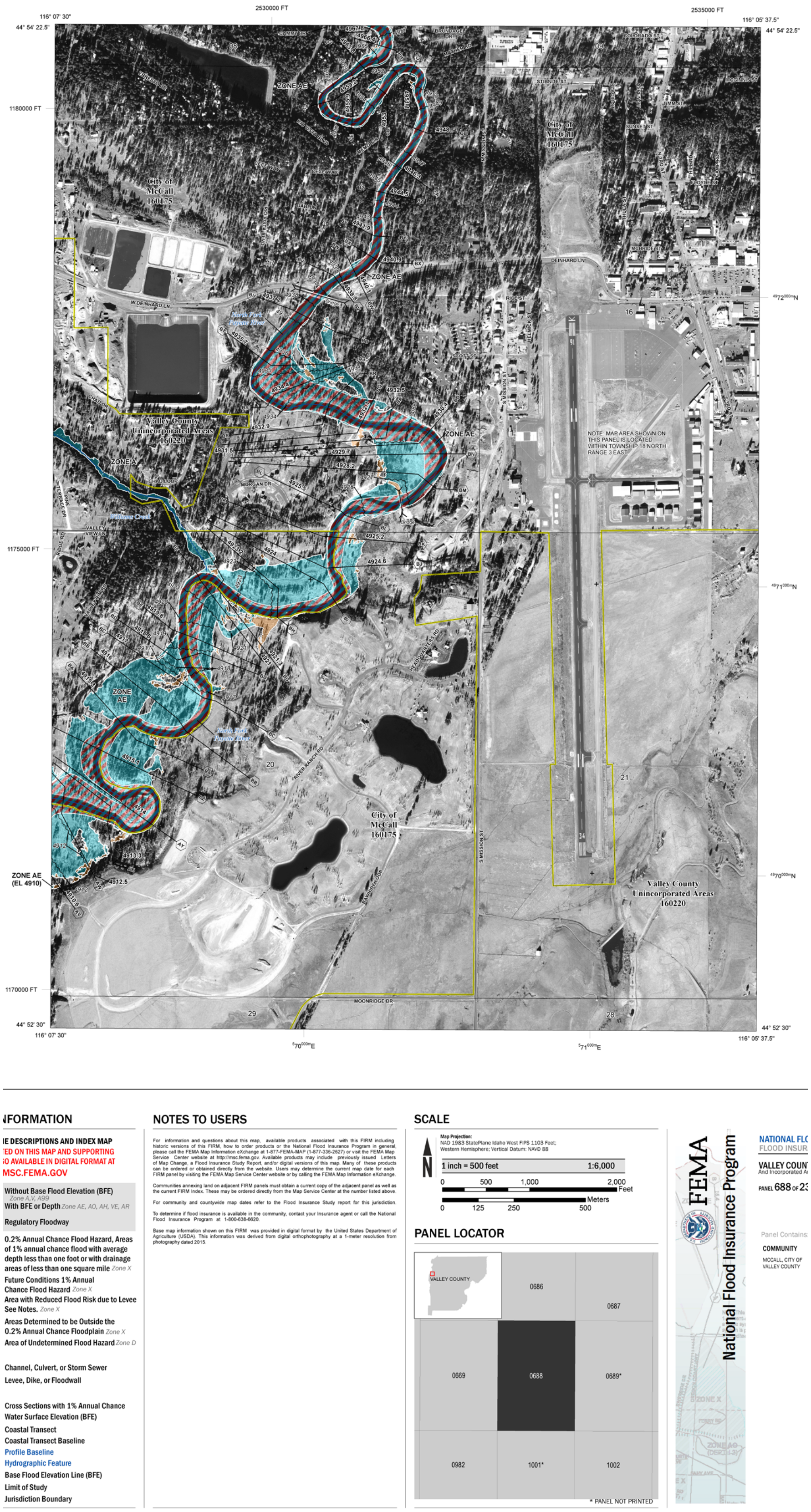
Source: USFWS

FLOODPLAIN

According to the FAA 1050.1F Desk Reference Chapter 14, floodplains are lowland areas adjoining inland and coastal waters that are periodically inundated by flood waters. Floodplains are often discussed in terms of the 100-year flood.[26] The 100-year flood is a flood having a 1% chance of occurring in any given year. The 100-year flood is also known as the base flood.

McCall Municipal Airport is located in the "Zone X" flood zone, which is outside the 100-year floodplain, as depicted in *Figure 7.5*. Thus, none of the projects proposed in this Airport Master Plan will impact floodplains.

Figure 7.5 McCall Municipal Airport Floodplain Map



Source: FEMA

SURFACE WATER

Surface waters include streams, rivers, lakes, ponds, estuaries, and oceans. The CWA[27] establishes the basic structure for regulating the discharge of pollutants into waters of the United States, specific sections include Section 303(d), Section 404 and 401 (refer to wetland section), and Section 402, which establishes the National Pollutant Discharge Elimination System (NPDES) permitting program.[28] Section 303(d) sets forth the process to identify impaired waters and to establish the maximum amount of pollutant allowed in a waterbody, known as the total maximum daily load, necessary to assess current conditions and project impacts.[29] If project activities have the potential to discharge pollutants into Waters of the United States through a point source, a NPDES permit will likely be required. IDEQ may also require an Idaho Pollution Discharge Elimination System (IPDES) permit if a project disturbs one or more acres of land.

Surface water resources on the airport are associated with Stringer Ditch Irrigation Canal and one intermittent stream that drain west and southwest towards the airport, underly the airport via a series of culverts, and then enter another drainage system that is connected to the North Fork Payette River. A drainage ditch constructed north-south and parallel to Taxiway A receives overflow water from a snow storage basin area (proposed location for hangar development), stormwater runoff from the adjacent taxiway, and inflow from intersecting irrigation ditches. The irrigation ditches and north-south airport drain are all manmade, while the intermittent stream is natural but has been channelized along the eastern edge of the airport property. Alterations to a stream channel may require a permit from the Idaho Department of Water Resources (IDWR).

The City of McCall has introduced Drainage Management Guidelines (DMG) to provide a comprehensive approach to implementing Best Management Practices (BMP's) that will protect the water quality in both the Payette Lake and the North Fork of the Payette River and minimize the impact to the surrounding environment from the pollutants generated by the direct or indirect impact of new development within McCall, Idaho. The DMG would need to address temporary sediment and erosion control BMP's to be used during construction as well as permanent BMP's.[30]

As stated in City of McCall, Code of Ordinances, no construction, alteration or activity shall cause harm to water quality, fish and aquatic habitats, wetlands, significant wildlife habitat harboring any threatened or endangered species, views of, from, or across a lake or river. All applications for building permits within overlay zone, no matter what the permit may be for, shall be accompanied by a plan for the installation of appropriate natural, storm, and melt water drainage and treatment facilities. Such plans for natural, storm and melt water drainage of the property and on and through the property, shall be consistent with best management practices under state and federal storm and melt water regulatory programs to which the city is subject and consistent with other city programs in these regards to the satisfaction of the city.[31]

The airport should implement proactive stormwater management practices to reduce the amount of pollution that enters the surface water resources close to the airport property.

GROUNDWATER

Groundwater availability in the McCall area is quite variable due to complex surface geology. In general, groundwater levels in the McCall areas are stable. Depths to groundwater vary from near ground surface near the lake or river, to more than 100 feet in some upland areas.[32] According to the IDWR, there are no wells within the airport property.

7.14 AIRPORT MASTER PLAN ENVIRONMENTAL OVERVIEW

Table 7.6 Potential Environmental Impact Categories and Mitigation Measures

Impact Category	Potential Mitigation Measures
Air Quality	Use Best Management Practices (BMPs) during construction.
Biological Resources	Consultation with USFWS and the state office may be required to determine impacts to federally-listed and state-listed species, respectively. Construction BMP's should be implemented to avoid water quality impacts. Any tree removal should occur outside of the nesting season. Any future actions taken at the airport should be done in accordance with the recommendations outlined in the Wildlife Hazard Site Visit report.
Climate	Use data from the City's GHG Inventory Study to establish a baseline from which to assess future emission reduction measures.
Coastal Resources	Not applicable.
DOT Act Section 4(f)	Further analysis may be required to determine impacts to Section 4(f) resources.
Farmlands	Not applicable.
Hazardous Materials, Solid Waste, and Pollution Prevention	Use BMPs during construction.
Historical, Architectural, Archaeological, and Cultural Resources	Not applicable for the surveyed area for the hangar development; however, proposed area for runway extension and GA terminal should be surveyed for historical resources.
Land Use	Comply with local land use policies and regulations. Coordination with the City of McCall Planning Department will be required.
Natural Resources and Energy Supply	No significant impacts are expected.
Noise and Noise Compatible Land Use	AEDT analysis has determined no impact to noise-compatible land use.
Socioeconomic Impacts, Environmental Justice, and Children's Health and Safety Risks	No significant impacts are expected, since the proposed projects are either on existing airport property or will be on future property acquired by the airport. Airport design standards have not changed during this Airport Master Plan study.
Visual Effects	A visual analysis may be required for projects that may indirectly affect the historic hangar. Use BMPs during construction. No significant impacts are expected from lighting.
Water Resources	The City of McCall's Drainage Management Guidelines and Code of Ordinances recommend using BMPs to protect water quality and minimize impacts to the surrounding environment from pollutants (direct or indirect) related to development.
Cumulative Impacts	No significant cumulative impacts are expected.

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SECTION OVERVIEW

This chapter reviews the planned capital projects for McCall Municipal Airport, in conjunction with the FAA Airport Capital Improvement Plan (ACIP) and the Idaho Department of Transportation Division of Aeronautics (ITD Aeronautics), Idaho State Capital Improvement Program (SCIP). Potential future funding sources are examined, and the airport's revenues and expenses are reviewed to evaluate the financial feasibility of the development plan.

8.1 GENERAL

The facilities implementation plan provides guidance on how to implement the findings and recommendations of the planning effort. The plan must balance funding constraints, project sequencing limitations, environmental requirements, agency and tenant approvals and coordination processes, business issues (leases and property acquisition), and Sponsor preferences. Additionally, the plan must comport with the Airport Layout Plan (ALP) and the airport's financial plan. The plan should be implemented on an as-needed basis that is consistent with the financial capability and needs of the airport and community.

8.2 CAPITAL IMPROVEMENT PLAN

Capital projects differ from operations and maintenance (O&M) projects in that capital projects often require substantial funding, can occur over multiple years, and must be planned several years in advance. O&M projects consist of short-term expenses related to the routine maintenance, operation, and management of the airport. Capital projects at a general aviation airport normally consist of aviation infrastructure improvements, land acquisition, and acquisition certain types of equipment, such as snow removal equipment and their associated storage buildings.

Airport Master Plans and Airport Layout Plans are usually completed every seven to ten years at general aviation airports. Larger development items are determined to be needed and are justified through these planning efforts. Once planning identifies a project need, it is added to the CIP and SCIP by the Airport Sponsor during an annual review by the FAA and ITD Aeronautics. During the review, completed projects are removed, pending projects are refined, and new needs are added to future years. Once a project is on the CIP, it may take several years to schedule (program) the funding, depending upon the priority of the project. Safety and security projects have the highest priority. The FAA, ITD Aeronautics, and Airport Sponsor share of the project costs are presented in the cost estimates shown on the CIP. For MYL, the typical FAA share is 90% of the total cost of eligible improvements under the AIP grant program. The state's match for eligible items is 5%, leaving the Airport Sponsor with the remaining 5%. Note: Federal COVID-19 relief programs in 2020 and 2021 provided for 100% FAA matches.

Not all development costs are AIP eligible. In such cases, the Airport Sponsor is responsible for the cost of the project. Projects may be funded entirely or partially by the Airport Sponsor, ITD Aeronautics, private developers, or community grants.

8.3 MASTER SCHEDULE

Project implementation is typically driven by future aviation demand and changes in airport design standards. The master schedule is intended to establish project sequencing, based on priority, and maintain schedule integrity throughout the implementation period.

The cost estimates provided in *Table 8.1* are based on 2020 dollars. Consequently, these estimates should be considered foundational, as actual costs may increase over time due to a wide range of circumstances.

The master schedule is presented in three phases, based on federal fiscal years (October 1 – September 30). Phase 1 represents the short-term planning period of 1 – 5 years (FY2022 – 2026); Phase 2 represents the mid-term planning period of 6 – 10 years (FY2027 – 2031); and Phase 3 represents the long-term planning period of 11 – 20 years (FY2032 – 2042). It should be noted that this is a recommended implementation plan, as variance is expected to occur, particularly during Phases 2 and 3, due to changing conditions.

PHASE 1 DEVELOPMENT

This phase addresses the immediate needs of the airport – pavement reconstruction, infield development, and runway incursion mitigation measures.

1-1 Taxiway D Reconstruction: This project will increase circulation and efficiency within the terminal area by constructing a new taxiway adjacent to the existing transient apron. This new taxiway will be construction to meet ADG-II standards.

1-2 Rehabilitate Runway 16/34: This project will rehabilitate the pavement of Runway 16/34, re-designate the runway to 17/35 due to magnetic declination, and update the runway signage to the new runway designation.

1-3 Infield Development – Extension of Utilities: This project will be Sponsor-funded and will extend utilities into the infield to accommodate future hangar development.

1-4 Infield Development – Phase 1: This project will design and construct new Taxilane F to accommodate future hangar development. Taxilane F will be constructed to meet ADG-I standards.

1-5 Transient Apron Reconstruction – Phase 1: This project will design and reconstruct the transient apron pavement and reconfigure the aircraft parking spaces to meet current design standards and increase efficiency in the terminal area.

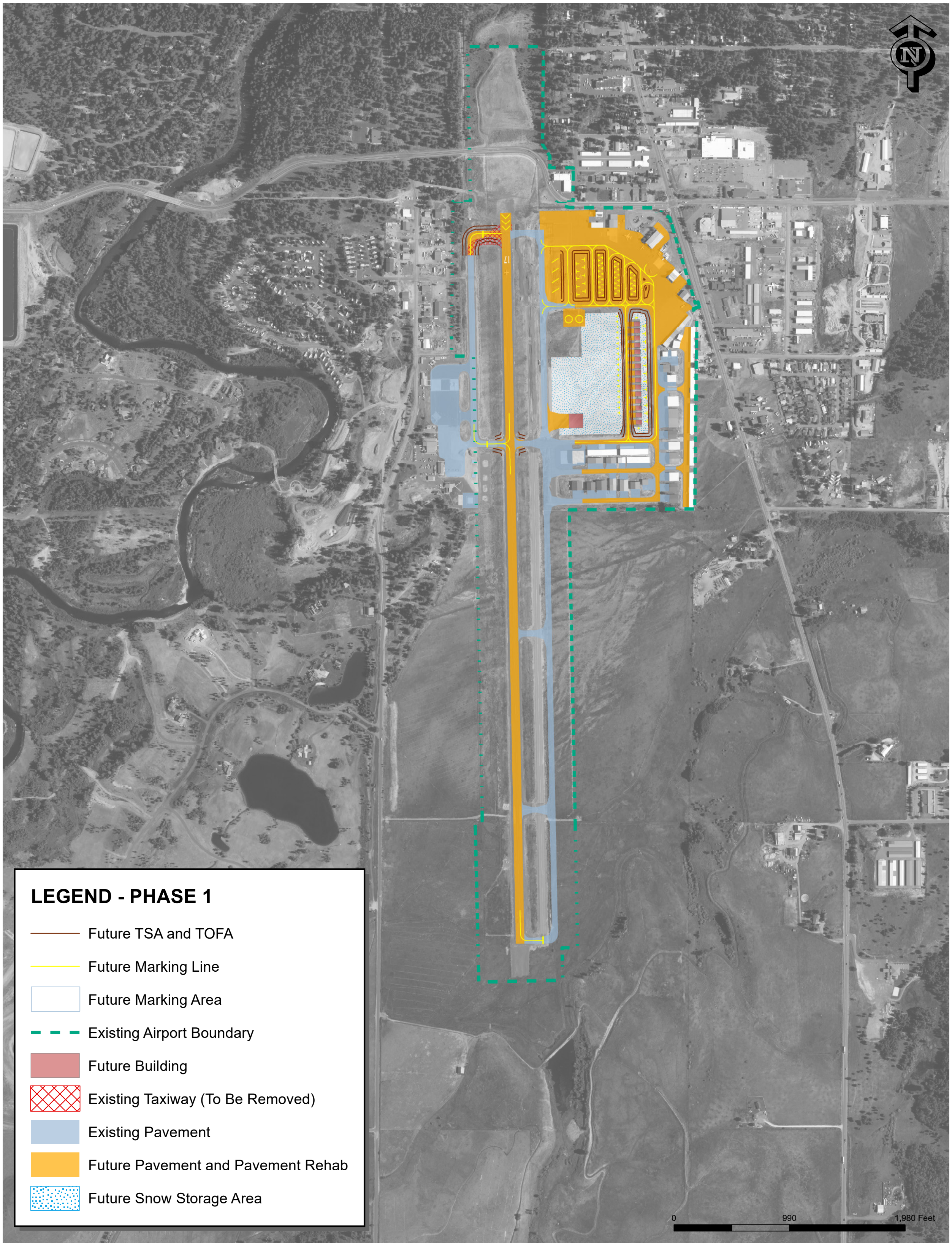
1-6 Transient Apron Reconstruction – Phase 2: This is a continuation of 1-5, based on funding availability.

1-7 Pavement Reconstruction – Phase 3: This is a continuation of 1-6, if necessary, and design and reconstruction of Taxiway E, and Taxilanes H, J, K, and E-3.

1-8 Taxiway B-1 Reconfiguration, Runway 17 Blast Pad Expansion, Taxiways A-2 and B-2 Fillets, and Elevated Runway Guard Lights: This project will remove the wide expanse of pavement at Taxiway B-1 and reconstruct it to coincide with the runway end with proper fillets. The blast pad will be expanded to meet current design standards. Taxiways A-2 and B-2 will be reconstructed with proper fillets and elevated runway guard lights to reduce the possibility of runway incursions.

1-9 Runway 17/35 Lighting Replacement: This project will replace the runway edge lights.

Figure 8.1 Phase 1 Development Plan



PHASE 2 DEVELOPMENT

This phase includes steps to grow the airport and improve safety, including land acquisition, obstruction removal, Snow Removal Equipment (SRE) acquisition, and a regular schedule of pavement maintenance.

2-1 Land Acquisition for ASOS Relocation: The ASOS must be relocated to maximize the infield for development of hangars. This land acquisition will allow for the ASOS to be moved to the south end of the airport and protect the ASOS critical area.

2-2 Pavement Maintenance – Runway 17/35 and Taxiway A. Runway 17/35 and Taxiway A will receive treatment to extend the life of the pavement.

2-3 Construct Wildlife Fencing: This project will complete wildlife fencing around the south and western portions of the airport, or where there are currently holes in the existing fence.

2-4 Obstruction Removal Runway 35 Approach: This project will remove obstructions within the Runway 35 approach corridor.

2-5 Infield Development – Construction Taxilane G: This project will design and construct a new taxilane in the infield to accommodate future hangar development. This taxilane will be constructed to ADG-II standards.

2-6 Relocate ASOS: The ASOS will be relocated from the infield, following land acquisition.

2-7 Runway 35 Flight Procedure Coordination and Development: This project assumes the instrument approach procedure will need to be re-evaluated following project 2-4, to include AGIS aeronautical survey and flight procedure development to meet LPV minimums.

2-8 Land Acquisition: This land acquisition will accommodate a future runway extension to the south, approach protection to the south, a general aviation terminal, and extension of Krahn Lane onto the airport from S.H. 55.

2-9 Pavement Maintenance – Taxiway B and B-2: Pavement will receive treatment to extend the life of the pavement.

2-10 Acquire SRE: A new piece of Snow Removal Equipment will be acquired to replace aging equipment.

2-11 Pavement Maintenance – Transient Apron, Taxiways C and D: Pavement will receive treatment to extend the life of the pavement.

2-12 Pavement Maintenance – Taxiway E, Taxilanes H, J, K, and E-3: Pavement will receive treatment to extend the life of the pavement.

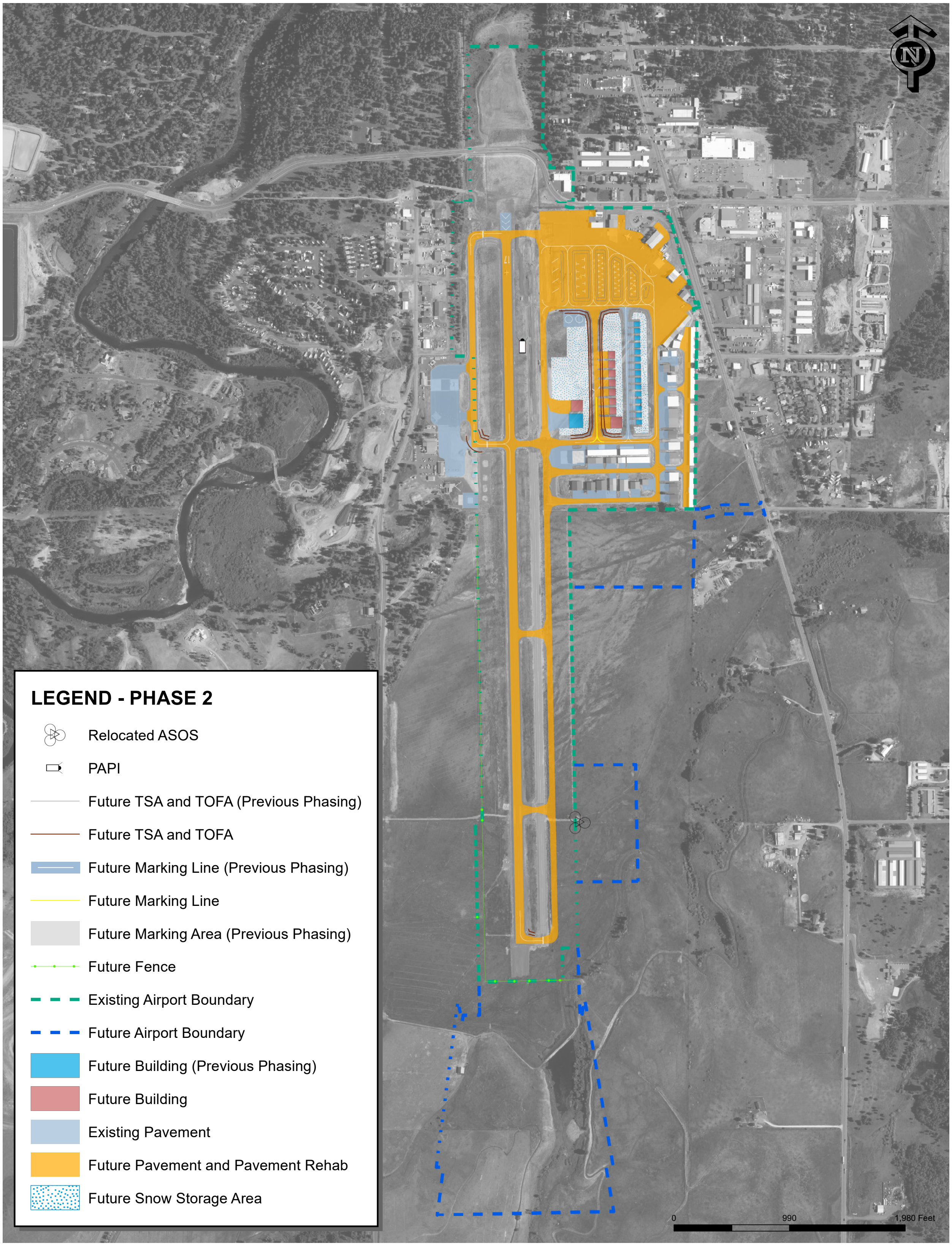
2-13 Obstruction Removal Runway 17 Approach: This project will remove obstructions from the Runway 17 approach corridor.

2-14 Pavement Maintenance – Taxiways B-1, B-2, and A-2. Pavement will receive treatment to extend its useful life.

2-15 Update Airport Master Plan: The Airport Master Plan will be updated to address future conditions at and around the airport.

2-16 Install Runway 17 PAPI: Following removal of obstructions during 2-12.

Figure 8.2 Phase 2 Development Plan



PHASE 3 DEVELOPMENT

This phase represents the long-term development projects and is highlighted by a runway extension, land acquisition for potential revenue-generating uses, and construction of a general aviation terminal and extension of Krahn Lane.

3-1 Environmental Assessment for Runway 35 Extension

3-2 Extend Runway 35 and Taxiway A, Install Runway 35 PAPI – Design and Construction

3-3 Pavement Maintenance – Runway 17/35 and Taxiway A

3-4 Land Acquisition – S.H. 55 Triangle

3-5 Acquire SRE

3-6 General Aviation Terminal and Krahn Lane Extension – Design and Construction

Figure 8.3 Phase 3 Development Plan

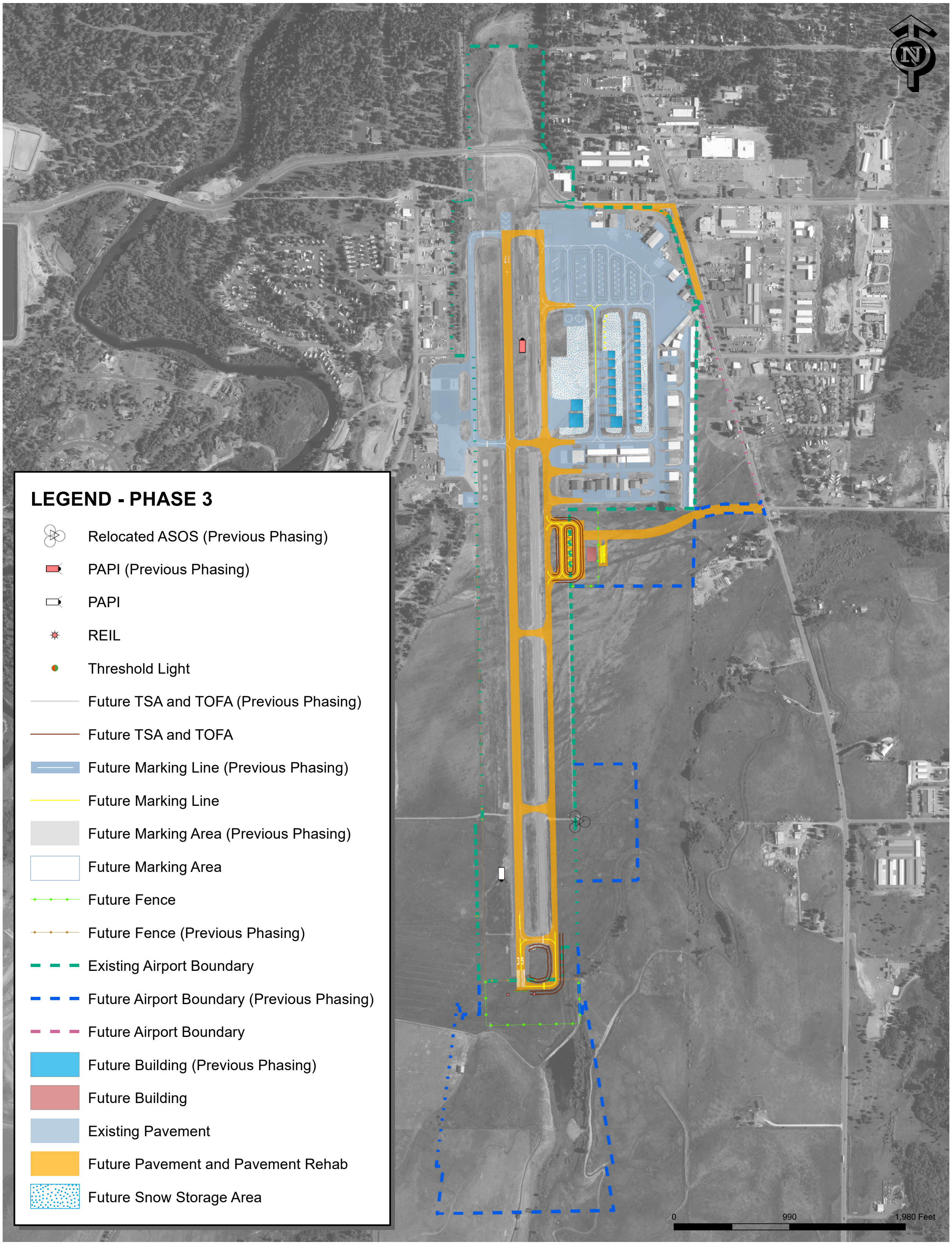


Table 8.1 Development Plan Cost Estimates					
Phase	Proposed Development	FAA (90%)	State (10%)	McCall (10%)	Total
		Phase 1 (1-5 Years)			
1-1 (FY22)	Taxiway D Reconstruction	$1,500,000.00	$83,333.33	$83,333.33	$1,666,666.67
1-2 (FY22)	Rehabilitate RW 16/34, Redesignate to 17/35, Update Runway Signage	$380,000.00	$21,111.11	$21,111.11	$422,222.22
1-3 (FY22)	Infield Development - Extension of Utilities (Sponsor Only)	$ -	$ -	$300,000.00	$300,000.00
1-4 (FY23)	Infield Development - Phase 1, Taxilane F Design & Construction	$450,000.00	$25,000.00	$25,000.00	$500,000.00
1-5 (FY23)	Transient Apron Reconstruction - Phase 1	$3,600,000.00	$200,000.00	$200,000.00	$4,000,000.00
1-6 (FY24)	Transient Apron Reconstruction - Phase 2	$3,600,000.00	$200,000.00	$200,000.00	$4,000,000.00
1-7 (FY25)	Pavement Reconstruction - Phase 3, TW E, TL H, J, K, E-3	$1,188,000.00	$66,000.00	$66,000.00	$1,320,000.00
1-8 (FY26)	TW B-1 Reconfiguration, RW 17 Blast Pad Expansion, TW A-2 and B-2 Fillets, Guard Lights	$450,000.00	$25,000.00	$25,000.00	$500,000.00
1-9 (FY26)	RW 17/35 Lighting Replacement	$247,500.00	$13,750.00	$13,750.00	$275,000.00
		Phase 2 (6-10 Years)			
2-1 (FY27)	Land Acquisition for ASOS Relocation (12 ac)	$3,100,000.00	$172,222.22	$172,222.22	$3,444,444.44
2-2 (FY27)	Pavement Maintenance - RW 17/35, TW A	$450,000.00	$25,000.00	$25,000.00	$500,000.00
2-3 (FY27)	Construct Wildlife Fencing	$225,000.00	$12,500.00	$12,500.00	$250,000.00
2-4 (FY27)	Obstruction Removal RW 35	$300,000.00	$16,666.67	$16,666.67	$333,333.33
2-5 (FY27)	Infield Development - Construct TL G	$382,500.00	$21,250.00	$21,250.00	$425,000.00
2-6 (FY28)	Relocate ASOS	$365,000.00	$20,277.78	$20,277.78	$405,555.56
2-7 (FY28)	RW 35 Flight Procedure Development	$40,000.00	$2,222.22	$2,222.22	$44,444.44
2-8 (FY28)	Land Acquisition for Runway Extension (32 ac), Approach Protection, and GA Terminal, Krahn Lane Extension (17 ac)	$7,717,500.00	$428,750.00	$428,750.00	$8,575,000.00
2-9 (FY28)	Pavement Maintenance - TW B, B-2	$337,500.00	$18,750.00	$18,750.00	$375,000.00
2-10 (FY28)	Acquire SRE	$675,000.00	$37,500.00	$37,500.00	$750,000.00
2-11 (FY29)	Pavement Maintenance - Transient Apron, TW C and D	$350,000.00	$19,444.44	$19,444.44	$388,888.89
2-12 (FY30)	Pavement Maintenance - TW E, TL H, J, K, E-3	$300,000.00	$16,666.66	$16,666.66	$333,333.33
2-13 (FY30)	Obstruction Removal RW 17	$300,000.00	$16,666.66	$16,666.66	$333,333.33

Table 8.1 Development Plan Cost Estimates (Continued)					
Phase	Proposed Development	FAA (90%)	State (10%)	McCall (10%)	Total
Phase 2 (6-10 Years, Continued)					
2-14 (FY31)	Pavement Maintenance - TW B-1, B-2, A-2	$300,000.00	$16,666.66	$16,666.66	$333,333.33
2-15 (FY31)	Update Airport Master Plan	$350,000.00	$19,444.45	$19,444.45	$100,000.00
2-16 (FY31)	Install RW 17 PAPI	$90,000.00	$5,000.00	$5,000.00	$300,000.00
Phase 3 (11-20 Years)					
3-1	Environmental Assessment for Runway Extension	$230,000.00	$12,777.78	$12,777.78	$255,555.56
3-2	Extend RW 35 and TW A - Design & Construction	$585,000.00	$32,500.00	$32,500.00	$650,000.00
3-3	Pavement Maintenance - RW 17/35, TW A	$450,000.00	$25,000.00	$25,000.00	$500,000.00
3-4	Land Acquisition - S.H. 55 Triangle (12 ac)	$1,890,000.00	$105,000.00	$105,000.00	$2,100,000.00
3-5	Acquire SRE	$675,000.00	$37,500.00	$37,500.00	$750,000.00
3-6	GA Terminal, Krahn Lane Extension - Design & Construction	$4,050,000.00	$225,000.00	$225,000.00	$4,500,000.00

Table 8.2 Cost Estimate Summary				
Phase	Federal (90%)	State (5%)	McCall (5%)	Total
Short-Term	$11,415,500.00	$634,194.45	$934,194.45	$12,983,888.89
Medium-Term	$15,282,500.00	$849,027.78	$849,027.78	$16,980,555.56
Long-Term	$7,880,000.00	$437,777.78	$437,777.78	$8,755,555.56
Total	$34,578,000.00	$1,918,777.78	$2,221,000.00	$38,720,000.00

8.4 AIRPORT FUNDING SOURCES

Funding sources for airport projects range from federal, state, local, and private developers. Ideally, federal grants from the FAA will be used to fund most of the eligible projects. Some of the eligible projects may not compete well enough to receive discretionary funding, leaving the airport to seek alternative funding sources, or self-fund the projects. This section identifies some of the more common funding sources used for airport projects.

FEDERAL AIRPORT IMPROVEMENT PROGRAM

A general description of the federal Airport Improvement Program (AIP) is provided in Chapter 1, Airports and Master Plans Introduction. AIP grants may come in the form of nonprimary entitlements (NPE), which is currently set at $150,000 per year; discretionary, which MYL competes with other airports for in the FAA's Northwest Mountain Region; and state apportionment, which is money set aside for the state through the AIP.

COVID-19 RELIEF PROGRAMS

The COVID-19 pandemic placed a substantial financial burden on airports during 2020, due to lockdowns and travel restrictions. To assist airports, the federal government passed three laws which injected stimulus funding into the airport system – the Coronavirus Aid, Relief, and Economic Security (CARES) Act in 2020, the Coronavirus Response and Relief Supplemental Appropriation Act (CRRSAA) in 2020, and the American Rescue Plan Act of 2021 (ARPA) in 2021. These federal laws allowed federal funding to be used for items not eligible under AIP, such as operations, personnel, and maintenance costs, rent relief, payment of debt service, cleaning, and sanitation. CARES, CRRSAA, and ARPA grant funding came from the U.S. Treasury's General Fund, rather than the Airport and Airway Trust Fund (AATF).

STATE FUNDING

The Idaho Airport Aid Program (IAAP) provides for the discretionary allocation of grant funds to Idaho airport owners. Only public entities are eligible to participate in the IAAP. Any county, city, village, or agency designated in Idaho Code is deemed an eligible public entity for participation in the IAAP.

IAAP funds are derived from Idaho's aviation fuel tax, $.07/gallon for aviation gasoline and $.06/gallon for jet fuel. The IAAP is a Trustee and Benefit program providing matching funds to municipal governments for public airport improvements. Allocations must meet high priority needs and achieve maximum benefit and use of available funds. The allocation program is designed to provide the greatest and best utilization of limited Idaho Airport Aid funds. The primary goal of the allocation program is to further the proper development of a statewide system of airports and fair distribution of aviation tax money.

The IAAP is administered according to Idaho Administrative Code IDAPA 39.04.01. This rule states that an airport owner should have a state approved airport plan (section 701.01), and protective zoning (Idaho law Title 67 Chapter 6508 Section q) in place to participate in the IAAP. However, if they do not have a plan or protective zoning in place, or if these need to be updated, the IAAP can provide funding for those items.

ITD Aeronautics also has two other programs intended to assist airports. The Airport Maintenance and Safety Supplies Program supplies airports with certain maintenance items, such as lamps, light fixtures, and wind cones. The Small Projects Program provides funding for emergency or unscheduled improvements of less than $2,000.

The Idaho Department of Commerce administers the Idaho Gem Grant Program (IGG) to aid rural communities in the planning and implementation of economic development projects. The program is open to any rural community with a population of 10,000 or less, and must be requested by a city, county, or tribal government. Idaho Gem Grants of up to $50,000 are intended to be used for private sector job creation and economic development. Eligible projects include infrastructure for new businesses and matching funds for economic development projects.

The Idaho Department of Commerce also administers the Community Development Block Grant Program (CDBG), which is intended for Idaho cities and counties with less than 50,000 people. Eligible projects include public facility improvements that support businesses who are expanding and creating jobs.

Another program administered by the Idaho Department of Commerce is the Rural Community Investment Fund (RCIF), which provides funds to rural areas with a population of less than 25,000 to support economic expansion and job creation. Projects must have a measurable rural benefit and include extension of utilities to a site for a new business or industrial park. Grant limits are $50,000 to $500,000. A local match is required, but there is no set amount.

LOCAL FUNDING

Local funds are those derived from income generated from the operation of the airport through leases and user fees, or contributions by the sponsoring agency, in this case the City of McCall, from general or other funds. Local funds are used to match grants that do not cover 100% of project costs, and to fund operations, maintenance, and administration of the airport.

PRIVATE FUNDING

Private funding for airport improvements typically comes in the form of investors who are intending to make extensive use of the airport through development of hangars or an airport business, such as an FBO. Such endeavors may require substantial infrastructure improvements that ultimately benefit the public use portions of the airport, but obligate the investor with a significant financial commitment. Financial commitments of this magnitude require long-term agreements between the private entity and Airport Sponsor to make it palatable for investors.

REVENUE AND SPECIAL FACILITY BONDS

Article VIII, Public Indebtedness and Subsidies, Section 3E, *Airports and Air Navigation Facilities – Airport Related Projects – Revenue and Special Facility Bond Financing*, of the Idaho State Constitution authorizes airport operators to issue revenue and special facility bonds to finance the cost of airport improvements intended for public use. Bonds would then be paid for with revenue generated by the facilities financed by the bonds.

OTHER FEDERAL LOAN PROGRAMS

Other sources of funding can be applied for through the United States Department of Agriculture (USDA), and the United States Economic Development Administration (USEDA). The USDA Rural Development program is for communities with a population less than 20,000 people. The mission is to create economic prosperity and improve the quality of life in rural areas, where access to financing is more challenging. Funding for Rural Development programs are for projects which enhance community infrastructure, and spur economic growth by providing quality jobs, and attract new businesses.

Under the Rural Development program is the Community Facilities Loan Program, specifically for transportation infrastructure, such as airports. Funding may be used for terminals, hangars, runways, parking areas, roadway, curbside, and administrative facilities. Additionally, USDA Community Facility loans may be used as the community match for FAA funding. The average direct loan size is four million, though much larger loans are available. The Community Facilities Program has funded projects greater than $100 million dollars. The interest rates may be fixed or variable and are determined quarterly and posted publicly. The repayment period is limited to the useful life of the facility, or any statutory limitation on the applicant's borrowing authority.

8.5 FINANCIAL FEASIBILITY

The purpose of this section is to demonstrate the Airport Sponsor's ability to fund the projects described in the CIP. A review of the airports rates and charges will be described, along with revenues and expenses from the airport's annual budget.

RATES AND CHARGES

The current fee schedule for McCall Municipal Airport was adopted via Resolution 20-23 on December 17, 2020 and is described in *Table 8.3*.

Table 8.3 McCall Municipal Airport Fee Schedule	
Description	**Fee Amount**
Fuel Flowage Fees (per gallon)	$0.08
Seasonal Tie-Down Rates (permonth, 25% discount forpaying 6 months in advance)	
Single Engine and Small Twin, T-Tie Down Area	$50.00
Twin Tie-Down Row	$75.00
Jet Row	$200.00
Aircraft Parking	
Piston Single & Light Piston Twin, less than 6,000 pounds (per night)	$5.00
Piston Single & Light Piston Twin, 6,000 – 12,500 pounds (after 4 hours)	$7.50
Turbine-Powered Single/Twin (after 4 hours)	$15.00
Jets less than 12,500 pounds (after 4 hours)	$40.00
Jets 12,500 pounds and greater (after 4 hours)	$45.00
New Land Leases (annually, per square foot, base year 2018 adjusted annually effective October 1, according to the percentage increase of the Western Urban Consumer Price Index for the 12 calendar months prior and including the most recent month for which an Index is available.	
Covered	$0.3127
Bare	$0.3127
New Lease Prep Fee	$300.00
Lease Assignment Fee	Not to exceed $1,000 and not to exceed actual cost of personnel and expenses
Lease Termination Fee	$50.00
Survey Work (Tenant requested only)	Cost + Admin Fee
Landing Fees (per 1,000 pounds) maximum certificated gross takeoff weight	
Less than 8,000 pounds	No Charge
Based Aircraft 8,000 pounds	$1.10
Transient Group A, B, C, Category I & II greater 8,000 pounds and greater	$1.65
Category III and greater	$2.75
All Air Ambulance and Fire Fighting Aircraft	No Charge
Hangar Wait List	$500.00
Car Rental Fees (On airport and picking up or dropping off at airport)	10% of gross receipts
Commercial Operator Permits (Not leasing from airport or subleasing from airport tenant)	
Itinerant Commercial Operators	$500.00 per year, landing fee at $1.65 credited against first $500.00
FAR Part 137 agricultural operators, except fire fighters	$500.00 per month
Scheduled Part 135 (less than 10 seats)	$1,000.00 per year, landing fee at $1.65

Table 8.3 McCall Municipal Airport Fee Schedule (Continued)	
Description	**Fee Amount**
Vehicle Parking (non-aircraft)	
Daily	$5.00
Vehicle operator leasing from airport or subleasing or receiving services from airport tenant. Monthly rate paid in advance	$25.00
Vehicle operator leasing neither leasing from airport nor subleasing nor receiving services from airport tenant. Monthly rate paid in advance	$50.00
Snow Removal from Leased Space	
Automatic removal option (per square foot)	$0.01
As-requested option, request received prior to 9 am (per square foot)	$0.01 + $10.00
As-requested expedited option (per square foot)	$0.015
Construction/Project Fees	
New Hangar Construction Staff Review	$150.00
Projects for Tenants through Airport Staff	Cost + Admin Fee
Administrative Fee	10%

Source: City of McCall

REVENUE AND EXPENSE, FY2017 - 2022

The following revenue and expenses were derived from City of McCall annual budgets, excluding grants, for fiscal years 2017 - 2022. For that period, the greatest revenue source was from hangar leases, followed by property taxes, then the U.S. Forest Service contract. The greatest expense during that period was personnel costs, followed by operating expenses, then inter-fund transfers for City administrative, GIS, and network support services. Operating expenses include utilities, facility and equipment repairs, professional services, and fuel.

Table 8.4 McCall Municipal Airport Revenues

Revenue Source	FY17 Actual	FY18 Actual	FY19 Actual	FY20 Actual	FY21 Actual	FY22 Adopted
Property Taxes	$44,769	$18,970	$55,397	$71,957	$65,723	$62,342
County Airport Levy	$15,600	$15,600	$15,600	$15,600	$15,600	$15,600
Penalties & Interest	$269	$217	$228	$675	$394	$500
Landing Fees	$6,429	$16,225	$11,646	$14,278	$15,318	$9,500
Tie-Down Feeas	$3,573	$3,368	$1,750	$1,375	$1,745	$2,750
Overnight Parking Fees	$3,200	$9,485	$6,357	$6,174	$5,485	$4,000
Vehicle Parking Fees	$0	$0	$1,500	$0	$0	$100
Car Rental Fees	$4,617	$8,073	$6,942	$5,724	$9,849	$5,500
Snow Removal	$0	$0	$0	$0	$0	$0
Fuel Flowage Fees	$22,270	$33,773	$27,362	$25,068	$37,492	$22,500
Interest	$2,183	$1,932	$11,238	$11,269	$1,608	$1,500
Appropriated Fund Balance	$0	$0	$0	$0	$0	$28,500
Inter-Fund Transfer	$7,200	$87,359	$0	$0	$0	$0
Hangar Leases	$154,773	$157,475	$172,101	$173,858	$179,567	$175,000
USFS Contract	$57,740	$55,021	$54,670	$55,489	$56,390	$58,500
Local Tax Option	$30,000	$0	$0	$0	$0	$0
Contracts/Agreements	$4,200	$3,331	$700	$700	$700	$1,250
ID Fuel Tax Refund	$33	$0	$0	$1,128	$0	$150
Miscellaneous	$450	$2,400	$2,944	$2,294	$1,511	$0
Sale of Property	$24,776	$0	$3,800	$0	$0	$0
Contingent Revenue	$0	$0	$0	$0	$0	$0
Total Revenue	$382,082	$413,229	$379,435	$385,589	$391,381	$387,692

Source: City of McCall Annual Budgets

Table 8.5 McCall Municipal Airport Expenses

Expense Source	FY17 Actual	FY18 Actual	FY19 Actual	FY20 Actual	FY21 Actual	FY22 Adopted
Personnel	$147,877	$142,871	$163,903	$169,182	$172,839	$195,530
Operating	$70,326	$66,022	$81,373	$67,885	$79,091	$97,850
Capital Expense	$119,854	$0	$41,566	$0	$0	$0
Inter-Fund Transfer	$35,720	$53,603	$64,405	$67,846	$64,548	$65,812
Contingent Expenses	$0	$0	$0	$0	$0	$0
Total Expense	$373,777	$262,496	$351,247	$304,913	$316,479	$359,192

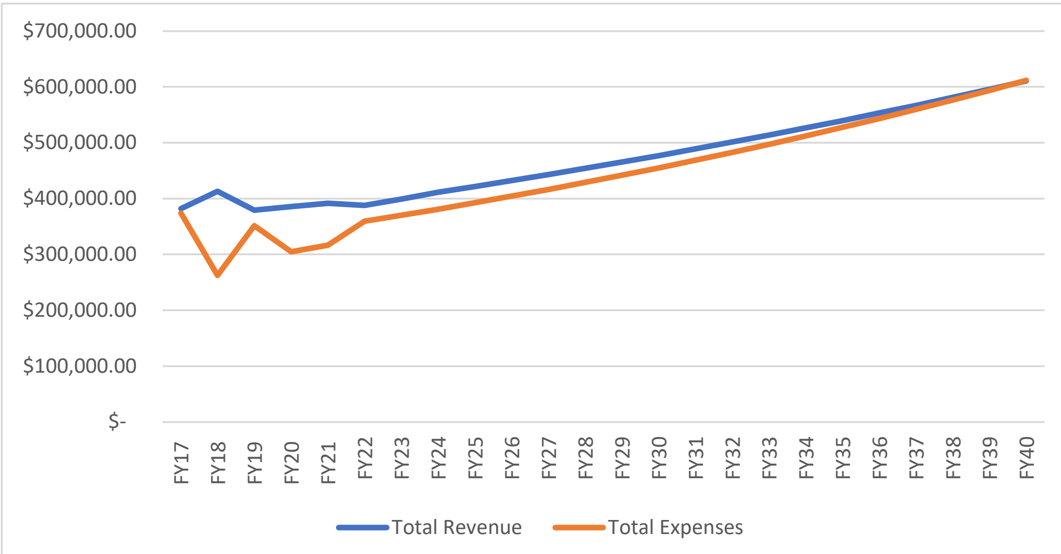
Source: City of McCall Annual Budgets

From the tables above, if contingent revenue and contingent expense are removed since they cancel each other out, the Average Annual Growth Rate (AAGR) of revenue is 0.4%, while the AAGR of expense is 1.6%.

REVENUE AND EXPENSE, PROJECTED

The following revenue and expense projections were made using very broad and general assumptions, based on historic performance, a Consumer Price Index (CPI) (all items in West urban, all urban consumers, not seasonally adjusted) of 2.5%, and the implementation of revenue generating projects, such as the infield development area. For revenue projections, fiscal years 2023 and 2024 assume a growth rate of 3.0% to account for new lease plots, then 2.5% thereafter. For expense projections, a 3.0% growth rate is assumed to account for CPI, aging infrastructure, and added infrastructure that will require maintenance. At this assumed rate, expenses will catch up to and overtake revenue in FY2040.

Figure 8.4 MYL Revenue and Expense, Historic and Projected



8.6 POTENTIAL REVENUE ENHANCEMENT

The Airport Sponsor is responsible under Grant Assurance #24 to maintain a fee and rental structure which makes the airport as self-sustaining as possible under the circumstances that exist at the airport. Per FAA Order 5190.6B, *Airport Compliance Manual*, fees for aeronautical uses only need to be fair and reasonable, while fees for nonaeronautical uses must be at fair market value. Charges for nonaeronautical uses at less than fair market value constitute a subsidy of local government and is considered revenue diversion, a violation of Grant Assurance #25. The FAA expects Airport Sponsors to charge police or fire fighting units that operate aircraft at the airport reasonable fees for their aeronautical use, but may offset the value of those services against airport fees (in-kind services). Airport Sponsors may reduce rental rates to aviation museums, Civil Air Patrol units that operate an aircraft at the airport, and aeronautical education programs (if they are provided by an accredited institution), to the extent they provide benefits to civil aviation.

McCall Municipal Airport's fee schedule was last updated in December of 2020. A review of the fee schedule should be conducted annually to ensure the rates and charges are current and relevant, with adjustments made accordingly.

Another potential revenue source is from nonaeronautical development along S.H. 55 following land acquisition in Phase 3 of the development plan. Examples for this triangular-shaped parcel include a hotel, restaurant, conference center, self-storage, or campground. One existing nonaeronautical opportunity area is a strip of airport property west of Taxiway B, north of the Smokejumper base, and south of Deinhard Lane. Examples for this area include a public viewing area, pocket park, community garden, campground, or storage. Any nonaeronautical uses on airport property would need prior approval from the FAA.

The general aviation terminal proposed in Phase 3 of the development plan should incorporate leasable space for an aeronautical user, such as an air charter company, which would also generate revenue. Other revenue generating activities in the general aviation terminal include advertising, concessions, ATM, rental cars, and vehicle parking.

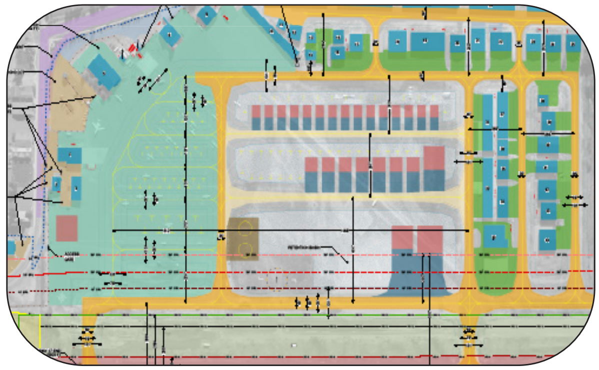
8.7 SUMMARY

The development plan for McCall Municipal Airport is ambitious and dependent on discretionary funding by the FAA, along with actual airport needs as they present themselves. Alternative funding sources, along with enhanced revenue generating capacity at the airport, will be key to a successful implementation of this Airport Master Plan. Furthermore, the projects contained in the development plan are for planning and programming purposes, and do not commit the Airport Sponsor or FAA to carry out or fund the projects. If a project is not financially feasible or justified, it will not be pursued.

9. Airport Layout Plan

SECTION OVERVIEW

The Airport Layout Plan is a drawing set depicting the current airport facilities and proposed developments based upon the previously determined aviation demand forecast, facility requirements, and selected alternatives. This chapter describes each drawing included in the set.



9.1 GENERAL

An approved Airport Layout Plan (ALP) is necessary for an airport to receive financial assistance under the terms of the Airport and Airway Improvement Act of 1982. An airport must keep its ALP current and follow the plan as part of AIP grant assurance requirements and previous airport improvement programs. The ALP creates a blueprint for airport development by depicting proposed facility improvements and a guideline to ensure that development meets airport design standards and safety requirements.

The ALP is a set of planning drawings and is intended to provide locations of the major components of an airport; runways, taxiways, aprons, and hangar areas. The various parts of the airport are all interconnected and need to be looked at as a whole. For this reason, the full ALP set is vetted through multiple divisions of the FAA. Each division analyzes the existing airport and planned improvements for overall compatibility with the national system of airports (such as airspace and planned approaches) and for on-airport compliance. After the ALP is approved by the FAA, minor changes to the planning sheets are allowed by the Sponsor to include a slight relocation of a hangar or taxiway. However, FAA design standards and overall use of the land and space as planned must be followed, otherwise the airport drawings must be submitted to the FAA again for approval.

This chapter describes, in detail, the ALP drawings for McCall Municipal Airport, and gives a description of the proposed improvements for the airport. The airport and the areas the airport impacts are graphically represented within the drawing set. All layout drawings appropriate to the project were produced using FAA standards as defined in AC 150/5070-6B, *Airport Master Plans* and AC 150/5300-13A, *Airport Design*. The following drawings were produced on 24" x 36" sheets and on 11" x 17" sheets as included in Appendix E:

- Title Sheet (Sheet 1)
- Airport Data Sheet (Sheet 2)
- Airport Layout Plan (Sheet 3A - Existing)
- Airport Layout Plan (Sheet 3B - Future)
- Airport Airspace (Sheet 4)
- Inner Portion of the Approach Surface - Runway Detail (Sheet 5A)
- Inner Portion of the Approach Surface - Runway 16 (Sheet 5B)
- Inner Portion of the Approach Surface - Runway 34 (Sheet 5C)
- Runway Departure Surface - Runway 16/34 (Sheet 6)

- Terminal Area - Overall (Sheet 7A)
- Terminal Area - Existing Detail (Sheet 7B)
- Terminal Area - Future Detail (Sheet 7C)
- Terminal Area - West Side Detail (Sheet 7D)
- On Airport Land Use (Sheet 8A)
- Off Airport Land Use (Sheet 8B)
- Photo and Contours (Sheet 9)
- Exhibit "A" (Sheet 10)

9.2 TITLE SHEET

The Title Sheet lists the drawings within the set, with approval signature blocks for the Sponsor, ITD Aeronautics, and designated space for the FAA approval letter. This sheet also includes the location and vicinity map, showing the airport, City of McCall, and Valley County in relation to the State of Idaho. The project name, AIP number, and airspace case number are also included.

9.3 AIRPORT DATA SHEET

The Data Sheet includes the following information:

- Wind rose(s) including data source, time period covered, and wind coverage percentages for the runway.
- Airport Data Table: existing and future, including Airport elevation, Airport Reference Point, mean maximum temperature, Airport Reference Code, and design aircraft.
- Runway Data Table: existing and future, including percent effective gradient; percent wind coverage; maximum elevation above Mean Sea Level (MSL); runway length, width, surface type, and strength; 14 CFR Part 77 approach category, approach type, and approach slope; runway lighting, markings, navigational, and visual aids; and RSA dimensions.
- FAA Approved Airport Modification to Standards Table, including approved date.
- Declared Distances Table: existing and future, including Take-off Run Available (TORA), Take-off Distance Available (TODA), Accelerated Stop Distance Available (ASDA), and Landing Distance Available (LDA).

9.4 AIRPORT LAYOUT PLAN (ALP)

A set of drawings has been described as the ALP, but the main sheet of the set is singularly called the Airport Layout Plan. This sheet is the core of the set and is the overall representation of the existing and planned airport. The existing facility is depicted to show improvements as compared to the existing condition. The surfaces presented, such as the RSA and OFA, include dimensions to show the FAA design standards. If a surface falls short of standards, a note in the appropriate table and drawing will point out the deficiency.

A primary function of the ALP sheet is to show the planned development areas, including runways, taxiways, apron areas, expansions or extensions of any kind, and any other changes connected to airport development. The McCall Municipal Airport ALP sheet shows airport development using FAA design standards for an ARC B-II, large, airport.

The ALP depicts the existing and future airport facilities and includes facility identifications, description labels, imaginary surfaces, safety areas, and data tables. The ALP includes the following items:

- North Arrow showing True and Magnetic North and the year of the magnetic declination.
- Airport Reference Point (ARP), existing and future.
- Elevations, existing and future, for runway ends, touchdown zones, intersections, runway high and low points, structures on the airport, and roadways where they intersect the RPZ.
- Building limit lines.

- Runway details, existing and future, including dimensions, orientation, markings, threshold lighting, runway safety areas, and end coordinates.
- Taxiway details, existing and future, including widths and separations from the runway centerline, parallel taxiway, aircraft parking, and objects.
- RPZ details, existing and future, including dimensions.
- Approach slope ratio.
- Sponsor and ITD Aeronautics acceptance, and FAA conditional approval signature blocks.

9.5 AIRPORT AIRSPACE

The airport airspace drawing identifies all penetrations to surfaces as defined by 14 CFR Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace*. A primary function of the Part 77 drawing is to provide local planners and governments a means to check for potential obstructions from other planned development. A prime example of this would be an application to build a cellular tower near the airport. By using the Part 77 drawing, planners can check obstruction impacts to airport safety surfaces prior to any construction, degrading the airspace or approach procedures. This drawing is one of two that addresses land use protections near the airport; the other, discussed later, is the Land Use plan. Items in the Part 77 drawing include:

- Plan view of all 14 CFR Part 77 surfaces, based on the future runway lengths.
- Small scale profile views of future approaches.
- Obstruction data tables, including terrain and significant items, obstruction identification number and description, the amount of the approach surface penetration, and the proposed disposition of the obstructions.
- Contoured base map, runway end numbers, 50’ elevation contours on all slopes, most demanding surfaces more darkly shaded, and top elevations of objects that penetrate any surface.
- Runway ends, existing and future, with latitude, longitude, and elevation coordinates.
- North Arrow showing True and Magnetic North and the year of magnetic declination.
- Obstruction notes listing airspace protection regulations and obstruction survey completion date.
- Vertical buffer notes.

9.6 INNER PORTION OF APPROACH SURFACE AND RUNWAY DEPARTURE SURFACE DRAWINGS

The Inner Portion of Approach Surface sheet contains: 1) a top-down view of the inner approach for both runway ends with an aerial image with contoured background, 2) profile drawing that displays the center line ground profile detail and critical ground profile for the inner approach of both runway ends, and 3) obstructions to Part 77 surfaces.

The Runway Departure Surface contains: 1) a top-down view of the entire approach and departure surface for both runway ends with a topographical background with contours, 2) an oblique view of the same area with contours shaded, and 3) a profile that displays the center line ground profile and critical ground profile beyond the runway ends for approximately 10,000 feet, as well as all surfaces, to determine obstructions.

In summary, these drawings include:

- Large scale plan views of inner portions of approaches for each runway, usually limited to the RPZ.
- Large scale projected profile views of inner portions of approaches for each runway, usually limited to the RPZ.
- Plan View Details including aerial photos for base maps, numbering system to identify obstructions, property line, existing and future physical end of the runways with runway end numbers and elevation, and ground contours.
- Profile View Details including terrain and significant items and obstructions with numbers on the plan view.

- Approach Profile Details including a depiction of the ground profile along the extended runway centerline representing the composite profile, based on the highest terrain across the width and along the length of the approach surface.
- The Approach Profile Details also includes the identification of all significant objects within the approach surfaces, regardless of whether or not they are obstructions and the existing and future runway ends and 14 CFR Part 77 approach slopes.

9.7 TERMINAL AREA

The Terminal Area plan is a detailed view of the apron that allows sufficient scale to present dimensions and show imaginary surfaces. When the Sponsor is approached for new hangar development, this drawing should be referenced for available space, location, and appropriate restrictions to meet the design standards, thus ensuring a safe environment.

The Terminal Area plan presents large-scale depictions of highlighted areas with existing and future building development opportunities and facilities. The FAA, during the airspace review, ensures that existing and planned building development will not impact instrument approach procedures or hamper improvements to the approaches. Depicted on the drawing is the Building Restriction Line (BRL) which represents where a 35-foot building can be located without penetrating 14 CFR Part 77 surfaces. The Terminal Area drawing presents the following information:

- Large scale plan views of the area or areas where aprons, buildings, hangars, and parking lots are located.
- A building and data table that lists structures and shows pertinent information including a numbering system to identify structures, top elevations of structures, and existing and planned obstruction markings.
- Existing and future airport facility and building list.
- Title and revision blocks.

9.8 LAND USE

The next drawings used for local protection of the airport is Land Use. These drawings focus on particular uses of the land near the airport, whereas the Part 77 drawing dealt with height obstructions. Incompatible land use can degrade the value of the public investment in the airport and/or heighten the exposure of danger to greater numbers of the public. Studies have shown that generally, aircraft have a greater potential of crashing near the ends of the runway on both takeoff and landing. This heightened potential for risk has caused the FAA to develop safety areas off of the runway ends and develop guidance and standards to preclude congregations or gatherings of people in these zones. Land uses such as hospitals, schools, high density residential (apartment complexes), and other places that have a greater potential for loss of life if an accident were to occur are prohibited or strongly discouraged in these areas.

Additional concerns with particular land uses near the airport are wildlife attractants and pilot interference. Limiting the amount of attractive natural ground is important to reduce the potential of wildlife impacts. Specific problem areas are animal attractants, such as golf courses and parks (goose attractant), certain farming activities (mammal and bird attractants), landfills (bird attractant), and other uses like high cover that offer sanctuary to wildlife. Natural occurring attractants should be minimized when possible and man-made attractants should be avoided. Land uses that might interfere with pilot or aircraft operations must be avoided, including power plants or industrial uses that create steam columns/clouds or other visual obstructions. Uses that may cause interference with compasses or radios need to be avoided as well.

The land use and zoning photograph and map display the airport and a large surrounding area. Defined airport safety zones are overlaid and include:

- Aerial base map.
- Legend with symbols and land use descriptions.
- Airport and nearby communities.
- City defined airport safety zones.

9.9 AIRPORT PHOTO AND CONTOURS

The Airport Photo and Contours depicts the terrain contours, using five-foot and two-foot contours, of land around the airport. General contours are used to highlight possible terrain obstructions and penetrations for approach and departures surfaces. Contours are also used in planning construction and earthwork. The existing airport and proposed facilities, as well as the airport property boundary and safety areas are included for reference against terrain contours.

9.10 AIRPORT PROPERTY MAP (EXHIBIT "A")

The airport property map, also called the Exhibit "A" if prepared in accordance with AC 150/5100-17, *Land Acquisition and Relocation Assistance for Airport Improvement Program Assisted Projects*, depicts the various tracks of land acquired to develop the airport, and the method of acquisition. It displays easements beyond the airport boundary. The airport property map includes the following information:

- Parcel Data Table with a numbering or lettering system to identify tracts of land, the date the property was acquired, the Federal Aid project number under which it was acquired, the type of ownership, and existing and future airport features that would indicate a future aeronautical need for airport property.

To qualify as an Exhibit "A", the drawing must contain the following as directed in AC 150/5100-17, Figure 1.2:

- Identify the outside airport property boundary.
- All property parcels of the entire airport must be shown and numbered. In addition, parcels that were once airport property must also be shown.
- Show and/or directly reference parcel information including: Grantee (selling owner), type of interest acquired, acreage, public land record references such as book and page and date of recording.
- For each property parcel show FAA project number if acquired under a grant; Surplus Property Transfer or AP-4 Agreement if applicable; and type of easement (clearing, avigation, utility, ROW, etc.); and if released, date of FAA approval.
- Show the purpose of acquisition (current aeronautical, noise compatibility, or future development) and current use if different or in interim use pending development.
- Show runway protection zones, runway configurations, and building restriction lines.
- Show magnetic and true north arrows per standard drafting practices.
- The Exhibit "A" must be dated and amended whenever there is a change to any airport property.

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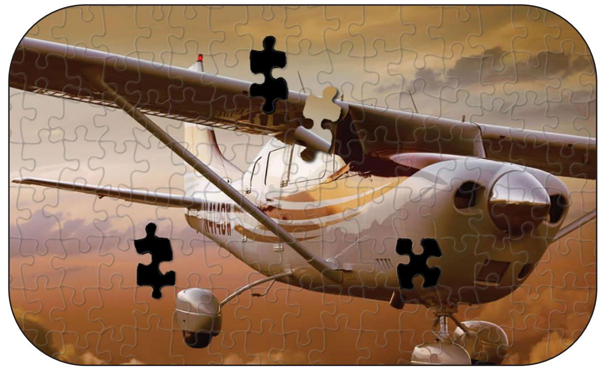
10. Planning for Compliance

SECTION OVERVIEW

The FAA has published the FAA Airport Compliance Manual, Order 5190.6B. This chapter provides a brief overview of planning needs for compliance with some of these standards.



10.1 GENERAL

The FAA published Order 5190.6B, *Airport Compliance Manual*, in September 2009 that provides guidance on interpreting and administering the various continuing commitments Airport Sponsors make to the U.S. government when they accept grants of federal funds or federal property for airport purposes. The Airport Compliance Program was developed to ensure that Airport Sponsors comply with federal obligations in the form of grant assurances, surplus and nonsurplus obligations, or other applicable federal laws.

10.2 SOURCES OF OBLIGATIONS

The federal obligations an Airport Sponsor assumes by accepting FAA administered airport development assistance are mandated by federal statute. These obligations are incorporated in the grant agreements and property conveyance instruments entered into by the Airport Sponsor and the U.S. Government. The sources of Airport Sponsor federal obligations include:

- Grant agreements issued through airport development grant programs including:
    - Federal Aid to Airports Program (FAAP)
    - Airport Development Aid Program (ADAP)
    - Airport Improvement Program (AIP)
- Grant agreements and instruments of nonsurplus conveyance issued under the:
    - 1946 Airport Act
    - 1970 Airport Act
    - Airport and Airway Improvement Act of 1982 (AAIA)
- Surplus property instruments of transfer issued under the provisions of Section 13(g) of the Surplus Property Act of 1944, as amended
- Deeds of conveyance issued under section 16 of the 1946 Airport Act, Section 23 of the 1970 Airport Act, and Section 516 of the AAIA
- AP-4 agreements authorized by various acts between 1939 and 1944
- Exclusive Rights under section 303 of the Civil Aeronautics Act of 1938, as amended and section 308(a) of the FAA Act, as amended
- Commitments in environmental documents prepared in accordance with current Federal Aviation Administration requirements that address the National Environmental Policy Act of 1969 (NEPA) and the AAIA

- Separate written agreements between the Sponsor and the FAA, including settlement agreements resulting from litigation.

10.3 FEDERAL GRANT OBLIGATIONS

The following list of assurances and deed restrictions are those most commonly encountered in compliance cases.

a. Exclusive Rights Prohibition:
   1) Applies to airports subject to: Any federal agreement or property conveyance.
   2) Obligation: To operate the airport without granting or permitting any exclusive right to conduct any aeronautical activity at the airport. (Aeronautical activity is defined as any activity which involves, makes possible, or is required for the operation of an aircraft, or which contributes to or is required for the safety of such operations; i.e., air taxi and charter operations, aircraft storage, sale of aviation fuel, etc.)
   3) Duration of obligation: For as long as the property is used as an airport.
b. Maintenance of the Airport:
   1) Applies to airports subject to: FAAP/ADAP/AIP agreements, surplus property, conveyances, and certain section 16/23/516 conveyances.
   2) Obligation: To preserve and maintain the airport facilities in a safe and serviceable condition. This applies to all facilities shown on the approved ALP which are dedicated for aviation use, and includes facilities conveyed under the Surplus Property Act.
   3) Duration of obligation: Standard[1].
c. Operation of the Airport:
   1) Applies to airports subject to: FAA/ADAP/AIP agreements and surplus property conveyances.
   2) Obligation: To operate the aeronautical and common use areas for the benefit of the public and in a manner that will eliminate hazards to aircraft and persons.
   3) Duration of obligation: Standard[1].
d. Protection of Approaches:
   1) Applies to airports subject to: FAAP/ADAP/AIP agreements and surplus property conveyances.
   2) Obligation: To prevent, insofar as it is reasonably possible, the growth or establishment of obstructions in the aerial approaches to the airport. (The term “obstruction” refers to natural or man-made objects which penetrate the imaginary surfaces as defined in FAR Part 77, or other appropriate citation applicable to the specific agreement or conveyance document.)
   3) Duration of obligation: Standard[1].

[1] Standard means:
   1) <u>Grant agreements for development other than land purchase.</u> Pavement and other facilities built to FAA standards are designed to last at least 20 years, and the duration of the obligation should generally be assumed to be 20 years. The duration may be shorter for grants made exclusively for certain equipment, such as a vehicle, that clearly has a useful life shorter than 20 years.
   2) <u>Grant agreements for land purchase.</u> AIP grant agreements for purchase of land provide that obligations do not expire, since the useful life of land does not end or depreciate. However, FAAP and ADAP grants did not always contain this language, and the grant documents should be reviewed to determine whether the obligations expire in 20 years or continue indefinitely. Also, grants to a private operator of a public-use general aviation airport provide for a defined duration of the obligations attached to the grant, and the grant documents should be reviewed to determine the actual obligations that apply.
   3) <u>Surplus property deeds and nonsurplus land conveyance documents.</u> Documents conveying federal land and property interests for airport use generally have no expiration date, and obligations continue indefinitely until the Sponsor is formally released from the obligation by the FAA. Obligations run with the land and bind subsequent owners.

e. Compatible Land Use
   1) Applies to airports subject to: FAAP (after 1964)/ADAP/AIP agreements.
   2) Obligation: To take appropriate action, to the extent reasonable, to restrict the use of lands in the vicinity of the airport to activities and purposes compatible with normal airport operations.
   3) Duration of obligation: Standard[1].

f. Availability of Fair and Reasonable Terms:
   1) Applies to airports subject to: Any federal agreement or property conveyance.
   2) Obligation: To operate the airport for the use and benefit of the public to make it available to all types, kinds, and classes of aeronautical activity on fair and reasonable terms and without unjust discrimination.
   3) Duration of obligation: Twenty years from the date of execution for grant agreement prior to 1964. For grants executed subsequent to the passage of the Civil Rights Act of 1964, the statutory requirement prohibiting discrimination remains in effect for as long as the property is used as an airport. The obligation runs with the land for surplus property and section 16/23/516 conveyances.

g. Adherence to the Airport Layout Plan:
   1) Applies to airports subject to: FAAP/ADAP/AIP agreements.
   2) Obligation: To develop, operate, and maintain the airport in accordance with the latest approved Airport Layout Plan. In addition, airport land depicted on the latest property map (Exhibit "A") cannot be disposed of or otherwise encumbered without prior FAA approval.
   3) Duration of obligation: Standard[1].

h. Utilization of Surplus Property:
   1) Applies to airports subject to: Surplus property conveyances.
   2) Obligation: Property conveyed under the Surplus Property Act must be used to support the development, maintenance and operation of the airport. If not needed to directly support an aviation use, such property must be available for use to produce income for the airport. Such property may not be leased or rented at a discount or for nominal consideration to subsidize nonairport objectives. Airport property cannot be used, leased, sold, salvaged, or disposed of for other than for airport purposes without FAA approval.
   3) Duration of obligation: Standard[1].

i. Utilization of Section 16/23/516 lands:
   1) Applies to airports subject to: Section 16/23/516 conveyances.
   2) Obligation: Property must be used for airport purposes; i.e., uses directly related to the actual operation or the foreseeable aeronautical development of the airport. Incidental use of the property must be approved by the FAA.
   3) Duration of obligation: Standard[1].

j. Sale or Other Disposal of Property Acquired Under FAAP/ADAP/AIP:
   1) Applies to airports subject to: FAAP/ADAP/AIP agreements.
   2) Obligation: To obtain FAA approval for the sale or other disposal of property acquired under FAAP/ADAP/AIP, as well as approval for the use of any net proceeds realized.
   3) Duration of obligation: Standard[1].

k. Utilization of Airport Revenue:
   1) Applies to airports subject to: Any federal agreement or property conveyance.
   2) Obligation: To use all airport revenues for the capital or operating costs of the airport, the local airport system, or other local facilities which are owned or operated by the owner or operator of the airport, and directly related to the actual air transportation of passengers or property.
   3) Duration of obligation: Standard for grants and conveyances executed prior to October 1, 1996. For airports receiving assistance on or after that date, the obligation continues as long as the facility is used as a public-use airport.

4) Special Conditions Affecting Noise Land and Future Aeronautical Use Land: Apply interim revenue derived from noise land or future aeronautical use land to projects eligible for grants under the AIP. This income may not be used for the matching share of any grant.

l. National Emergency Use Provision:
   1) Applies to airports subject to: Surplus property conveyances (where Sponsor not released from this clause.)
   2) Obligation: That during any war or national emergency, the government has the right of exclusive possession and control of the airport.
   3) Duration of Obligation: Runs with the land (unless released from this clause by the FAA, with concurrence of the Department of Defense.)

m. Fee and Rental Structure:
   1) Applies to airports subject to: FAAP/ADAP/AIP agreements.
   2) Obligation: To maintain a fee and rental structure of the facilities and services being provided to the airport users which will make the airport as self-sustaining as possible. (Note: Fair and reasonable for aeronautical activities and fair market value for nonaeronautical activities.)
   3) Duration of obligation: Standard[1].

n. Preserving Rights and Powers:
   1) Applies to airports subject to: FAAP/ADAP/AIP agreements.
   2) Obligation: To not enter into any transaction which would operate to deprive it of any of the rights and powers necessary to perform any or all of the Sponsor assurances without FAA approval, and to act promptly to acquire, extinguish or modify any outstanding rights or claims of right of others that would interfere with such performance by the Sponsor. To not dispose of or encumber its title or other interests in the site and facilities for the duration of the terms, conditions, and assurances in the grant agreement without FAA approval.
   3) Duration of Obligation: Standard[1].

o. Environmental Requirements:
   1) The AAIA requires that for certain types of project, an environment review be conducted. The review can take the form of either an environmental assessment or an environmental impact statement. These environmental documents often contain commitments related to mitigation of environmental impacts. FAA approval of environmental documents containing such commitments has the effect of requiring that these commitments be fulfilled before FAA grant issuance or as part of the grant.

p. Other Obligations:
   1) The above obligations represent the more important obligations assumed by an airport Sponsor. Other obligations that may be found in grant agreements include:
      - Use of government Aircraft
      - Land for Federal Facilities
      - Standard Accounting Systems
      - Reports and Inspections
      - Consultation with Users
      - Terminal Development Prerequisites
      - Construction Inspection and Approval
      - Minimum Wage Rates
      - Veterans Preference
      - Audits, Audit Reports and Record Keeping Requirement
      - Local Approval
      - Civil Rights

- Construction Accomplishment
- Planning Projects
- Good Title
- Sponsor Fund Availability

10.4 GRANT ASSURANCES

There are 39 Grant Assurances that are briefly described here. Complete descriptions and requirements are located within Appendix A of FAA Order 5190.6B.

1. General Federal Requirements - The Sponsor must comply with all applicable federal laws, regulations, executive orders, policies, guidelines, and requirements as they relate to the application, acceptance, and use of federal funds for the project.
2. Responsibility and Authority of the Sponsor - The Sponsor must have legal authority to apply for the grant and to finance and carry out the proposed project and comply with all terms, conditions, and assurances of the grant agreement. As applicable, a resolution, motion, or similar action must be duly adopted or passed as an official act of the applicant's governing body authorizing the filing of the application.
3. Sponsor Fund Availability - The Sponsor must have sufficient funds available for the portion of the project costs that will not be paid by the U.S. government. Sufficient funds must also be available to assure operation and maintenance of items funded under the grant agreement.
4. Good Title - The Sponsor must show that good title is held or will be acquired by the Sponsor, public agency, or federal government. The Sponsor must hold good title or obtain good title for noise compatibility program projects.
5. Preserving Rights and Powers - The Sponsor will not take or permit any action which would deprive it of any of the rights and powers necessary to perform any or all of the terms, conditions, and assurances in the grant agreement. The Sponsor will not sell, lease, encumber, or otherwise transfer or dispose of any part of its title or other interests in the property shown on Exhibit A or properties for which noise compatibility program funds have been expended. The Sponsor must enter into an agreement with the property owner for noise compatibility programs that are not on airport property.
6. Consistency with Local Plans - The project should be reasonably consistent with plans of public agencies that are authorized by the State to plan for area development existing at the time of application submission.
7. Consideration of Local Interest - The Sponsor should give fair consideration to the interest of communities located in or near the project location.
8. Consultation with Users - The Sponsor must undertake reasonable consultations with parties that use the airport.
9. Public Hearings - The Sponsor must give opportunities for public hearings for projects involving the location of an airport, an airport runway, or a major extension of the runway.
10. Metropolitan Planning Organization - Projects involving the location of an airport, an airport runway, or a major runway extension at a medium or large hub airport, the sponsor has made available to and has provided upon request to the metropolitan planning organization in the area in which the airport is located, if any, a copy of the proposed amendment to the airport layout plan to depict the project and a copy of any airport master plan in which the project is described or depicted.
11. Pavement Preventative Maintenance - The Sponsor assures or certifies that an effective pavement-maintenance management program has been implemented.

12. Terminal Development Prerequisites - The Sponsor must show that all required safety equipment, security equipment, and access to the passenger enplaning and deplaning areas have been provided for projects which include terminal area development.
13. Accounting System, Audit, and Record Keeping - All project accounts and records must be kept and be available for inspection.
14. Minimum Wage Rates - Contracts in excess of $2,000 that involve labor must have provisions establishing minimum wage rates to be paid.
15. Veterans Preference - The employment of labor preference shall be given to Veterans of the Vietnam era and disabled veterans. The preference does not apply to executive, administrative, and supervisory positions and only applies where individuals are available and qualified.
16. Conformity to Plans and Specifications - The project must be executed subject to FAA approved plans, specifications, and schedules.
17. Construction Inspection and Approval - The Sponsor must provide and maintain competent technical supervision at the construction site throughout the project to assure that the work conforms to the FAA approved plans, specifications, and schedules.
18. Planning Projects - Planning projects must be completed in an approved method. The material must be made available for examination. The plan may not be copyrighted and approval of the plan does not constitute or imply any assurance or commitment to approve any future airport grants.
19. Operations and Maintenance - The airport and all facilities that are necessary to serve the aeronautical users of the airport shall be operated at all times in a safe and serviceable condition and in accordance with the minimum standards that may be required. The Sponsor may not cause or permit any activity or action that would interfere with its use for airport purposes.
20. Hazard Removal and Mitigation - The Sponsor must take actions to ensure that terminal airspace as required to protect instrument and visual operations to the airport will be adequately cleared and protected by mitigating existing airport hazards and by preventing the creation of future hazards.
21. Compatible Land Use - The Sponsor must take appropriate action, to the extent reasonable, to restrict the use of land adjacent to and in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations. If the project is for noise compatibility program implementation, the Sponsor will not cause or permit any change in land use, within its jurisdiction, that will reduce its compatibility with respect to the airport or the noise compatibility program measures.
22. Economic Nondiscrimination - The Sponsor must make the airport available for public use on reasonable terms and without unjust discrimination to all types, kinds, and classes of aeronautical activities, including commercial aeronautical activities offering services to the public at the airport.
23. Exclusive Rights - The Sponsor may not permit an exclusive right for the use of the airport by any person providing, or intending to provide, aeronautical services to the public. There may be a single FBO serving the airport that would not be considered an exclusive right if certain conditions exist.
24. Fee and Rental Structure - The Sponsor must maintain a fee and rental structure for the facilities and services at the airport that will make the airport as self-sustaining as possible under the circumstances existing at the particular airport.
25. Airport Revenues - All revenues generated by the airport and any local taxes on aviation fuel will be expended for the capital or operating costs of the airport, the local airport system, or other local facilities that are owned or operated by the owner or operator of the airport and that are directly and substantially related to

the actual air transportation of passengers or property. The revenues can also be used for noise mitigation purposes on or off the airport.

26. Reports and Inspections - Annual operations reports, airport development project records and documents, and noise compatibility program records must be maintained and be available for inspection.
27. Use by federal government Aircraft - The Sponsor must make all of the facilities of the airport developed with federal financial assistance and all those usable for landing and takeoff of aircraft available to the United States for use by government aircraft in common with other aircraft at all times without charge. If use by governmental aircraft is substantial, a reasonable and proportional charge for the cost of operating and maintaining the facilities may be charged.
28. Land for Federal Facilities - The Sponsor must furnish without cost land or water areas to the federal government for the use in connection with any air traffic control, air navigation activities, weather-reporting, and communication activities related to air traffic control.
29. Airport Layout Plan - The Sponsor must keep the Airport Layout Plan up to date at all times. Changes or alterations made on the airport that are not shown on an approved airport layout plan may be subject to elimination or relocation at the Sponsor's expense.
30. Civil Rights - The Sponsor must comply with existing rules to ensure that no person is excluded on the grounds of race, creed, color, national origin, sex, age, or disability from participating in any activity conducted with or benefiting from funds received.
31. Disposal of Land - Land no longer used for airport noise compatibility purposes or airport development purposes must be properly disposed of following existing guidelines.
32. Engineering and Design Services - All contracts or sub-contracts for services must be awarded in a qualifications-based method.
33. Foreign Market Restrictions - The Sponsor will not allow funds provided under the grant to be used to fund any project that uses any product or service of a foreign country when that country is listed by the United States Trade Representative as denying fair and equitable market opportunities for products and suppliers of the United States in procurement and construction.
34. Policies, Standards, and Specifications - The Sponsor must carry out the project in accordance with the FAA approved policies, standards, and specifications.
35. Relocation and Real Property Acquisition - The Sponsor must follow Subparts B, C, D, and E of 49 CFR Part 24.
36. Access by Intercity Buses - The airport owner will permit, to the maximum extent practicable, intercity buses or other modes of transportation to have access to the airport. There is no obligation by the airport owner to fund special facilities.
37. Disadvantaged Business Enterprises (DBE) - The grant recipient shall not discriminate on the basis of race, color, national origin, or sex in the award of any DOT-assisted contract, in the administration of its DBE program, or the requirements of 49 CFR Part 26. Implementation of the DBE program is a legal obligation.
38. Hangar Construction - The airport owner must grant a long term lease that may be subject to terms and conditions for hangars constructed on the airport at the aircraft owner's expense.
39. Competitive Access - Applies to medium or large hub airports.

The FAA has published additional guidance in a document entitled *Airport Sponsor and Airport User Rights and Responsibilities.* This 10-page booklet features a handful of key grant assurances in simplified terms. Notably, Grant Assurances 5, 22, 23, 24, and 25 are highlighted in this publication.

10.5 COMPLAINT RESOLUTION

Under 14 Code of Federal Regulations (CFR) 13.1, any person who knows of a violation of federal aviation laws, regulations, rules, policies, or orders may report the violation to the FAA informally as a "report of violation." Under this section, airport users may report allegations of grant assurance violations to the FAA. This is commonly referred to as an "informal complaint." Individuals seeking to file informal complaints are encouraged to do so in writing. Alleged violations are investigated by the FAA's local Airports District Office (ADO) or Regional Airports Division.

14 CFR 16, commonly referred to as Part 16, outlines a formal complaint process. In order to file a formal complaint under Part 16, complainants must be "directly and substantially affected" by any alleged noncompliance. Part 16 includes regulatory time frames and detailed procedures associated with the process. The Part 16 Decision Database contains copies of final FAA determinations. Because complaints often focus on similar issues, an understanding of how the FAA has decided a case in the past may be beneficial.

Most violations of Airport Sponsor federal obligations are not a deliberate attempt to circumvent federal obligations. Generally, violations occur because Sponsors do not understand specific requirements or how a requirement applies to a specific circumstance. The Airport Compliance Program works to ensure Sponsors are fully informed of their federal obligations and of the applicability of those obligations to the circumstances at a given airport. Informal resolution is the preferred course of action when it comes to addressing complaints of violations.

10.6 COMPATIBLE LAND USE

Land use planning is important to ensure that airport investments are not affected by incompatible land uses adjacent to and in the immediate vicinity of the airport. Incompatible land uses at or near airports may result in the creation of hazards to air navigation, reductions in airport utility resulting from obstructions to flight paths, or noise-related incompatible land use resulting from residential areas too close to the airport.

Zoning is an effective method of meeting the federal obligation to ensure compatible land use and to protect airport approaches. According to 5190.6B, restricting residential development near the airport is essential in order to avoid noise-related problems. Residential developments can also be incompatible for safety reasons. The development of public facilities such as schools, churches, public health facilities, and concert halls should also be avoided near the airport due to noise incompatibility.

Compatibility of land use is attained when the use of property adjacent to and near the airport neither adversely affects flight operations from the airport nor is itself adversely affected by the flight operations. Land uses that adversely affect flight operations are ones that create or contribute to a flight hazard. These can include tall structures, features that inhibit pilot visibility such as light or smoke, produce electronic aberrations in navigational guidance systems, or that attract birds.

Order 5190.6B states the FAA's position in regard to several variations on residential properties on or near airports. Airpark developments allow aircraft owners to reside and park their aircraft on the same property with immediate access to an airfield. The FAA considers residential use by aircraft owners to be no different from any residential use and finds it incompatible with the operation of a public use airport (20.4.b).

Permitting development of a residential airpark near a federally obligated airport, through zoning approval or otherwise, would be inconsistent with Grant Assurance 21 (20.4.b). Any residential use existing on the airport or any residential use granting "through-the-fence" access is an incompatible land use (20.4.a).

A "through-the-fence" operation is defined by the FAA as any activity or use of real property of an aeronautical or nonaeronautical nature that is located outside (or off) of airport property but has access to the airport's runway and/or taxiway system. Airport property is property owned by the airport Sponsor and shown on an FAA approved Airport Layout Plan (ALP). "Through-the-fence" operations occur from property that is immediately adjacent to the airport, but which is owned by corporations, businesses, or private parties. These properties are not under control in any manner by the airport Sponsor.

Off-airport residential airparks are privately owned and maintained residential facilities. The FAA does not consider them to be aeronautical facilities eligible for reasonable access to a federally obligated airport. Therefore, the Sponsor is under no federal obligation to allow "through-the-fence" access for privately owned residential airparks. Allowing access could be an encumbrance on the airport in conflict with Grant Assurance 5. Residential hangars with "through-the-fence" access are considered incompatible land uses at federally obligated public use airports.

Other non-residential "through-the-fence" activities may be allowed, but the Sponsor must make sure that the use agreement does not violate any of the grant assurances.

The most common improper and noncompliant land uses include nonaeronautical leaseholds being located on designated aeronautical use land without FAA approval (not shown on the ALP) or on property not released by the FAA. Another common noncompliant land use is allowing dedicated aeronautical property to be used for nonaeronautical uses. This includes using hangars to store vehicles, using property and buildings for animal control facilities, nonairport vehicle and maintenance equipment storage, aircraft museums, and municipal administrative offices.

Some common incompatible land uses include the introduction of a wildlife attractant or failure to take adequate steps to mitigate hazardous wildlife at the airport. Other incompatible land uses include wastewater ponds, municipal flood control channels and drainage basins, sanitary landfills, solid waste transfer stations, electrical power substations, water storage tanks, golf courses, and other bird attractants. Towers or buildings that penetrate Part 77 surfaces or are located within a runway protection zone (RPZ), runway object free area (ROFA), object free zone (OFZ), and clearway or stopway are also incompatible uses.

10.7 CONCLUSION

According to FAA Order 5190.6B, the FAA Airport Compliance Program is contractually based; it does not attempt to control or direct the operation of airports. Rather, the program is designed to monitor and enforce obligations agreed to by Airport Sponsors in exchange for valuable benefits and rights granted by the United States in return for substantial direct grants of funds and for conveyances of federal property for airport purposes. The Airport Compliance Program is designed to protect the public interest in civil aviation. Grants and property conveyances are made in exchange for binding commitments (federal obligations) designed to ensure that the public interest in civil aviation will be served. The FAA bears the important responsibility of seeing that these commitments are met. The FAA considers all federal airport obligations important. However, the most important objective in the FAA's oversight of the compliance program is to ensure and preserve safety at all federally obligated airports.

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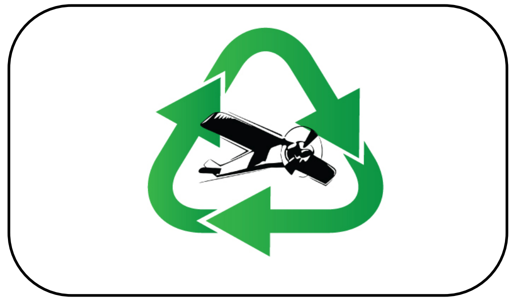
11. Sustainability and Recycling



SECTION OVERVIEW

The purpose of this section is to provide a general overview of sustainability, as well as define the Airport Recycling, Reuse, and Waste Reduction Plan (Plan). The Plan is used to enhance airport recycling and waste minimization efforts at McCall Municipal Airport, and comply with FAA requirements.

11.1 SUSTAINABILITY

WHAT IS SUSTAINABILITY?

The United Nations convened the Brundtland Commission to address the growing concern about the deterioration of natural resources. In its 1987 report, the commission defined sustainability as, "*development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*" The Airports Council International-North America (ACI-NA) took the approach one step further by incorporating operations into the definition, "*a holistic approach to managing an airport so as to ensure the integrity of the economic viability, operational efficiency, natural resource conservation and social responsibility (EONS) of the airport.*" Based on these definitions, Airport Master Plans should evaluate how programs and initiatives impact airport users, the surrounding community, and natural environment by integrating sustainability into the airport planning process.

Figure 11.1 EONS Framework of Sustainability

Source: Sustainable Aviation Guidance Alliance (SAGA)

Each airport should consider a unique definition of sustainability relating to variable circumstances of the airport and its role in the community. This definition will set the groundwork for future planning and implementation. Accordingly, McCall Municipal Airport will adopt the EONS approach to sustainability, as defined above. The City of McCall has established a committment to sustainability through the 2018 Comprehensive Plan.

WHY BE SUSTAINABLE?

Along with improving the community and the natural environment, sustainability makes good business sense. Airports that have adopted sustainable practices have reported experiencing tangible benefits including, but not limited to, the following:

- Greater utilization of assets;
- Reduced operating and maintenance costs;
- Improved work environment for employees;
- Reduced energy consumption, waste, and emissions;
- Improved water quality; and
- Positive community relationships.

11. Sustainability and Recycling

HOW DOES SUSTAINABILITY RELATE TO MCCALL MUNICIPAL AIRPORT?

Airport Sponsors have the ability to incorporate sustainability into their Airport Master Plans, based on the needs and resources of each facility. Like any initiative, sustainability measures need to be formally documented and tracked to measure progress. As a core part of the Airport Master Plan process, sustainability initiatives and activities will be identified and documented. One of the practices that contribute to sustainability is a recycling and waste reduction plan. Areas of recycling and solid waste management can be split into multiple categories - those over which the airport has direct control, those over which the airport has influence, and those over which the airport has little or no control or influence.

11.2 RECYCLING, REUSE, AND WASTE REDUCTION PLAN

The term solid waste is defined in accordance with the Resource Conservation and Recovery Act, of 1976 (RCRA) but is generally, non-soluble, discarded solid materials, including sewage, municipal garbage, industrial wastes, agricultural refuse, demolition wastes, and mining residues. Sanitary sewer wastes are not considered solid wastes.

LEGISLATIVE BACKGROUND

The FAA Modernization and Reform Act of 2012 (FMRA), which amended Title 49, United States Code (U.S.C.), included several changes to the Airport Improvement Program (AIP). Two of these changes are related to recycling, reuse, and waste reduction at airports.

a. FMRA Section 132 (b)) of the FMRA expanded the definition of airport planning to include “developing a plan for recycling and minimizing the generation of airport solid waste, consistent with applicable State and local recycling laws, including the cost of a waste audit.”

b. Section 133 of the FMRA added a provision requiring airports that have or plan to prepare a master plan, and that receive AIP funding for an eligible project, to ensure that the new or updated master plan addresses issues relating to solid waste recycling at the airport. This includes:

1. The feasibility of solid waste recycling at the airport;
2. Minimizing the generation of solid waste at the airport;
3. Operation and maintenance requirements;
4. Review of waste management contracts; and
5. The potential for cost savings or the generation of revenue.

Figure 11.2 Recycle Triangle

For the purpose of this Plan, “recycling” refers to any program, practice, or opportunity to reduce the amount of waste disposed in a landfill. This includes reuse and waste reduction as well as the recycling of materials.

TYPES OF SOLID WASTE GENERATED AT AIRPORTS

Airports generate various types of solid waste. This Plan addresses the recycling, reuse, and reduction of municipal solid waste (MSW) and other materials that can be legally disposed of in a 42 U.S.C. §§ 6941-6949a landfill or equivalent state-permitted facility.

Any reference to MSW for recycling, reduction, or reuse in this Plan includes construction and demolition (C&D)

debris, organic compostable material such as food and yard waste, and deplaned waste. Definitions of these terms are provided below. Airports can recycle, reuse, or minimize many of the materials described below.

This Plan does not address other types of solid waste such as hazardous waste, universal waste (i.e., batteries, fluorescent bulbs, electronics, etc.), or industrial waste. These materials are often subject to Federal, state, and local laws with specific disposal and recycling requirements. The Plan applies to the following:

- Municipal Solid Waste (MSW) consists of everyday items that are used and discarded. Recyclable MSW at airports includes, but is not limited to, aluminum and steel, glass bottles and containers, plastic bottles and containers, packaging, bags, paper products, and cardboard.
- Construction and Demolition (C&D) Debris is generally categorized as MSW. C&D debris is any non-hazardous solid waste that results from land clearing, excavation, or construction, demolition, renovation, or repair of structures, roads, and utilities.

  C&D debris includes, but is not limited to, concrete, wood, metals, soil, bricks and masonry material, asphalt, rock, stone, gravel, sand, roofing materials, drywall, carpet, plastic, pipe, rocks, earthwork, land-clearing debris, cardboard, and salvaged building components. In some instances, C&D debris requires special handling and may be subject to special requirements. Examples include tar-impregnated roofing materials and asbestos-containing building materials. Materials that may be subject to special requirements are not addressed in this Plan.
- Compostables, Green Waste, and Food Waste are also categorized as MSW. Green waste consists of tree, shrub, grass clippings, leaves, weeds, small branches, seeds, pods, and similar debris generated by landscape maintenance activities. Food waste is food that is not consumed or generated during food preparation activities and discarded.
- Deplaned Waste is MSW that is removed from passenger aircraft. These materials include bottles and cans, newspaper and mixed paper, plastic cups and utensils, food waste, food-soiled paper, magazines, unconsumed or surplus food, and paper towels. Waste that comes off airplanes after flights can represent 20% of an airport's total MSW stream. The composition is roughly 30% each of paper, compostable food material, and non-recyclable materials, with the balance consisting of cups and beverage containers.

  Except for Canada, waste from international flights must be processed separately, as this waste can introduce plant pests and diseases. The United States Department of Agriculture regulates international waste. It must be handled in accordance with procedures in the Manual for Agricultural Clearance. Therefore, waste from international flights is not discussed in this Plan

11.3 CONTENTS OF AN AIRPORT RECYCLING, REUSE, AND WASTE REDUCTION PLAN

The content and scope of an airport recycling, reuse, and waste reduction plan will vary depending on the unique conditions at each airport. For airports that already have recycling programs, certain tasks (such as a new waste audit) may not need to be completed.

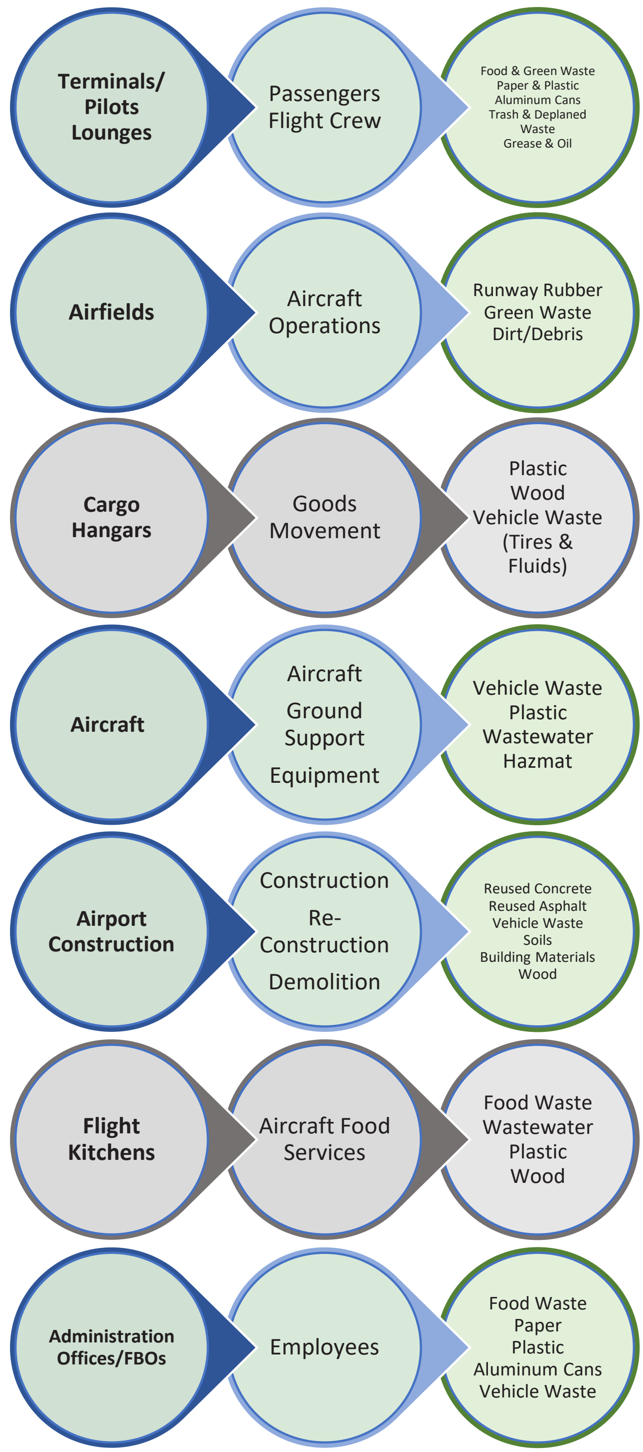
Document scope is governed by the extent and accuracy of available information. This includes information on the airport's current recycling program, the types and amounts of airport waste, and factors that influence the scope of the program. Plans for small, low activity airports may also be less detailed. Though certain tasks may not need to be completed to prepare a plan, review and documentation of each of the five elements listed in the FMRA is required in airport master plans and master plan updates (including sustainability master plans) (see also 49 U.S.C. § 47106(a)(6)).

SOURCES AND PATHWAYS OF AIRPORT WASTE

Each airport activity has its own set of factors, resource requirements, and waste stream. Any plan to implement a recycling program must consider all the activities and waste streams at the facility. The list below describes the typical airport waste streams associated with smaller commercial and general aviation airports.

- **Airfields:** Predominantly runways, taxiways, and infields. Waste produced from aircraft operations consists mostly of rubber from aircraft tires, green waste from mowing, and debris from sweeping and plowing.
- **Aircraft**: Maintenance of aircraft and ground support equipment produces waste, including oil, grease, chemicals, plastic, wastewater, universal waste, and vehicle waste, such as tires and fluids. The party responsible for aircraft and ground support equipment waste varies, typically by whomever owns the vehicle or performs the maintenance. The amount of aircraft waste correlates with the number of operations at the airport. The FBO and maintenance shop are responsible for waste associated with maintenance at the airport. Some waste associated with maintenance is considered hazardous waste and must be handled in accordance federal regulations.
- **Terminals and Pilot Lounges:** Typically, generated waste includes food, paper, plastic, aluminum cans, trash, and deplaned waste.
- **Administration Offices**: Offices produce waste, such as paper, plastic, aluminum cans, food, and universal waste. Office waste is usually solid or compostable and is fairly steady throughout the year.
- **Airport Construction:** Construction at the airport corresponds with programmed Capital Improvement Program (CIP) projects. Construction activities have the potential to create a large amounts of waste, including concrete, asphalt, wood, soil, and metal. These waste streams increase during warmer months, as that is when construction usually occurs. Airport construction wastes are typically solid or C&D. The contractor is contractually responsible for waste associate with airport construction.

Figure 11.3 Pathways of Airport Waste



RECYCLING FEASIBILITY

Many airports currently implement solid waste recycling programs. However, program scope varies considerably. This variability may occur due to the size and location of different airports, the amount of waste being produced, and external factors that affect the scope of recycling programs. Variables include, but are not limited to:

- Local markets for recyclable commodities;
- Cost for transport and processing recyclables;
- Local recycling infrastructure;
- Identify willingness of an airport and its tenants to implement recycling programs;
- The nature of the airport's waste stream;
- Competition between recycling and landfilling firms; and
- Airport layout and logistics

REVIEW OF WASTE MANAGEMENT CONTRACTS AT MCCALL MUNICIPAL AIRPORT

Under the current waste management and recycling program, the airport is responsible for waste management, however tenants are required to take care of their own trash disposal per their lease agreement. The airport has a two yard dumpster which is picked up twice weekly by Lakeshore Disposal. It is generally 3/4 full at pickup. Refuse is taken to Valley County Landfill in Donnelly, which is the only landfill in the county. The City of McCall does not have its own local garbage collection or recycling department. All waste and recycling is processed in Donnelly, as all recycling satellite locations were closed as of December 1, 2020.

POTENTIAL FOR COST SAVINGS OR REVENUE GENERATION

Currently, there are no recycle bins located at the airport, as it was determined there is not a sufficient stream of recyclables generated at the airport. There is a recycling facility available located in Donnelly; however due to marketability, a limited list of materials are accepted. These items include unsoiled cardboard, mixed paper, aluminum, tin, and plastic. Items that are not currently accepted include glass, lightbulbs, batteries, electronic waste, and used oil. Although the airport does not generate a significant amount of accepted recyclable material, the City is always looking for ways to re-use and recycle.

AIRPORT OPERATIONS AND MAINTENANCE REQUIREMENTS

Waste generated through airfield maintenance is negligible and not transported off-site. Sweeping, which does not occur regularly, is primarily dust and dirt, and is swept back into the sand soil off the paved areas. Vegetation surrounding the airport is primarily small weedy bushes, therefore grass disposal from mowing is not a concern. Snow plowed during the winter months is pushed to the dirt and undeveloped areas of the airport and left to melt in the spring. There are no terminal facilities, flight kitchens, or catering services at the airport which would generate waste.

PLAN TO MINIMIZE SOLID WASTE GENERATION

The ACI-NA Policy Handbook provides a waste decision hierarchy that shows - in order of decreasing priority - what constitutes the best overall waste management choices: to **avoid**; to **reduce**; to **reuse**; to **recycle**; and finally, to **dispose** with the ultimate goal of eliminating waste going to landfills. By this decision hierarchy, the first consideration should be given to minimize the generation of waste at the airport and include opportunities for cost savings through improved management of waste, the feasibility of waste recycling at the airport, and the potential for generation of revenue from airport waste.

The FAA compiled a list of 10 steps, shown in *Table 11.1*, to assist with designing and implementing an effective recycling/waste minimization program, noting that each airport is unique and faces its own issues. McCall Municipal Airport will explore the following steps while planning for a more sustainable future:

1. Establish a commitment from management to support a recycling/waste minimization program;
2. Include lease/contract language that supports recycling/waste minimization;
3. Provide additional containers and/or space for recycling;
4. Educate airport staff and users on the importance of recycling and waste minimization.

Table 11.1 Steps to Recycling & Waste Minimization

Step	*Description*
1	Commitment from Management
2	Program Leadership
3	Waste Identification
4	Waste Collection and Hauler
5	Waste Management Plan Development
6	Education and Outreach
7	Monitor and Refine
8	Performance Monitoring
9	Promote Success
10	Continuous Improvements

Source: FAA Recycling, Reuse and Waste Reduction at Airports, A Synthesis Document, April 24, 2013

CONCLUSION

McCall Municipal Airport has opportunities to enhance airport sustainability, recycling, and waste minimization at the airport by establishing formal policies and procedures. One opportunity to enhance sustainability is the addition of electric aircraft charging stations. Any program established at the airport should include a commitment from management to support sustainability, recycling, education and outreach, setting performance targets, monitoring progress, and seeking continuous improvement. Benefits gained from establishing a recycling and waste minimization program include:

1. Reduced operating costs.
2. Prolonged use of limited landfill space.
3. Reduced environmental liability.
4. Improved public perception of the airport.

12. Glossary

City of McCall

AC: Advisory Circular
AAC: Aircraft Approach Category
ADG: Airplane Design Group
ADO: Airports District Office
ADS-B: Automated Dependent Surveillance - Broadcast
ACN: Aircraft Classification Number
AGL: Above Ground Level
AIP: Airport Improvement Program
ALP: Airport Layout Plan
ALS: Approach Lighting System
AMSL: Above Mean Sea Level
AOA: Airport Operations Area
AOPA: Aircraft Owners and Pilots Association
APMS: Airport Pavement Management System
ARC: Airport Reference Code
ARFF: Aircraft Rescue and Fire Fighting
ASDA: Accelerate-Stop Distance Available
ASL: Above Sea Level
ASOS: Automated Surface Observation System
AT: Air Traffic
ATC: Air Traffic Control
ATCT: Air Traffic Control Tower
AVGAS: Aviation Gasoline
AWOS: Automated Weather Observation System

BARO: Barometric
BLM: Bureau of Land Management
BMP: Best Management Practices
BRL: Building Restriction Line
BVLOS: Beyond Visual Line of Sight

CAT: Category
CATEX: Categorical Exclusion
CEQ: Council on Environmental Quality
CFI: Certified Flight Instructor
CFR: Code of Federal Regulations
CIP: Capital Improvements Program
CTAF: Common Traffic Advisory Frequency
DEQ: Department of Environmental Quality
DME: Distance Measuring Equipment
DNL: Day/Night Equivalent Sound Level (see also Ldn)
DOI: Department of Interior
DOT: Department of Transportation
DTWG: Dual Tandem Wheel Gear
DWG: Dual Wheel Gear

EA: Environmental Assessment
EIS: Environmental Impact Statement
EPA: Environmental Protection Agency

FAA: Federal Aviation Administration
FAAP: Federal Aid Airport Program
FAR: Federal Aviation Regulation
FBO: Fixed Base Operator
FEMA: Federal Emergency Management Agency
FIRM: Flood Insurance Rate Maps
FONSI: Finding of No Significant Impact
FPPA: Farmland Protection Policy Act

GA: General Aviation
GIS: Geographic Information System
GPS: Global Positioning Satellite or System
GSE: Ground Support Equipment

HF: High Frequency
HIRL: High Intensity Runway Lights

IAP: Instrument Approach Procedure
IFR: Instrument Flight Rules
ILS: Instrument Landing System
IMC: Instrument Meteorological Conditions

LAAS: Local Area Augmentation System
Ldn: Day/Night Noise Levels
LIRL: Low Intensity Runway lights
LNAV: Lateral Navigation
LOC: Localizer
LPV: Localizer Performance with Vertical Guidance

MALS: Medium Intensity Approach Lighting System
MDA: Minimum Descent Altitude
ME: Multi-Engine Aircraft
MGW: Maximum Gross Weight
MGTW: Maximum Gross Takeoff Weight
MIRL: Medium Intensity Runway Lights
MOA: Military Operations Area
MSL: Mean Sea Level

NAS: National Airspace System
NAAQS: National Ambient Air Quality Standards
NAVAIDS: Navigational Aids
NBAA: National Business Aviation Association
NDB: Non-Directional Beacon
NEPA: National Environmental Policy Act
NM: Nautical Mile
NOAA: National Oceanic and Atmospheric Administration
NOTAM: Notice to Airmen
NPIAS: National Plan of Integrated Airport Systems
NRCS: National Resources Conservation Service
NTSB: National Transportation Safety Board
NWI: National Wetland Inventory
NWS: National Weather Service

OFA: Object Free Area
OFZ: Obstacle Free Zone
OTS: Out of Service

PAPI: Precision Approach Path Indicator (Visual Approach Aid)
PCI: Pavement Condition Index
PCN: Pavement Classification Number

RDC: Runway Design Code
REIL: Runway End Identifier Lights
RNAV: Area Navigation
RNP: Required Navigation Performance
ROD: Record of Decision
ROFA: Runway Object Free Area
RPZ: Runway Protection Zone
RSA: Runway Safety Area
RW: Runway

12. Glossary

SE: Single Engine Aircraft
SHPO: State Historical Preservation Office
SID: Standard Instrument Departure
STAR: Standard Terminal Arrival
SWG: Single Wheel Gear

TAC: Technical Advisory Committee
TACAN: Tactical Air Navigation System (See VORTAC)
TAF: Terminal Area Forecast
TAP: Terminal Area Plan
TCS: Tribal Cultural Specialist
TDG: Taxiway Design Group
THPO: Tribal Historical Preservation Office
TODA: Takeoff Distance Available
TOFA: Taxiway Object Free Area
TORA: Takeoff Run Available
TFMSC: Traffic Flow Management System Counts
TSA: Taxiway/Taxilane Safety Area and Trasnportation Safety Administration

UAM: Urban Air Mobility
UAS: Unmanned Aerial System
UAV: Unmanned Aerial Vehicle
UNICOM: Universal Communications
USACE: U.S. Army Corps of Engineers
USDA: U.S. Department of Agriculture
USFWS: U.S. Fish and Wildlife Service
USGS: U.S. Geological Survey
UTM: Unmanned Aircraft System Traffic Management

VASI: Visual Approach Slope Indicator
VFR: Visual Flight Rules
VHF: Very High Frequency
VOR: VHF Omnidirectional Range
VORTAC: VHF Omnidirectional Range and Tactical Air Navigation System
VMC: Visual Meterological Conditions
VNAV: Vertical Navigation
VTOL: Vertical Takeoff and Landing

WAAS: Wide Area Augmentation System
WHA: Wildlife Hazard Assessment
WHMP: Wildlife Hazard Management Plan
WHSV: Wildlife Hazard Site Visit
WX: Weather

12. Glossary

COMMON TERMS

Above Ground Level (AGL): Altitude expressed as feet above terrain or airport elevation (see MSL).

Access Road: The right-of-way, the roadway and all improvements constructed thereon connecting.

Accelerate Stop Distance Available (ASDA): The runways plus stopway length declared available and suitable for the acceleration and deceleration of an aircraft aborting a takeoff.

Access Taxiway: A taxiway that provides access to a particular location or area.

Active Aircraft: Aircraft registered with the FAA and reported or estimated to have been flown at least one hour during the preceding year.

Active Runway: The runway at an airport that is being used for landing, taxiing or takeoff operations.

Actual Runway Length: The length of a full-width usable runway from end to end of full strength pavement where those runways are paved.

Accelerate-Stop Distance Available (ASDA): The runway plus stopway length declared available and suitable for the acceleration and deceleration of an aircraft aborting a takeoff.

Advisory Circular (AC): External publications issued by the FAA consisting of non-regulatory material providing for the recommendations relative to a policy, and guidance and information relative to a specific aviation subject.

Air Taxi: An aircraft operated under an air taxi operating certificate for the purpose of carrying passengers, mail, or cargo for revenue in accordance with Part 121 and Part 135.

Air Traffic Control: The control of aircraft traffic, in the vicinity of airports from control towers, and in the airways between airports from control centers.

Aircraft Approach Category (AAC): A grouping of aircraft based on 1.3 times their stall speed in their landing configuration at their maximum certificated landing weight. The categories are Category A through Category E and range from a speed of less than 91 knots to 166 knots or more.

Aircraft Classification Number (ACN): expresses the relative effect of an aircraft at a given configuration on a pavement structure for a specified standard subgrade strength.

Aircraft Mix: The type of aircraft which are to be accommodated at the airport.

Aircraft Operation: The landing, takeoff or touch-and-go procedure by an aircraft on a runway at an airport.

Aircraft Tiedowns: Positions on the ground surface that is available for securing aircraft.

Aircraft: A device that is used or intended to be used for flight in the air.

Airplane Design Group (ADG): A grouping of aircraft based on wingspan and/or tail height. When an airplane is in two categories, the most demanding category should be used.

Airport Beacon: A visual navigation aid displaying alternating white and green flashes to indicate a lighted airport or white flashes only for an unlighted airport.

Airport Capital Improvement Plan (ACIP): The planning program used by the Federal Aviation Administration to identify, prioritize and distribute funds for airport development and the needs of the National Airspace System to meet specified national goals and objectives.

12. Glossary

Airport Elevation: The highest point of an airport's usable runways measured in feet above mean sea level (MSL).

Airport Improvement Program (AIP): The Airport Improvement Program of the Airport and Airways Improvement Act of 1982 as amended by the Airport and Airway Safety and Capacity Expansion Act of 1987. Under this program, the FAA provides funding assistance for the planning, design and development of airports and airport facilities.

Airport Layout Plan (ALP): A scaled drawing (or set of drawings), in either traditional or electronic form, of current and future airport facilities that provides a graphic representation of the existing and long-term development plan for the airport and demonstrates the preservation and continuity of safety, utility, and efficiency of the airport to the satisfaction of the FAA.

Airport Master Plan: The planner's concept of the long-term development of an airport.

Airport Obstruction Chart: A scaled drawing depicting the 14 Code of Federal Regulations (CFR) Part 77 surfaces, a representation of objects that penetrate these surfaces, runway, taxiway, and ramp areas, navigational aids, buildings, roads and other detail in the vicinity of an airport.

Airport Operation Area (AOA): The area of the Airport bounded by a fence to which access is otherwise restricted and is primarily used or intended to be used for landing, takeoff, or surface maneuvering of aircraft and related activities.

Airport Reference Code (ARC): An airport designation that signifies the airport's highest Runway Design Code (RDC), minus the third (visibility) component of the RDC. The ARC is used for planning and design only and does not limit the aircraft that may be able to operate safely on the airport.

Airport Reference Point (ARP): The latitude and longitude of the approximate center of the airport.

Airport Sponsor: The entity that is legally responsible for the management and operation of an airport including the fulfillment of the requirements of laws and regulations related thereto. Often an Airport Sponsor is a City or County.

Airport: An area of land or water that is used or intended to be used for the landing and takeoff of aircraft, and includes its buildings and facilities, if any.

Annual Service Volume (ASV): The number of annual operations that can reasonably be expected to occur at the airport based on a given level of delay.

Approach Area: The defined area the dimensions of which are measured horizontally beyond the threshold over which the landing and takeoff operations are made.

Approach Lights: High intensity lights located along the approach path at the end of an instrument runway. Approach lights aid the pilot as he transitions from instrument flight conditions to visual conditions at the end of an instrument approach.

Approach Slope Ratio: The ratio of horizontal to vertical distance indicating the degree of inclination of the approach surface.

Approach Surface: A surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. An approach surface is applied to each end of each runway based upon the type of approach available or planned for that runway end.

Apron: A specified portion of the airfield used for passenger, cargo or freight loading and unloading, aircraft parking, and the refueling, maintenance and servicing of aircraft.

12. Glossary

Automatic Dependent Surveillance - Broadcast (ADS-B): A primary technology which shifts aircraft separation and air traffic control from ground-based radar to satellite-derived positions. It broadcasts an aircraft's WAAS-enhanced GPS position to the ground. It's also transmitted to aircraft with ADS-B receivers, either directly or relayed by ground stations, increasing the pilot's situational awareness.

Automated Surface Observing System (ASOS): Equipment that is designated to support weather forecast activities and aviation operatins and gathers nationwide weather data .

Automated Weather Observing System (AWOS): Equipment that automatically gathers weather data from various locations on an airport and transmits the information directly to pilots by means of computer generated voice messages over a discrete frequency.

Avigation Easement: A land use easement permitting the unlimited operation of aircraft in the airspace above the land area involved and restricting incompatible development of areas.

Avionics: Airborne navigation, communications, and data display equipment required for operation under specific air traffic control procedures.

Based Aircraft: The total number of active general aviation aircraft which use or may be expected to use an airport as a home base.

Beyond Visual Line of Sight (BVLOS): Flying an unmanned aerial system aircraft beyond the remote pilot in command's direct sight of the aircraft.

Building Area: An area on an airport to be used, considered, or intended to be used, for airport buildings or other airport facilities or rights-of-way, together with all airport buildings and facilities located thereon.

Building Restriction Line (BRL): A line which identifies suitable building area locations on airports.

Capital Improvement Plan (CIP): The planning program used by the Federal Aviation Administration to identify, prioritize and distribute Airport Improvement Program funds for airport development and the needs of the National Airspace System to meet specified national goals and objectives.

Categorical Exclusion (CATEX): At the first level, an undertaking may be categorically excluded from a detailed environmental analysis if it meets certain criteria that a federal agency has previously determined as normally having no significant environmental impact.

Commercial Service: Commercial service airports are public use airports which receive scheduled passenger service aircraft, and which annually enplane 2,500 or more passengers.

Common Traffic Advisory Frequency (CTAF): A frequency designed for the purpose of carrying out airport advisory practices while operating to or from an airport without an operating control tower. The CTAF may be a UNICOM, Multicom, FSS, or tower frequency and is identified in appropriate aeronautical publications.

Conical Surface: A surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.

Controlled Airspace: Airspace in which some or all aircraft may be subject to air traffic control to promote safe and expeditious flow of air traffic.

Critical (Design) Aircraft: The most demanding aircraft (or combination of aircraft) with at least 500 annual operations that operates, or is expected to operate, at the airport.

Crosswind Component: A wind component that is at a right angle to the longitudinal axis of the runway or the flight path of the aircraft.

Crosswind Runway: A runway additional to the primary runway to provide for wind coverage not adequately provided by the primary runway.

Crosswind: A wind that is not parallel to a runway centerline or to the intended flight path of an aircraft.

Decibel (dB): A unit of measurement used for defining a noise level or an exposure level.

Displaced Threshold: A threshold that is located at a point on the runway other than the physical beginning. Aircraft can begin departure roll before the threshold, but cannot land before it.

Distance Measuring Equipment (DME): Equipment used to measure, in nautical miles, the distance of an aircraft from the DME navigational aid located on the airport.

Environmental Assessment (EA): An environmental analysis performed pursuant to the National Environmental Policy Act to determine whether an action would significantly affect the environment and thus require a more detailed environmental impact statement.

Environmental Impact Statement (EIS): A document required of federal agencies by the National Environmental Policy Act for major projects or legislative proposals affecting the environment. It is a tool for decision-making describing the positive and negative effects of a proposed action and citing alternative actions.

Federal Aviation Administration (FAA): Created by the act that established the Department of Transportation. Assumed all of the responsibilities of the former Federal Aviation Agency including aircraft safety, movement, and controls.

Finding of No Significant Impact (FONSI): A public document prepared by a Federal agency that presents the rationale why a proposed action will not have a significant effect on the environment and for which an environmental impact statement will not be prepared.

Fixed Base Operator (FBO): An individual or company located at an airport, and providing commercial general aviation services such as fuel, maintenance, and storage.

Flight Plan: Specified information relating to the intended flight of an aircraft, which is filed orally or in writing with air traffic control. (FAR Part 1)

Fuel Flowage Fees: Fees levied by the airport operator per gallon of aviation gasoline and jet fuel sold at the airport.

General Aviation (GA): The segment of aviation that encompasses all aspects of civil aviation except certified air carriers and other commercial operators such as airfreight carriers.

General Aviation Airports: Those airports with fewer than 2,500 annual enplaned passengers and those used exclusively by private and business aircraft not providing common carrier passenger service.

Glide Slope (GS): Generally, a 3-degree angle of approach to a runway established by means of airborne instruments during instrument approaches, or visual ground aids for the visual portion of an instrument approach and landing.

Global Positioning System (GPS): A satellite based radio positioning, navigation, and time-transfer system.

Hangar: A building used to store one or more aircraft, and/or conduct aircraft maintenance.

High Intensity Runway Lights (HIRL): These lights are used to outline the edges of runway during periods of darkness or restricted visibility conditions. HIRL system has variable intensity controls.

Horizontal Surface: An imaginary obstruction-limiting surface defined in Part 77 that is specified as a portion of a horizontal plane surrounding a runway located 150 feet above the established airport elevation. The specific horizontal dimensions of this surface are a function of the types of approaches existing or planned for the runway.

Instrument Approach: An approach to an airport, with intent to land, by an aircraft flying in accordance with an IFR flight plan, when the visibility is less than 3 miles and/or when the ceiling is at or below the minimum initial altitude.

Instrument Flight Rules (IFR): Procedures for the conduct of flight in weather conditions below Visual Flight Rules weather minimums. The term IFR is often also used to define weather conditions and the type of flight plan under which an aircraft is operating.

IFR Conditions: Weather conditions below the minimum for flight under visual flight rules.

Instrument Landing System (ILS): A precision instrument approach system which provides in the aircraft, the lateral, longitudinal, and vertical guidance necessary for a landing.

Instrument Meteorological Conditions (IMC): Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorogical conditions (VMS).

Integrated Noise Model (INM): The FAA's standard methodology since 1978 for noise assessments.

Itinerant Operations: Operations by aircraft that leaves the local airspace.

Jet Noise: The noise generated externally to a jet engine in the turbulent jet exhaust.

Land Use Plan: Shows on-airport land uses as developed by the airport sponsor under the master plan effort and off-airport land uses as developed by surrounding communities.

Landing Gear: That part of an aircraft which is required for landing. Gear may be configured as Single Wheel Gear (SWG), Dual Wheel Gear (DWG), or Dual Tandem Wheel Gear (DTWG).

Landing Roll: The distance from the point of touchdown to the point where the aircraft can be brought to a stop, or exit the runway.

Large Aircraft: Aircraft of more than 12,500 pounds maximum certificated takeoff weight.

Local Operations: Aircraft operations performed by aircraft that are based at the airport and that operate in the local traffic pattern or within sight of the airport, that are known to be departing for or arriving from flights in local practice areas within a prescribed distance from the airport, or that execute simulated instrument approaches at the airport.

Localizer (LOC): A navigational aid that consists of a directional pattern of radio waves modulated by two signals which, when receding with equal intensity, are displayed by compatible airborne equipment as an "on-course" indication, and when received in unequal intensity are displayed as an "off-course" indication.

Low Intensiy Runway Lights (LIRL): These lights are used to outline the edges of runway during periods of darkness or restricted visibility conditions. LIRLs normally have one intensity setting.

Marking: On airports, a pattern of contrasting colors placed on the pavement, turf, or other usable surface by paint or other means to provide specific information to aircraft pilots and sometimes to operators of ground vehicles, on the movement areas.

Mean Seal Level (MSL): Altitude expressed as feet above sea level, rather than above local terrain.

Minimum Descent Altitude (MDA): The lowest altitude, expressed in feet above mean sea level, to which descent is authorized on final approach or during circle-to-land maneuvering in execution of a standard instrument approach procedure where no electronic glide slope is provided.

Medium Intensity Runway Lights (MIRL): These lights are used to outline the edges of runway during periods of darkness or restricted visibility conditions. MIRL system has variable intensity controls.

Minimums: Minimum altitude a pilot can descend to when conducting an instrument approach. Also refers to the minimum visibility a pilot must have to initiate an instrument approach.

Multi-Engine Aircraft: Reciprocating, turbo-prop or jet powered fixed wing aircraft having more than one engine.

National Environmental Policy Act (NEPA): Federal legislation that establishes environmental policy for the nation. It requires an interdisciplinary framework for federal agencies to evaluate environmental impacts and contains action-forcing procedures to ensure that federal agency decision makers take environmental factors into account.

National Plan of Integrated Airport Systems (NPIAS): A plan prepared by the FAA which identifies, for the Congress and the public, the composition of a national system of airports together with the airport development necessary to anticipate and meet the present and future needs of civil aeronautics, to meet requirements in support of the national defense, and to meet the special needs of the postal service. The plan includes both new facilities and qualitative improvements to existing airports to increase their capacity, safety, technological capability, etc.

Nautical Mile Per Hour (Knot): Most common measure of aircraft speed. One knot is equal to one nautical mile per hour (1.15 knots = 1 mile).

Nautical Mile (NM): Most common distance measurement in aviation, equivalent to the length of one minute of latitude along the earth's equator or 6076.115 feet.

Navigable Airspace: Airspace at and above the minimum flight altitudes prescribed in the FARs, including airspace needed for safe takeoff and landing.

Navigational Aid (NAVAID): Any facility used as, available for use as, or designed for use as an aid to air navigation, including landing areas, lights, any apparatus or equipment for disseminating weather information, for signaling, for radio direction-finding, or for radio or other electronic communication, and any other structure or mechanism having similar purpose and controlling flight in the air or the landing or takeoff of aircraft.

Noise Contour: A line connecting equal points of noise exposure. Usually color coded by decibels.

Non-Directional Beacon (NDB): Signal that can be read by pilots of aircraft with direction finding equipment. Used to determine bearing and can "home" in or track to or from the desired point.

Non-Precision Approach: Provides course guidance without vertical path guidance.

Non-Precision Instrument Approach Aid: An electronic aid designed to provide an approach path for aligning an aircraft on its final approach to a runway. It lacks the high accuracy of the precision approach equipment and does not provide descent guidance. The VHF Omni range (VOR) and the non-directional beacon (NDB) are two examples of non-precision instrument equipment.

Non-Precision Instrument Runway: A runway having an existing instrument approach procedure utilizing air navigation facilities with only horizontal guidance for which straight-in non-precision instrument approach procedure has been approved.

Notice to Airmen (NOTAM): A notice containing information (not known sufficiently in advance to publicize by other means) concerning the establishment, condition, or change in any component (facility, service, or procedure) of, or hazard in the National Airspace System, the timely knowledge of which is essential to personnel concerned with flight operations.

Object Free Area (OFA): An area on the ground centered on a runway, taxiway, or taxilane centerline provided to enhance the safety of aircraft operations by having the area free of objects, except for objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes.

Obstacle Free Zone (OFZ): The OFZ is required to be clear of all objects, except for frangible visual NAVAIDs that need to be located in the OFZ because of their function, in order to provide clearance protection for aircraft landing or taking off from the runway, and for missed approaches. The OFZ is divided into the Runway OFZ, the Inner-Approach OFZ, and the Inner-Transitional OFZ.

Obstruction: An object which penetrates an imaginary surface described in Part 77.

Operation: The landing, takeoff or touch-and-go procedure by an aircraft on a runway at an airport.

Parallel Taxiways: Two taxiways which are parallel to one another which allow traffic to move simultaneously in different directions at busy airports.

Parking Apron: An apron intended to accommodate parked aircraft.

Part 77: Title 14 of the Code of Federal Regulations (CFR) titled "Objects Affecting Navigable Airspace," that establishes standards for determining obstructions and their potential effects on aircraft operations. Objects are considered to be obstructions to air navigation according to Part 77 if they exceed certain heights or penetrate certain imaginary surfaces established in relation to airport operations.

Part 135: Title 14 of the Code of Federal Regulations titled "Commuter and On Demand Operations and Rules Governing Persons On Board Such Aircraft," that defines a set of rules with more stringent standards for commuter and on demand operations.

Part 139: Title 14 of the Code of Federal Regulations titled "Certification of Airports," requires the FAA to issue airport operating certificates to airports that meet a specific set of requirements, including those that serve scheduled and unscheduled air carrier aircraft with more than 30 seats and those that serve scheduled air carrier operations in aircraft with more than 9 seats but less than 31 seats. Commonly associated with commercial service airports.

Pavement Structure: The combination of runway base and subbase courses and surface course which transmits the traffic load to the subgrade.

Pavement Sub-Grade: The upper part of the soil, natural or constructed, which supports the loads transmitted by the runway pavement structure.

Peak Hour: An estimate of the busiest hour in a day. This is also known as the design hour.

Precision Approach Path Indicator (PAPI): A system of lights on an airport that provides visual descent guidance to the pilot of an aircraft approaching a runway.

Precision Approach: A standard instrument approach using a precision approach procedure. See precision approach procedure.

Precision Approach Procedure: A standard instrument approach procedure in which an electronic glide slope is provided, such as ILS and PAR.

Precision Instrument Runway: A runway having an existing instrument approach procedure utilizing an Instrument Landing System (ILS), or a Precision Approach Radar (PAR). It also means a runway for which a precision approach system is planned and is so indicated by an FAA approved airport layout plan; a military service approved military airport layout plan; any other FAA planning document, or military service military airport planning document.

Primary Surface: An imaginary obstruction limiting surface defined in Part 77 that is specified as a rectangular surface longitudinally centered about a runway. The specific dimensions of this surface are a function of the types of approaches existing or planned for the runway.

Public Airport: An airport for public use, publicly owned and under control of a public agency.

Ramp: A defined area, on a land airport, intended to accommodate aircraft for purposes of loading or unloading passengers or cargo, refueling, parking, or maintenance.

Rotating Lighted Beacon: An airport aid allowing pilots the ability to locate an airport while flying under VFR conditions at night.

Runway Bearing: The magnetic or true bearing of the runway centerline as measured from magnetic or true north.

Runway Configuration: Layout or design of a runway or runways, where operations on the particular runway or runways being used at a given time are mutually dependent. A large airport can have two or more runway configurations operating simultaneously.

Runway Direction Number: A whole number to the nearest tenth of the magnetic bearing of the runway and measured in degrees clockwise from magnetic north.

Runway End Identification Lights (REIL): An airport lighting facility in the terminal area navigation system consisting of one flashing white high intensity light installed at each approach end corner of a runway and directed toward the approach zone, which enables the pilot to identify the threshold of a usable runway.

Runway Environment: The runway threshold or approach lighting aids or other markings identifiable with the runway.

Runway Gradient (Effective): The average gradient consisting of the difference in elevation of the two ends of the runway divided by the runway length may be used provided that no intervening point on the runway profile lies more than 5 feet above or below a straight line joining the two ends of the runway. In excess of 5 feet, the runway profile will be segmented and aircraft data will be applied for each segment separately.

Runway Lights: Lights having a prescribed angle of emission used to define the lateral limits of a runway. Runway light intensity may be controllable or preset, and are uniformly spaced at intervals of approximately 200 feet.

Runway Markings: (1) Basic marking-markings on runways used for operations under visual flight rules, consisting of centerline marking and runway direction numbers, and if required, letters. (2) Instrument marking-markings on runways served by nonvisual navigation aids and intended for landings under instrument weather conditions, consisting of basic marking plus threshold marking. (3) All weather marking- markings on runways served by nonvisual precision approach aids and on runways having special operational requirements, consisting of instrument markings plus landing zone marking and side strips.

Runway Orientation: The magnetic bearing of the centerline of the runway.

Runway Protection Zone (RPZ): A runway protection zone is a trapezoidal area at ground level, under the control of the airport authorities, for the purpose of protecting the safety of approaches and keeping the area clear of the congregation of people. The runway protection zone begins at the end of each primary surface and is centered upon the extended runway centerline.

Runway Safety Area (RSA): A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway.

Runway Strength: The assumed ability of a runway to support aircraft of a designated gross weight for each of single-wheel, dual-wheel, and dual-tandem-wheel gear types.

Runway: A defined rectangular area at an airport designated for the landing and taking-off of an aircraft.

Segmented Circle: A system of visual indicators designed to provide traffic pattern information at an airport without an operating control tower.

Shoulder: As pertaining to airports, an area adjacent to the edge of a paved surface so prepared to provide a transition between the pavement and the adjacent surface for aircraft running off the pavement, for drainage and sometimes for blast protection.

Small Aircraft: Aircraft of 12,500 pounds or less maximum certificated takeoff weight.

Socioeconomic: Information dealing with population or economic characteristics of a region.

Stopway (SWY): A defined rectangular surface beyond the end of a runway prepared or suitable for use in lieu of runway to support an airplane, without causing structural damage to the airplane, during an aborted takeoff.

Straight-In Approach (IFR): An instrument approach wherein final approach is commenced without first having executed a procedure turn (not necessarily completed with a straight-in landing).

Straight-In Approach (VFR): Entry into the traffic pattern by interception of the extended runway centerline without executing any other portion of the traffic pattern.

Taxilane: The portion of the aircraft parking area used for access between taxiways and aircraft parking positions.

Taxiway: A defined path, usually paved, over which aircraft can taxi from one part of an airport to another without interfering with takeoffs or landings.

Taxiway Design Group (TDG): A classification of airplanes based on outer to outer Main Gear Width (MGW) and Cockpit to Main Gear distance (CMG).

Taxiway/Taxilane Safety Area (TSA): A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway.

Terminal Area Forecast (TAF): The official forecast of aviation activity, both aircraft and enplanements, at FAA facilities. This includes FAA-towered airports, federally contracted towered airports, non-federal towered airports, and many non-towered airports.

Terminal Area: The area used or intended to be used for such facilities as terminal and cargo buildings, gates, hangars, shops and other service buildings; automobile parking, airport motels and restaurants, and garages and vehicle service facilities used in connection with the airport; and entrance and service roads used by the public within the boundaries of the airport.

T-Hangar: An aircraft hangar in which aircraft are parked alternately tail to tail, each in the T-shaped space left by the other row of aircraft or aircraft compartments.

Threshold Lights: Lighting arranged symmetrically about the extended centerline of the runway identifying the runway threshold. They emit a fixed green light.

Threshold: The designated beginning of the runway that is available and suitable for the landing of airplanes.

Total Operations: All arrivals and departures performed by military, general aviation and air carrier aircraft.

Touch-and-Go: An operation by an aircraft that lands and departs on a runway without stopping or exiting the runway.

Touchdown Zone: The area of a runway near the approach end where airplanes normally alight.

Touchdown: (1) The point at which an aircraft first makes contact with the landing surface. (2) In a precision radar approach, the point on the landing surface toward which the controller issues guidance instructions.

Traffic Flow Management System Counts (TFMSC): Provide information on traffic counts by airport or by city pair for various data grouping such as aircraft type or by hour of the day. It includes data for flights that fly under Instrument Flight Rules (IFR) and are captured by the FAA's enroute computers. Most VFR and some non-enroute IFR traffic is excluded.

Traffic Pattern: The traffic flow that is prescribed for aircraft landing at, taxiing on, and taking off from an airport. The usual components of a traffic pattern are upwind leg, crosswind leg, downwind leg, base leg, and final approach.

Transient Operations: Operations or other activity performed by aircraft not based at the airport.

Transitional Surface: These surfaces extend outward and upward at right angles to the runway centerline and the runway centerline extended at a slope of 7 to 1 from the sides of the primary surface and from the sides of the approach surfaces. Transitional surfaces for those portions of the precision approach surface which project through and beyond the limits of the conical surface, extend a distance of 5,000 feet measured horizontally from the edge of the approach surface and at right angles to the runway centerline.

Transportation Security Administration (TSA): Regulates aviation security and operates airport screening checkpoints.

Turning Radius: The radius of the arc described by an aircraft in making a self-powered turn, usually given as a minimum.

UNICOM: Frequencies authorized for aeronautical advisory services to private aircraft. Only one such station is authorized at any landing area. The frequency 123.0 MHz is used at airports served by airport traffic control towers, and 122.8 MHz is used for other landing areas. Services available are advisory in nature, primarily concerning the airport services and airport utilization.

Utility Runway: A runway that is constructed for and intended to be used by propeller driven aircraft of 12,500 pounds gross weight and less.

Very High Frequency (VHF) Omni directional range (VOR): A ground based electronic navigation aid transmitting navigation signals for 360 degrees orientated from magnetic north. VOR is the historic basis for navigation in the national airspace system.

VFR Airport: An airport without an authorized or planned instrument approach procedure.

Visual Approach Aid: Any device, light, or marker used to provide visual alignment and/or descent guidance on final approach to a runway. Also see REIL, VASI.

Visual Approach Slope Indicator (VASI): An airport lighting facility in the terminal area navigation system used primarily under VFR conditions that provides vertical visual guidance to aircraft during approach and landing, by radiating a pattern of high intensity red and white focused light beams, which indicate to the pilot that they are above, on, or below the glide path.

Visual Approach: An approach wherein an aircraft on an IFR flight plan, operating in VFR conditions under the control of a radar facility and having an air traffic control authorization, may deviate from the prescribed instrument approach procedure and proceed to the airport of destination, served by an operational control tower, by visual reference to the surface.

Visual Flight Rules (VFR): Procedures for the conduct of flight in weather conditions above Visual Flight Rules (VFR) weather minimums. The term VFR is often also used to define weather conditions and the type of flight plan under which an aircraft is operating.

Visual Runway: A runway intended solely for the operation of aircraft using visual approach procedures, with no straight-in instrument approach procedure and no instrument designation indicated on an FAA-approved airport layout plan, a military service approved military airport layout plan, or by a planning document submitted to the FAA by competent authority.

VORTAC: Very High Frequency Omni Range Facility (VOR co-located with a Tactical Air Navigation (TACAN) facility.)

VOR/DME: Refers to associated VOR and DME systems. VOR and DME are the international Civil Aviation Organization (ICAO) standard for navigation.

Wind Cone or Wind Sock: A free-rotating fabric truncated cone which when subjected to air movement indicates wind direction and wind force.

Wind Rose: A diagram for a given location showing relative frequency and velocity of wind from all compass directions.

Visual Meteorological Conditions (VMC): Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling equal to or better than specified minima.

Wind Tee: A visual device in the shape of a “T” used to determine wind direction.

12. Glossary

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McCall's
Airport Master Plan
Kicks off...NOW!
The McCall Municipal Airport is beginning its Master Plan process. Watch the overview kick off video available online for open viewing and public comment at MYLmasterplan.com.
www.MYLmasterplan.com

City of McCall

McCall Municipal Airport Master Plan
Kick-Off Presentation Supplement
Frequently Asked Questions
Common Terms
July 2020

Presentation Contents:

1. Welcome and Introductions
2. Project Description
3. Master Plan Objectives
4. Master Plan Elements
5. Roles and Responsibilities
6. Public Participation
7. Key Airport Issues
8. Project Schedule
9. Next Steps
10. Public Comments

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McCall Municipal Airport Master Plan Kick-Off Meeting

T-O ENGINEERS

Airport Master Plans

An Airport Master Plan is a comprehensive study of an airport that describes short-, medium-, and long-term development plans needed to support future aviation demand.

The elements of an Airport Master Plan are outlined by the Federal Aviation Administration (FAA); however, the complexity and level of detail for each element depends upon the size, function, issues, and challenges of the airport.

The McCall Municipal Airport Master Plan will present a strategy for development while considering the potential environmental and socioeconomic impacts throughout the planning period.

The McCall Municipal Airport Master Plan will meet the following objectives:

- Understand airport issues, opportunities, and constraints.
- Consider the impacts of aviation trends.
- Identify the capacity of existing airport infrastructure.
- Determine need for airport improvements.
- Estimate project costs and funding sources.
- Develop a schedule for project implementation.
- Obtain stakeholder and public input.

Master Plan Process

The project begins with a pre-planning phase to determine the scope of work (completed), then will systematically follow the steps shown in the figure.

The McCall Municipal Airport Master Plan will incorporate a significant amount of public involvement to ensure the best final product possible. Effective public involvement includes numerous parties, including but not limited to: aircraft owners, airport staff, public officials, funding agencies, and the general public.

The earlier public input is communicated, the easier it is to incorporate into the planning process.

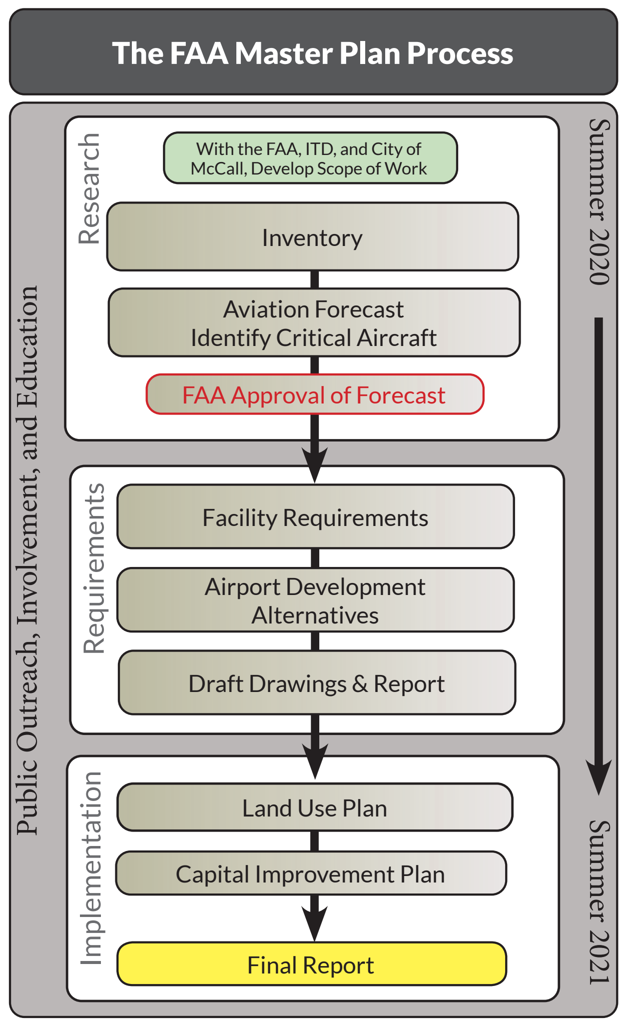
Throughout the Airport Master Plan project information will be available online to include a project schedule, announcements for upcoming meetings, draft documents, references, as well as a portal to ask questions and provide comments.

The website can be accessed through the T-O Engineers Project Portal, McCall Municipal Airport Master Plan:

https://www.to-engineersprojectinfo.com/jobs/1550/details/mccall-municipal-airport-master-plan

Or through the McCall Municipal Airport website:

https://www.mccall.id.us/airportmasterplan



McCall Municipal Airport Master Plan Kick-Off Meeting

T-O ENGINEERS

Frequently Asked Questions

Q: What is an Airport Master Plan?

A: An Airport Master Plan is a comprehensive study of an airport that describes short-, medium-, and long-term development needs to meet future aviation demand.

Q: Why is an Airport Master Plan needed?

A: An Airport Master Plan provides the developmental framework for individual airports to ensure appropriate planning for future needs. An Airport Master Plan is typically updated every 5-10 years due to FAA changes in airport design, swings in the economy, and transformational changes in aviation and how people travel.

The last Airport Master Plan completed for McCall Municipal Airport was in 2007.

Q: What are the major elements of an Airport Master Plan?

A: Airport Master Plans are developed based on guidance from the FAA Advisory Circular (AC) 150/5070-6B, Airport Master Plans.

- Inventory of Existing Conditions
- Aviation Forecast
- Facility Requirements
- Environmental Considerations
- Alternatives Development
- Airport Layout Plan (ALP)
- Facilities Implementation

Q: What are the Airport Master Plan Objectives:

A: The objectives of an Airport Master Plan are:

- To understand airport issues, opportunities and constraints.
- Consider the impacts of aviation trends.
- Identify the capacity of existing airport infrastructure.
- Determine the need for airport improvements.
- Estimate project costs and funding sources.
- Develop a schedule for project implementation.
- Obtain stakeholder and public input.

McCall Municipal Airport Master Plan Kick-Off Meeting

T-O ENGINEERS

Q: Who is funding the Master Plan project?

A: The FAA is providing 100% of funding for this Airport Master Plan project. The federal share for Airport Improvement Program (AIP) funded projects of this kind is typically up to 90% of project costs. Due to the CARES Act, signed March 27, 2020, federal funding was increased to 100% as part of the economic relief for eligible U.S. airports, for grants already planned for fiscal year 2020.

Q: How much will this Airport Master Plan Cost?

A: The total project cost is $366,333.

Q: Who Approves a Master Plan?

A: The Airport Sponsor, in this case the City of McCall, approves the Airport Master Plan.

FAA approval is required for the Airport Master Plan Forecast, as well as the Airport Layout Plan (ALP). The FAA also provides a review of the Master Plan documents, and accepts the final document.

Q: What results from an Airport Master Plan?

A: The Sponsor Approved Airport Master Plan becomes the guiding document for follow-on projects and airport development.

McCall Municipal Airport Master Plan Kick-Off Meeting

T-O ENGINEERS

COMMON TERMS

Advisory Circular (AC): External publications issued by the FAA consisting of non-regulatory material providing for the recommendations relative to a policy, and guidance and information relative to a specific aviation subject.

Aircraft Mix: The type of aircraft which are to be accommodated at the airport.

Aircraft Operation: The landing, takeoff or touch-and-go procedure by an aircraft on a runway at an airport.

Airport Capital Improvement Plan (ACIP): The planning program used by the Federal Aviation Administration to identify, prioritize and distribute funds for airport development and the needs of the National Airspace System to meet specified national goals and objectives.

Airport Improvement Program (AIP): The Airport Improvement Program of the Airport and Airways Improvement Act of 1982 as amended by the Airport and Airway Safety and Capacity Expansion Act of 1987. Under this program, the FAA provides funding assistance for the planning, design and development of airports and airport facilities.

Airport Layout Plan (ALP): A graphic presentation, to scale, of existing and proposed airport facilities, their location on the airport, and the pertinent clearance and dimensional information required to show conformance with applicable standards. To be eligible for AIP funding assistance, an airport must have an FAA approved airport layout plan.

Airport Master Plan: The planner's concept of the long-term development of an airport.

Airport Sponsor: The entity that is legally responsible for the management and operation of an airport including the fulfillment of the requirements of laws and regulations related thereto. Often an Airport Sponsor is a City or County.

Based Aircraft: The total number of active general aviation aircraft which use or may be expected to use an airport as a home base.

Critical (Design) Aircraft: The most demanding aircraft (or combination of aircraft) with at least 500 annual operations that operates, or is expected to operate, at the airport.

Federal Aviation Administration (FAA): Created by the act that established the Department of Transportation. Assumed all of the responsibilities of the former Federal Aviation Agency including aircraft safety, movement, and controls.

General Aviation (GA): The segment of aviation that encompasses all aspects of civil aviation except certified air carriers and other commercial operators such as airfreight carriers.

General Aviation Airports: Those airports with fewer than 2,500 annual enplaned passengers and those used exclusively by private and business aircraft not providing common carrier passenger service.

Land Use Plan: Shows on-airport land uses as developed by the airport sponsor under the master plan effort and off-airport land uses as developed by surrounding communities.

Large Aircraft: Aircraft weighing more than 12,500 pounds maximum certificated takeoff weight.

National Environmental Policy Act (NEPA): Federal legislation that establishes environmental policy for the nation. It requires an interdisciplinary framework for federal agencies to evaluate environmental impacts and contains action-forcing procedures to ensure that federal agency decision makers take environmental factors into account.

National Plan of Integrated Airport Systems (NPIAS): A plan prepared by the FAA which identifies, for the Congress and the public, the composition of a national system of airports together with the airport development necessary to anticipate and meet the present and future needs of civil aeronautics, to meet requirements in support of the national defense, and to meet the special needs of the postal service. The plan includes both new facilities and qualitative improvements to existing airports to increase their capacity, safety, technological capability, etc.

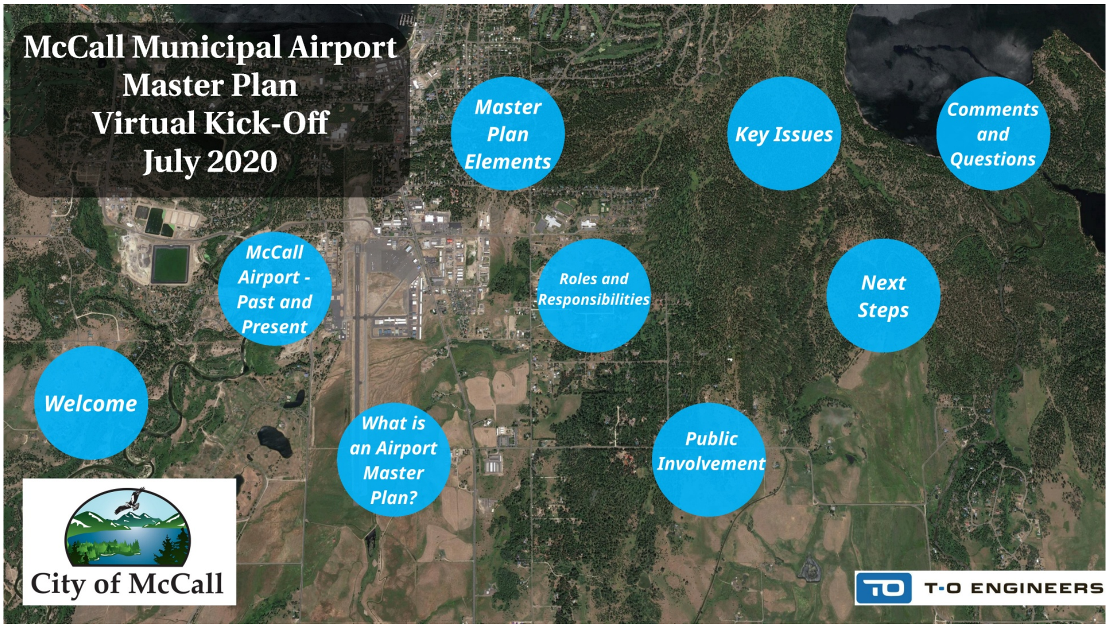
Operation: The landing, takeoff or touch-and-go procedure by an aircraft on a runway at an airport. A touch-and-go equals two operations.

Public Airport: An airport for public use, publicly owned and under control of a public agency.

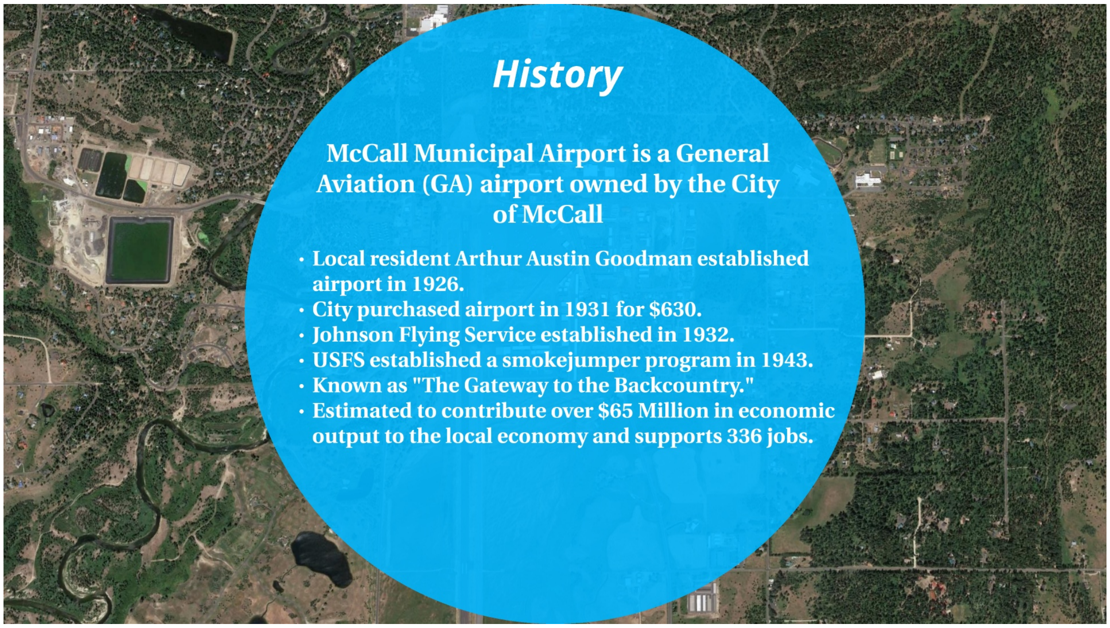
Small Aircraft: Aircraft of 12,500 pounds or less maximum certificated takeoff weight.

McCall Municipal Airport Master Plan Kick-Off Meeting

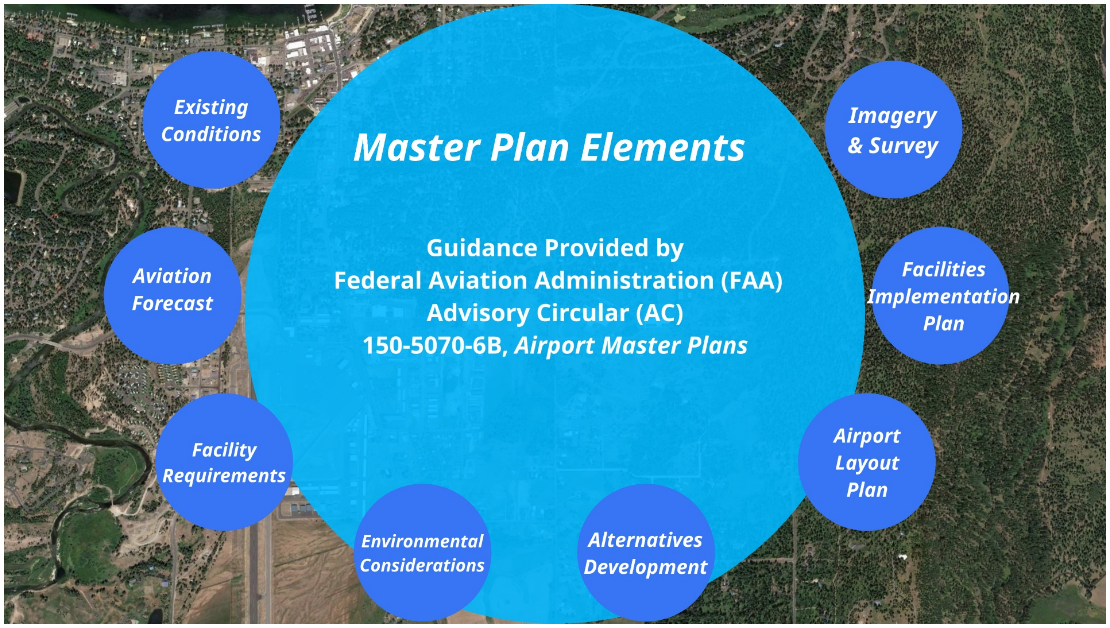
T-O ENGINEERS

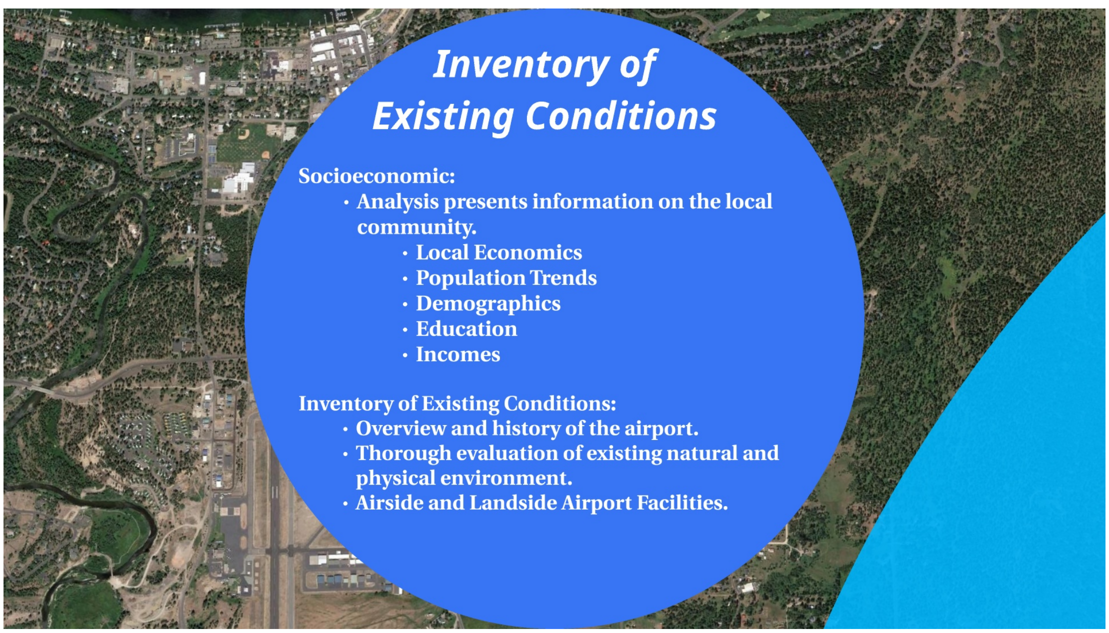

McCall Municipal Airport
Master Plan
Virtual Kick-Off
July 2020
Master Plan Elements
Key Issues
Comments and Questions
McCall Airport - Past and Present
Roles and Responsibilities
Next Steps
Welcome
What is an Airport Master Plan?
Public Involvement
City of McCall
T-O ENGINEERS

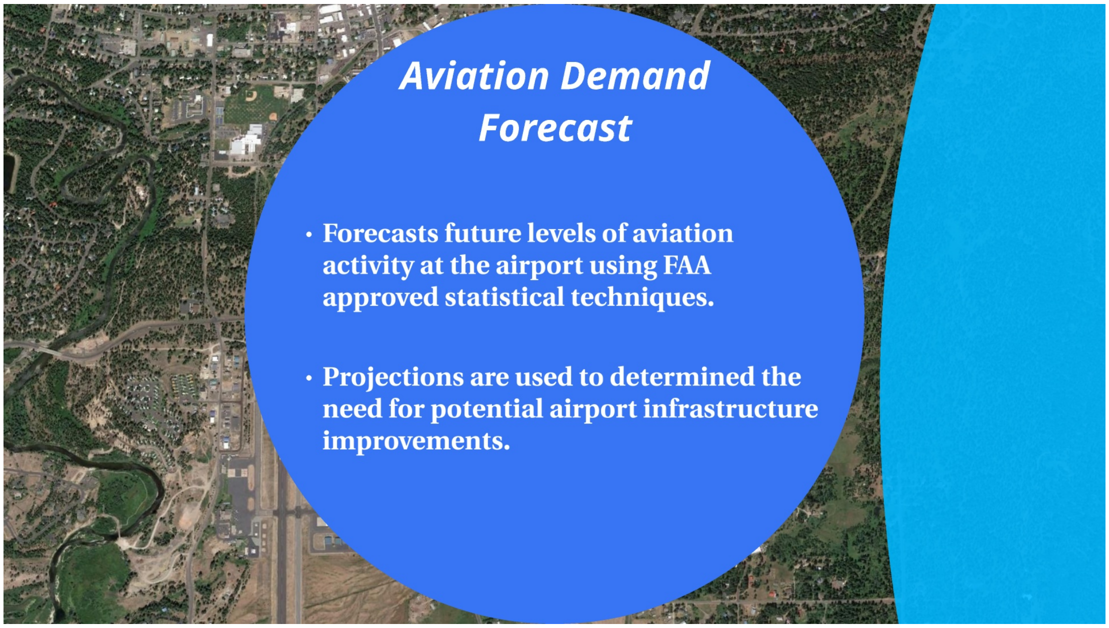

Welcome!
Rick Stein
Airport Manager
Kevin Bissell
Project Manager
Jared Wingo
Planning Leader
Wayne Reiter
Aviation Planner


History
McCall Municipal Airport is a General Aviation (GA) airport owned by the City of McCall
• Local resident Arthur Austin Goodman established airport in 1926.
• City purchased airport in 1931 for $630.
• Johnson Flying Service established in 1932.
• USFS established a smokejumper program in 1943.
• Known as "The Gateway to the Backcountry."
• Estimated to contribute over $65 Million in economic output to the local economy and supports 336 jobs.

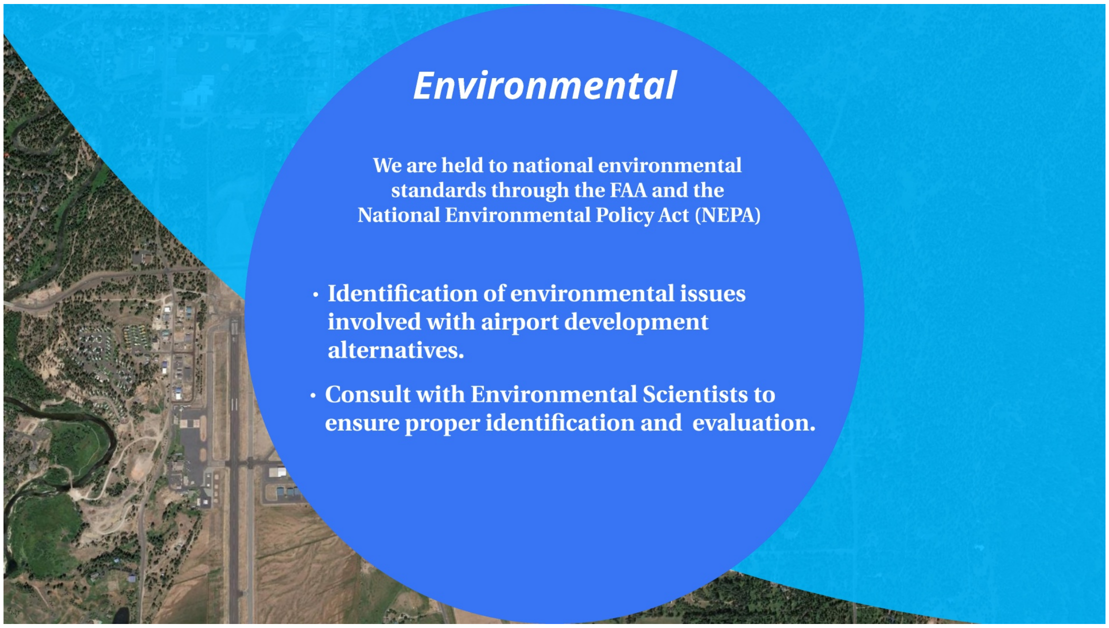

Airport Master Plan
A master plan is a comprehensive study of an airport, and describes the short, medium, and long term development needs to safely meet future demand.
Objectives:
• Understand airport issues, opportunities and constraints.
• Consider the impacts of aviation trends.
• Identify the capacity of existing airport infrastructure.
• Determine need for airport improvements.
• Estimate project costs and funding sources.
• Develop a schedule for project implementation.
• Obtain stakeholder and public input.

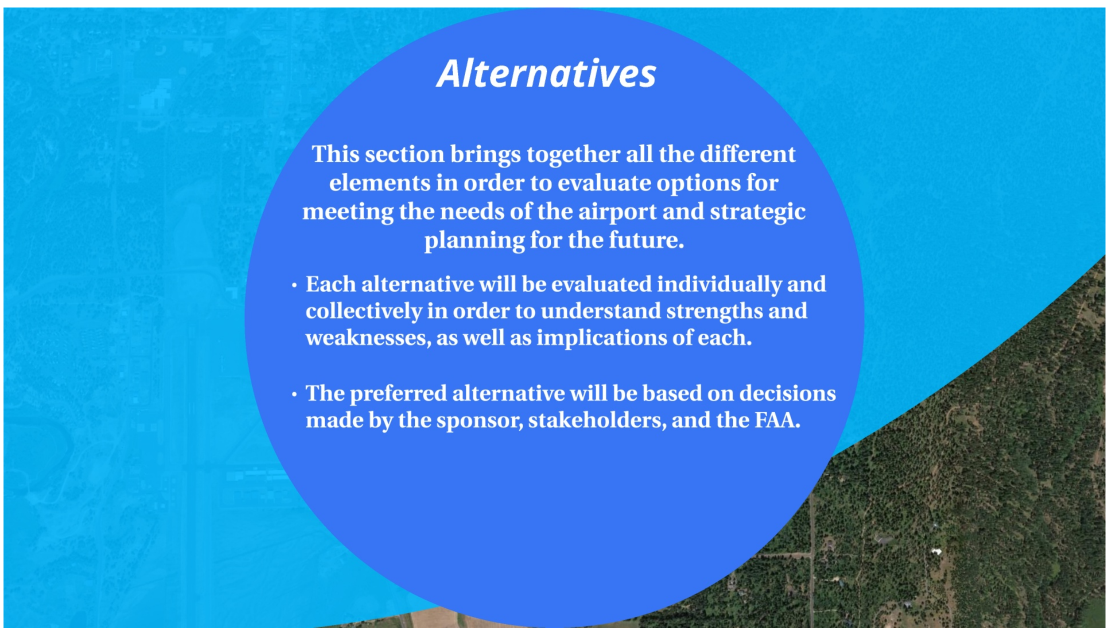

Master Plan Elements
Guidance Provided by
Federal Aviation Administration (FAA)
Advisory Circular (AC)
150-5070-6B, Airport Master Plans
Existing Conditions
Aviation Forecast
Facility Requirements
Environmental Considerations
Alternatives Development
Airport Layout Plan
Facilities Implementation Plan
Imagery & Survey


Inventory of
Existing Conditions
Socioeconomic:
• Analysis presents information on the local community.
• Local Economics
• Population Trends
• Demographics
• Education
• Incomes
Inventory of Existing Conditions:
• Overview and history of the airport.
• Thorough evaluation of existing natural and physical environment.
• Airside and Landside Airport Facilities.


Aviation Demand Forecast
• Forecasts future levels of aviation activity at the airport using FAA approved statistical techniques.
• Projections are used to determined the need for potential airport infrastructure improvements.

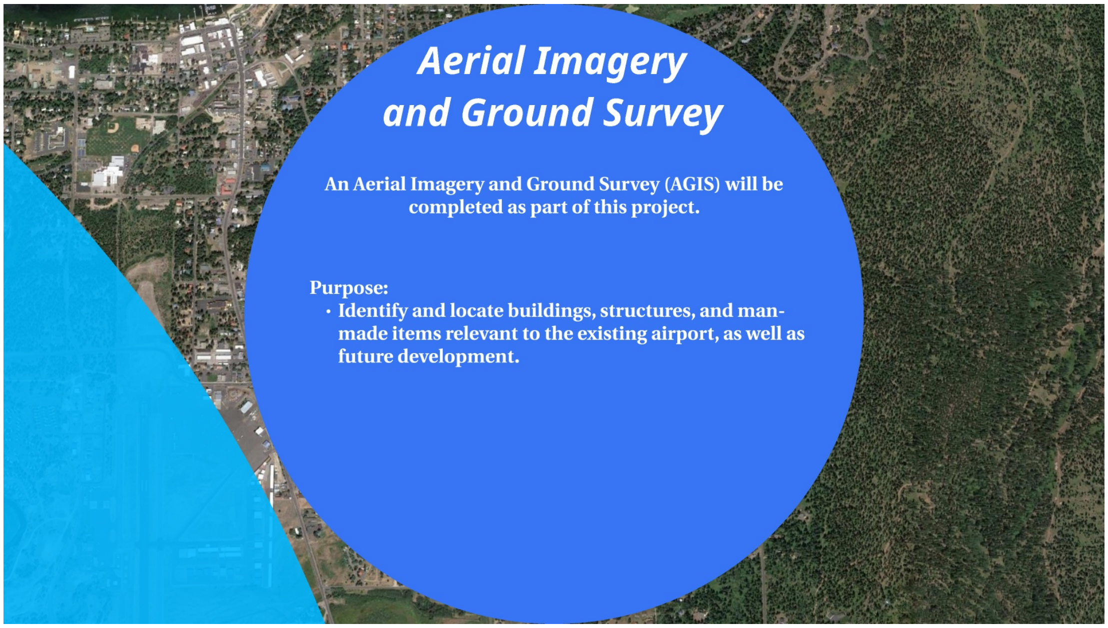

Facility Requirements
Based on the results of the FAA approved forecast, determine infrastructure development needed to safely support the future aviation demand.


Environmental
We are held to national environmental standards through the FAA and the National Environmental Policy Act (NEPA)
• Identification of environmental issues involved with airport development alternatives.
• Consult with Environmental Scientists to ensure proper identification and evaluation.


Alternatives
This section brings together all the different elements in order to evaluate options for meeting the needs of the airport and strategic planning for the future.
• Each alternative will be evaluated individually and collectively in order to understand strengths and weaknesses, as well as implications of each.
• The preferred alternative will be based on decisions made by the sponsor, stakeholders, and the FAA.


Airport Layout Plan (ALP)
An ALP is a drawing set which depicts the existing airport facilities, as well as the proposed developments as determined from the previous sections.
Five primary functions of an ALP:
• Create a blueprint for airport development.
• Serves as a record of aeronautical requirements.
• Enables the Sponsor and FAA to plan for the future.
• The ALP serves as a working tool in development and planning.
• An approved ALP is a requirement for FAA Funding


Facilities Implementation Plan
Also referred to as a Capital Improvement Plan (CIP), this element provides guidance on how to implement the recommendation of the planning effort.
Elements will vary depending on complexity:
• List/schedule of projects
• Estimated development costs
• Interrelated projects
• Detailed implementation plan

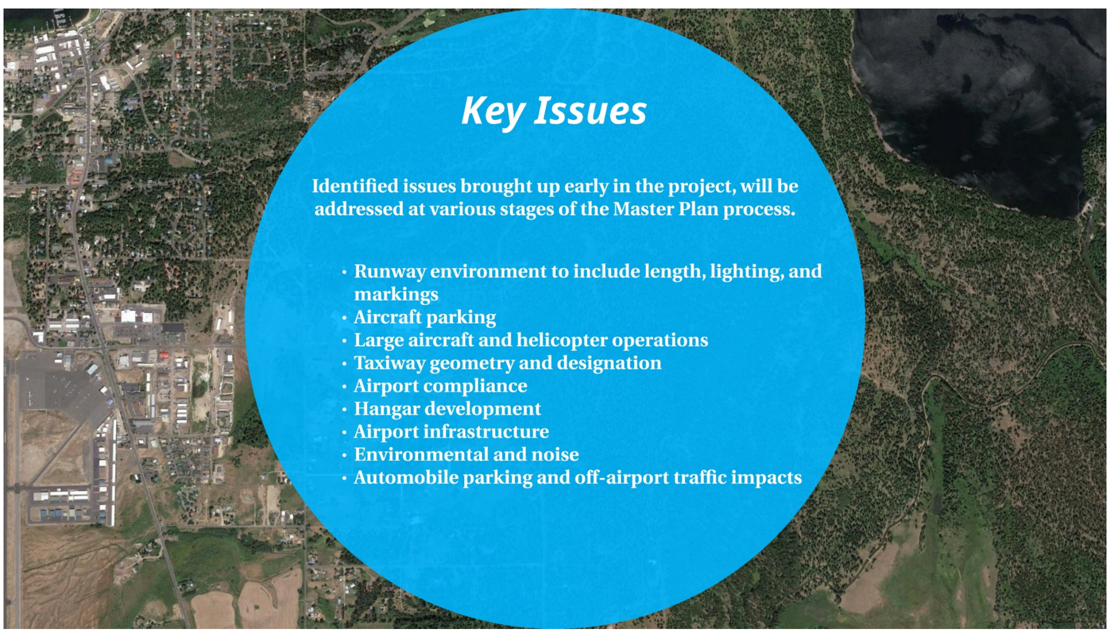

Aerial Imagery
and Ground Survey
An Aerial Imagery and Ground Survey (AGIS) will be completed as part of this project.
Purpose:
• Identify and locate buildings, structures, and man-made items relevant to the existing airport, as well as future development.

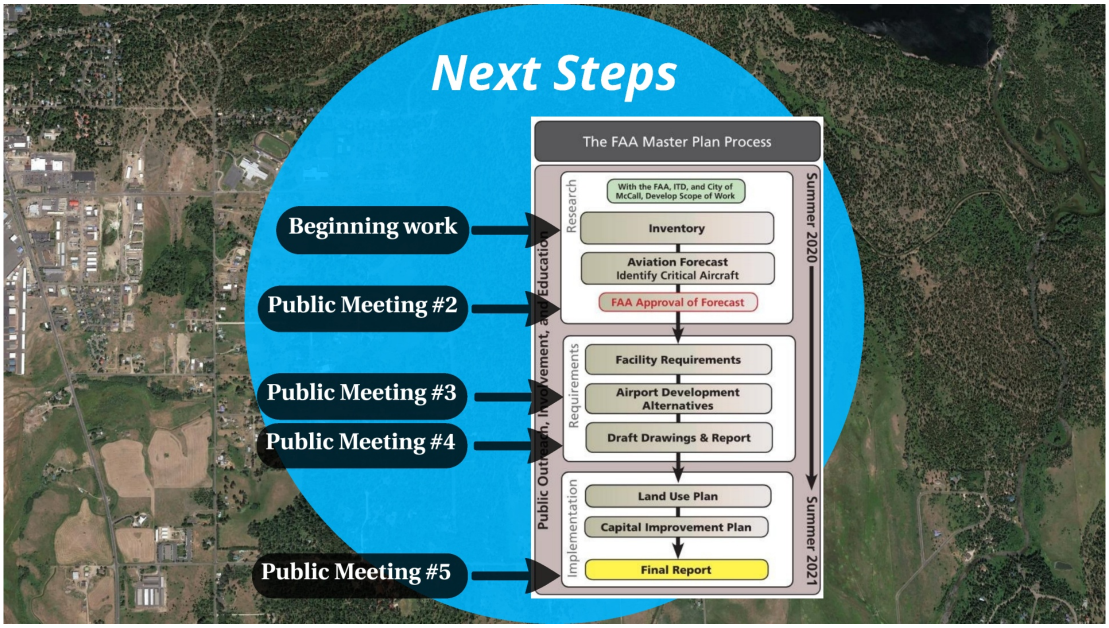

Roles and
Responsibilities
• City - Sponsor, provides data, community organizer, adopts the Master Plan.
• FAA - Funding Agency. (100% - $366,332), technical guidance, approval of forecast and ALP.
• ITD - Reviews ALP and updates the Idaho Airport System Plan (IASP)
• Consultant - Conducts research, produces technical documents, facilitates meetings.
• Community - Shares ideas and offers recommendations.


Public Involvement
We want to encourage information sharing and collaboration among:
• Airport Sponsor
• Users
• Tenants
• Agencies
• Businesses
• Public Officials
• Travelers
• General Public
• Surrounding Communities
Public Meetings
Project Website


Tentative Schedule
*All meetings will abide by Idaho State/Local COVID-19 guidelines.
• Meeting 1: Kick-Off July 2020 (Virtual)
• Meeting 2: Inventory, Forecast TBD
• Meeting 3: Facility Requirements, Development Alternatives TBD
• Meeting 4: Presentation of draft documents TBD
• Meeting 5: Presentation of final documents TBD


Project Website
Updated information for this project can be accessed through the T-O Engineers Project Portal
McCall Municipal Airport Master Plan
https://www.to-engineersprojectinfo.com/jobs/1550/details/mccall-municipal-airport-master-plan
Here you will find:
• Contacts
• Project Schedule
• Upcoming Meetings
• Draft Documents
• Master Plan Resources
• Surveys
• Provide Comments


Key Issues
Identified issues brought up early in the project, will be addressed at various stages of the Master Plan process.
• Runway environment to include length, lighting, and markings
• Aircraft parking
• Large aircraft and helicopter operations
• Taxiway geometry and designation
• Airport compliance
• Hangar development
• Airport infrastructure
• Environmental and noise
• Automobile parking and off-airport traffic impacts


Next Steps
The FAA Master Plan Process
Beginning work
Public Meeting #2
Public Meeting #3
Public Meeting #4
Public Meeting #5
Public Outreach, Involvement, and Education
Research
With the FAA, ITD, and City of McCall, Develop Scope of Work
Inventory
Aviation Forecast
Identify Critical Aircraft
FAA Approval of Forecast
Requirements
Facility Requirements
Airport Development Alternatives
Draft Drawings & Report
Implementation
Land Use Plan
Capital Improvement Plan
Final Report
Summer 2020
Summer 2021


Comments
&
Questions
Throughout the Airport Master Planning process, please email your comments and/or suggestions.
• Wayne Reiter
• Email: wreiter@to-engineers.com
• Rick Stein
• Email: rstein@mccall.id.us

McCall Municipal Airport ~ Master Plan

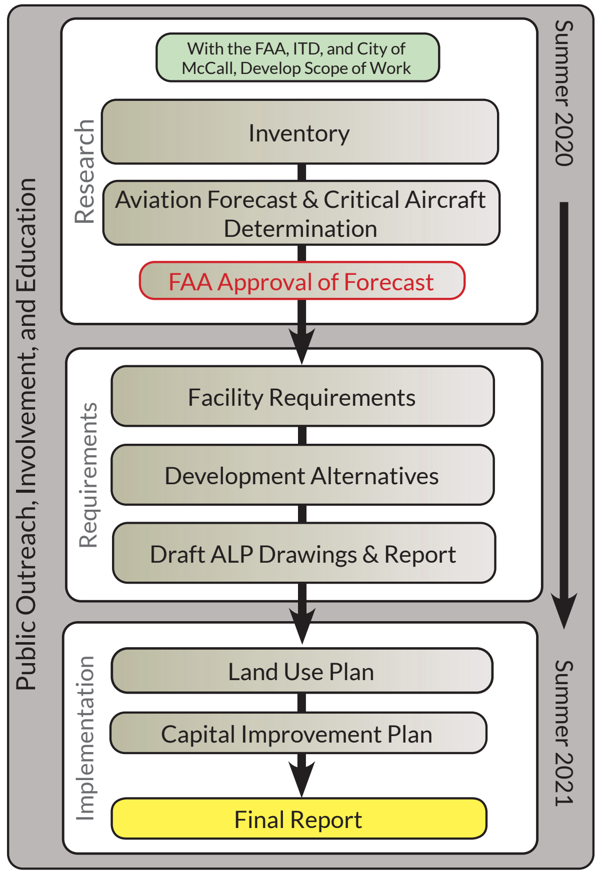
Public Meeting #2 • November 17th, 2020 • 6:00 p.m. •

Teams Live or Call-In 208-995-2415, ID 824 950 710#

City of McCall

MEETING AGENDA

- Welcome & Introductions
- Recorded Presentation: Chapters 1-4
- Additional Materials
- Public Comment
- Next Steps
- Meeting Conclusion



Presentation Contents

- Project Status - Chapters 1 through 4
- Socioeconomic Overview & Background
- Airside and Landside Inventory
- Forecast of Aviation Demand
  - Methodology
  - Forecast Operations
  - Based Aircraft
  - Critical Aircraft Determination
- Next Steps
  - Facility Requirements
  - Development Alternatives
  - Public Meeting #3
- Conclusion
  - Project Portal

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208.634.1488

WEBSITE ACCESS

1. Visit www.MYLmasterplan.com
2. Or, www.to-engineers.com
3. Click on the "Project Portal" tab in the upper right hand corner.
4. Under "Recent Jobs Posted," click on "McCall Municipal Airport Master Plan."
5. You may then view information and documents under several different tabs. No registration is needed.

PAGE 5 - THE STAR-NEWS - THURSDAY, NOVEMBER 5, 2020

Parks could be dropped from next library bond vote

BY DREW DODSON
The Star-News

Removing a $1 million parks department relocation included in last May's failed bond issue to expand the McCall Public Library could be key to earning voter approval, the McCall City Council said last week.

Council members and the library board of trustees agreed during a joint meeting last Friday that costs to voters should be reduced by using city money to pay for the new parks relocation.

"We need to change the cost and that may be just what we need to send us over the edge this time," trustee chair Jacki Rubin said.

The $6.2 million bond election fell 29 votes shy of approval, with 707 votes in favor and 397 opposed, or 64% overall in favor. A 66.7% majority was needed for approval.

Other ways to fund the parks department relocation without bond money will be presented to the council at its Dec. 3 meeting.

Work on the expansion cannot begin until the parks department is relocated from its current base next to the library.

The former city fire station on Park Street in downtown McCall would be demolished to expand the library.

The May election proposed building a new parks department headquarters on city land on Forest Street near the Central Idaho Historical Museum.

Availability of city funds for the new parks building could determine whether the library bond will be put to McCall voters in May 2021 or in May 2022. The timing split council members and trustees during Friday's meeting.

"I think if we wait, we're gonna lose things, not gain things," Rubin said.

Council member Colby Nielsen was unopposed to putting the bond to voters again in 2021, but pondered whether waiting until May 2022 would give it a better chance of passing.

"I think one of the virtues of waiting until May of 2022 would be adding some flexibility to potentially figure out how to fund that parks facility," Nielsen said.

Nielsen also said waiting until 2022 could allow the COVID-19 pandemic to subside, which could make signing over taxpayer money easier for voters.

"There a lot of things happening right now and I think that I'm probably not alone in feeling fairly overwhelmed with life in general," he said.

Council members and trustees were also undecided on how the cost of the original $6.2 million bond could be reduced in addition to removing the parks department relocation.

The group had mixed opinions on whether to include money in the bond proposal for 32 extra parking spaces behind the library and a pedestrian plaza between the library and City Hall.

Both were included in the original library bond at a cost of about $344,00, which created public mistrust in the last library bond proposal, according to the focus groups.

"You make a bond more convoluted by tacking more and more things on there," trustee Patrick Coyle said. "People will be suspicious and not really want to be on board with it."

Trustee Lola Elliot urged making the bond "skinny" by eliminating both projects, while Coyle favored keeping the extra parking as a selling point for the bond's overall community benefit.

Focus groups rap timing, cost of May library bond vote

BY DREW DODSON
The Star-News

The timing, cost and lack of public transparency were primary reasons last May's $6.2 million bond election to expand the McCall Public Library came up short, according to public comments gathered by the city.

Themes from 29 focus group participants helped explain why the bond fell 29 votes shy of approval, with 707 votes in favor and 397 opposed, or 64% overall in favor. A 66.7% majority was needed for approval.

Despite widespread support for an expanded library, the specifics of the May proposal gave pause to many voters, Communications Manager Erin Greaves said.

"The $6.2 million number was definitely a little too large for the majority of the people that I spoke with," Greaves told the McCall City Council and library board of trustees during a joint meeting last week.

Current plans were labeled as too "grandiose" for McCall by some voters, who suggested $2 million to $3 million as a more realistic request of city taxpayers, a report on the focus groups said.

"Some people thought 'we want more space, we want improvements, we realize the building is falling apart, but we just don't think it should cost that much,'" Greaves said.

However, focus group participants split on whether the size of the expansion should be reduced to bring costs down, the report said.

Some suggested a smaller expansion project could still allow the library to grow through partnerships with other libraries, digital offerings and technology rentals.

The $6.2 million requested from city taxpayers also looked more daunting to voters as the COVID-19 pandemic ushered in financial uncertainty, the report said.

The pandemic prompted some focus group participants to question the logic of investing in buildings when technology and working remotely are growing.

Focus group participants said May 2021 would be too soon for another election, Greaves said.

"People thought it would be almost rude to bring it back so quickly," she said.

Voters also felt caught off-guard and confused by non-library city projects included in the original proposal.

"It was a little bit muddy," Greaves said. "Some people felt that it wasn't a straightforward concept and they voted 'no' because of it."

Many voters were not aware of or did not understand how a $1 million parks department relocation to city land on Forest Street tied into the library expansion.

Midas

(Continued from Page 1)

"Substantive" comments are those that offer in-depth critiques of certain elements of the project or that identify areas in which existing analysis is insufficient.

Some substantive comments could trigger further analysis of the project that could ultimately influence how the mine is permitted, Harris said.

A team of Forest Service experts from across the nation will be helping the Payette sift through the comments to speed up the process, he said.

Midas Gold is "proud to be one step closer" to permitting the proposed gold and antimony mine, the company said in a news release.

"The feedback from these comments will be incredibly valuable as we work with regulators to finalize the plan for the Stibnite Gold Project," Midas Gold Corp. President Stephen Quin said.

The public comment period opened on Aug. 14 and was originally expected to last until Oct. 13 until the Payette granted a 15-day extension to Oct. 28.

Over 7,300 comments, or 76%, were received during the extension period, according to timestamps on the comments.

Responses will be issued to all 10,000 comments in the final environmental study, which is currently slated for release in August.

A minimum 45-day objection period will follow the release of the final environmental study and draft record of decision, which will be released at the same time as the final study.

Only those who submitted substantive comments during the project scoping period in 2017 or on the draft environmental study may issue an objection.

A final decision on the project could come as soon as December 2021.

MCCALL MUNICIPAL AIRPORT

Airport Master Plan Virtual Public Meeting

Tuesday, November 17th, 6:00pm

To Access the Teams Live Meeting:
Call: 208-995-2415 and Enter Conference ID: 824 950 710#

The master plan will define the type and extent of development required to accommodate short-term and long-term aviation demand for the McCall Municipal Airport. This meeting will present the first four chapters of the master plan, with emphasis on the recommended aviation forecast.

To receive project notifications or additional information, please contact Richard Stein, Airport Manager, City of McCall at 208-634-1488 or rstein@mccall.id.us. You may also visit www.MYLmasterplan.com, the T-O Engineers Project Portal at https://www.to-engineersprojectinfo.com/, or scan the QR code in the bottom right corner.

City of McCall

PAGE 5 - THE STAR-NEWS - THURSDAY, NOVEMBER 12, 2020

Swap

(Continued from Page 1

the land board than if we try to do things individually," commissioner Sherry Maupin said.

"This is important to our region, it's important to our water quality, it's important to our quality of life overall," Maupin said. "And they have the ability to impact that."

A preliminary plan will be aired to the land board on Tuesday in Boise and could be adopted as soon as January if the extension request is declined

The letter also will ask the land board to extend a moratorium on leases, sales and exchanges of McCall lands as part of delaying adoption of the plan.

The moratorium has been in place since June when the land board was approached with a land exchange proposal by Trident Holdings, a Boise-based company.

Trident's original proposal would have given it about 28,000 acres of state lands around Payette Lake and McCall in exchange for more productive timberlands in northern Idaho.

The lands department's long-term plan focuses on about 5,000 acres of lands around Payette Lake in the McCall Impact Area, Payette Lakes Supervisory Area Manager Scott Corkill said.

"That's the meat and potatoes, all those high value properties closest to Payette Lake," Corkill told commissioner and council members.

The other 23,000 acres included in Trident's original proposal are southeast of McCall and are covered by an existing forest management plan that guides harvesting, leasing and long-term strategy.

"We don't anticipate having any recommendations going forward to change that," Corkill said. "That was already approved by the land board in 2018."

Corkill admitted Trident's proposal may have expedited the long-term plan, but emphasized it is a "standalone plan" that the lands department has been working on for years.

Also at Tuesday night's joint meeting was the Payette Endowment Lands Alliance, which formed in July in response to Trident's proposal.

The group noted the importance of "overlapping public trust obligations" the state has to protect lakes and rivers while also maximizing profits from the use of state lands, as mandated by the Idaho Constitution.

"We feel restricting new development on endowment lands around the lake is essential to protecting and fulfilling these public trust obligations," said Lake Fork resident Judy Anderson, a founding member of the group.

Fellow founding member Jeff Mousseau of McCall pointed toward different land conservation solutions used elsewhere that could work locally, including one in Blaine County.

In 2008, Blaine County voters approved a two-year conservation tax levy to create a fund to grow through investments and spend on conservation work.

"Today the program has successfully put in place five major conservation easements, one large land acquisition and three land and water restoration projects," Mousseau said.

Mousseau also mentioned a 1% real estate tax passed by San Juan County voters in Washington in 1990, which over the last three decades has helped preserve the San Juan Islands.

Council members and commissioners also brainstormed ways the city and county could take more control of the future of state lands around McCall.

Council member Melanie Holmes suggested creating a "recreation" zoning category to be applied to state lands in case they are sold to developers.

"Could it be somewhat of a last resort between the county and city to consider some sort of zoning change that would prevent usage on those lands?" Holmes asked.

That option would need to be reviewed by attorneys, city officials said.

A conservation levy similar to the one in Blaine County was also suggested as a possibility.

"The big issue I have with all of that is I have a road department that needs money a lot sooner than I think this issue needs money, and I don't know how to wrestle with that," commissioner Elt Hasbrouck said.

Trident

(Continued from Page 1

However, the plans are strictly concepts, Williams said.

Williams fears that no action on state lands in McCall would eventually result in the state auctioning off less profitable tracts of land to private developers with no conservation goals.

A mandate in the Idaho Constitution requires state lands to earn as much money as possible for public schools and mental health hospitals.

Council Mtn. fire burns 800 acres

BY MAX SILVERSON
The Star-News

A wildfire started by an abandoned campfire grew to about 800 acres last week in Buck's Basin east of Council Mountain before being quashed by snowfall, the Payette National Forest reported.

The Crystal Creek Fire was reported on Nov. 2 and was considered controlled after snow fell on the site over the weekend.

"Since the beginning of hunting season, 17 abandoned warming fires have been found on the landscape, and 25 abandoned campfires have been discovered in campground facilities," Payette Forest Public Affairs Officer Brian Harris said.

"This number of human-caused wildfires is not normal for this time of year," he said.

People with information who may have left the fire, or to report any abandoned campfire, should contact the Payette headquarters office in McCall at 208-634-0700.

Fire officials deployed two helicopters to dump water on hot spots within the Crystal Creek Fire, but did not deploy firefighters on the ground because of the remote location and likelihood of snow in the forecast, Harris said.

The fire primarily burned open grassy areas while torching some subalpine fir trees, he said.

"We always evaluate the risk to firefighters versus the potential gain of deploying a full response," Harris said.

"The fire had no foreseeable threat to structures, private lands or other values at risk such as powerlines, roadways, etc.," he said.

The fire was located in an area surrounded by rocky terrain that helped keep it contained, Harris said.

Tamarack Resort fire contained; no cause released

BY MAX SILVERSON
The Star-News

The West State Fire at Tamarack Resort was declared 100% contained on Friday and extinguished completely by snowfall that started on Saturday.

The fire burned 61 acres within 500 feet of the resort's unfinished mid-mountain lodge and about 100 feet from the Mile High Cantina.

The cause of the fire was still under investigation, said Jennifer Russell, a public information officer for the Idaho Department of Lands.

Total firefighting costs on the West State Fire were not available.

Recent snowfall effectively ended the fire season in the area, but dangers from the fire remain.

Tamarack Resort President Scott Turlington urged people to stay out of the fire area because burned trees would continue to fall and pose a serious safety threat.

The fire started on Nov. 2 about 300 yards to the west of the mid-mountain lodge, which is located at the top of the Tamarack Express lift and at the base of the Summit Express lift.

The fire burned uphill to the northwest and began burning in grass and brush.

The blaze then moved into sub-alpine fir stands and took hold, causing black plumes of smoke and torched trees visible from across the valley floor at night.

Tamarack employees turned on snowmaking guns to spray the lodge with water.

The water feeding the snowmaking guns also was used to fill up water tankers deployed on the fire,.

The Summit Lift was not damaged.

COVID

(Continued from Page 1

One death from COVID-19 has been reported in Valley County since the pandemic reached Idaho in March. An 85-year-old McCall man died July 15 at St. Luke's Boise hospital due to complications of COVID-19 infection.

Adams County

Adams County had 70 total confirmed cases among county residents as of Wednesday, nine more than the 61 cases reported last week, according to Southwest District Health.

Four new cases were confirmed in the New Meadows area between Oct. 18 and Oct. 31, the health district said.

Two deaths in Adams County related to COVID-19 have been reported. The first death was a man in his 70s who had been hospitalized with underlying health complications.

The second death was a woman in her 70s with preexisting conditions who was hospitalized.

McCall care center reports COVID-19 infection by staffer

BY TOM GROTE
The Star-News

A staff member at McCall Rehabilitation and Care Center has tested positive for COVID-19, Facility Administrator Kurt Holm said Tuesday.

All of the 26 residents of the long-term care facility as well as about 40 staff members passed two weeks of testing without reporting an additional case, Holm said.

It was the first case of COVID-19 reported at the 44-bed facility located at 418 Floyde St. in McCall.

The female staffer reported on Oct. 30 that she had COVID-19 symptoms and likely caught the virus from a family member, Holm said.

All staffers and residents were tested twice per week for two weeks ending last Friday without new positive cases, he said.

"Our staff has been diligent, which we are very grateful for," Holm said.

Staff members only will continue to be tested twice per week due to the surge in COVID-19 infections reported in Valley County, he said.

McCall Rehab is an independently operated facility owned by The Ensign Group of San Juan Capistrano, California, which operates more than 200 health-care facilities across the United States.

McCall approves permanent public health powers

BY DREW DODSON
The Star-News

A law granting the City of McCall permanent authority to pass orders related to public health and safety during emergencies was adopted by the McCall City Council last week.

The law allows City Manager Anette Spickard to pass laws related to public health and safety during emergencies prior to city council approval, as would typically be required.

However, any laws passed by Spickard would need to be approved by the council within five days, which council members shortened from seven days in the original proposed law.

The council also added a 45-day term to emergency laws, which means laws would expire after 45 days unless council members vote to extend them another 45 days.

"We owe it to the community to have the shortest term we can," council member Melanie Holmes said. "I feel that we should be discussing and talking about any emergency order as often as possible."

Council member Colby Nielsen echoed Holmes, pointing to the stricter rules as a way to combat "government mistrust" with more oversight.

Emergency laws would have been valid until rescinded by council members under the originally proposed law, which did not specify a duration.

Emergencies could include public health crises like the COVID-19 pandemic or natural disasters like wildfires and earthquakes.

Any emergency laws adopted by the city would apply to all areas within city limits as well as everywhere within five miles of city limits, which includes parts of Lake Fork and Adams County.

Council members directed city staff to prepare the permanent emergency powers ordinance after a city mask order expired on Sept. 17 due to the expiration of a temporary emergency powers ordinance passed by the council in March.

Temporary emergency powers ordinances cannot be in effect for more than 182 days and cannot be renewed under Idaho law.

Currently, a countywide mask order from Central District Health remains in place in McCall.

Letters

(Continued from Page 4)

simple precautions be recognized as the conscientious objectors they may be, but they are forcing America to surrender to the virus. If we want to win this, we must recruit more to the fight.

Mike Weiss
McCall

Governor urged to make masks mandatory in Idaho

To the Editor:
To Gov. Little:

Gov. Liitle, as a retired RN and a senior citizen I implore you to make masks mandatory for Idaho.

It is glaringly obvious by this point in the pandemic that simply asking Idahoans to wear a mask is not working. It seems to me that by merely asking for people to wear a mask you are acting callously toward all the health care workers, first responders and essential workers.

Isn't their right to be as safe as possible while performing their critical roles in society more important than the inconvenience of some who wish not to be told what they have to do?

Alice Anderson
McCall

MCCALL MUNICIPAL AIRPORT

Airport Master Plan Virtual Public Meeting

Tuesday, November 17th, 6:00pm

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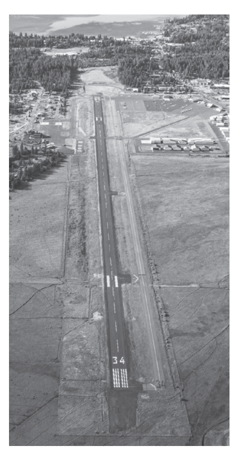
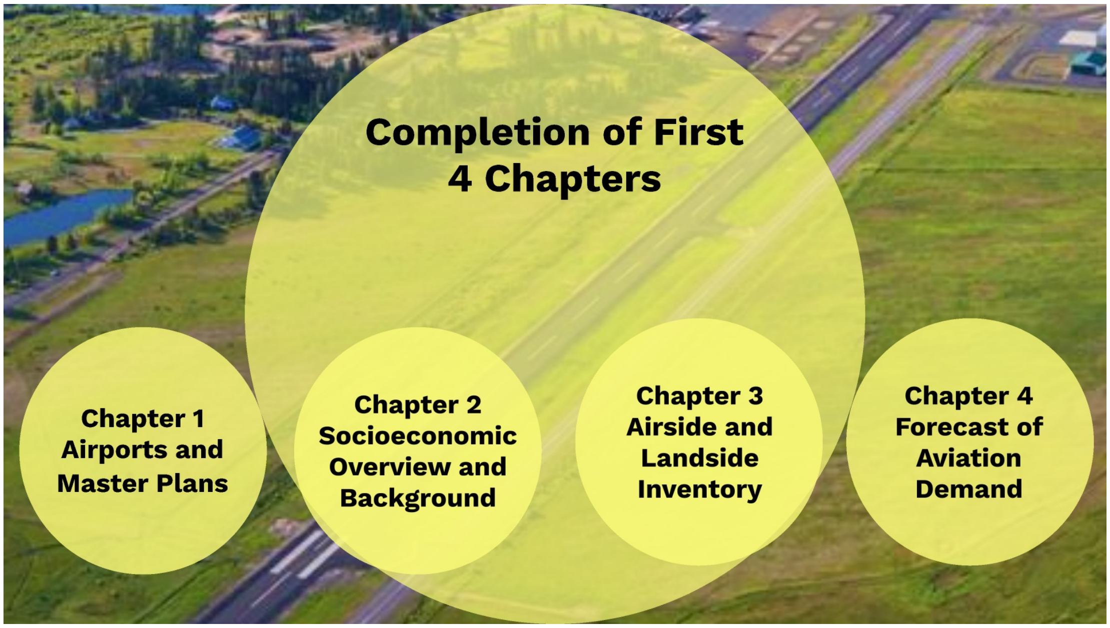
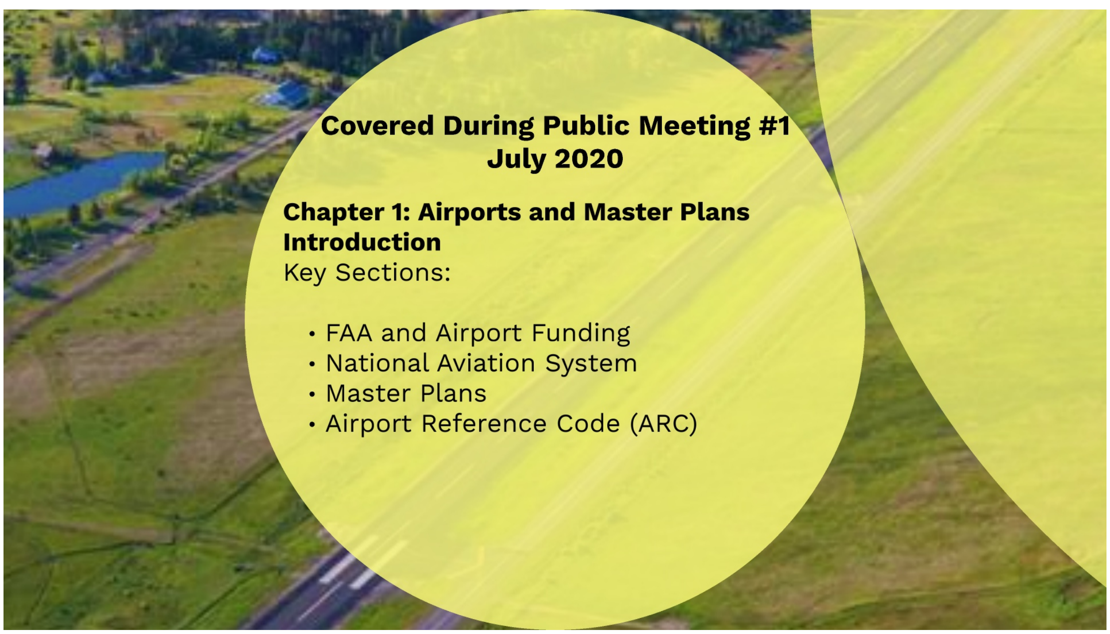
City of McCall

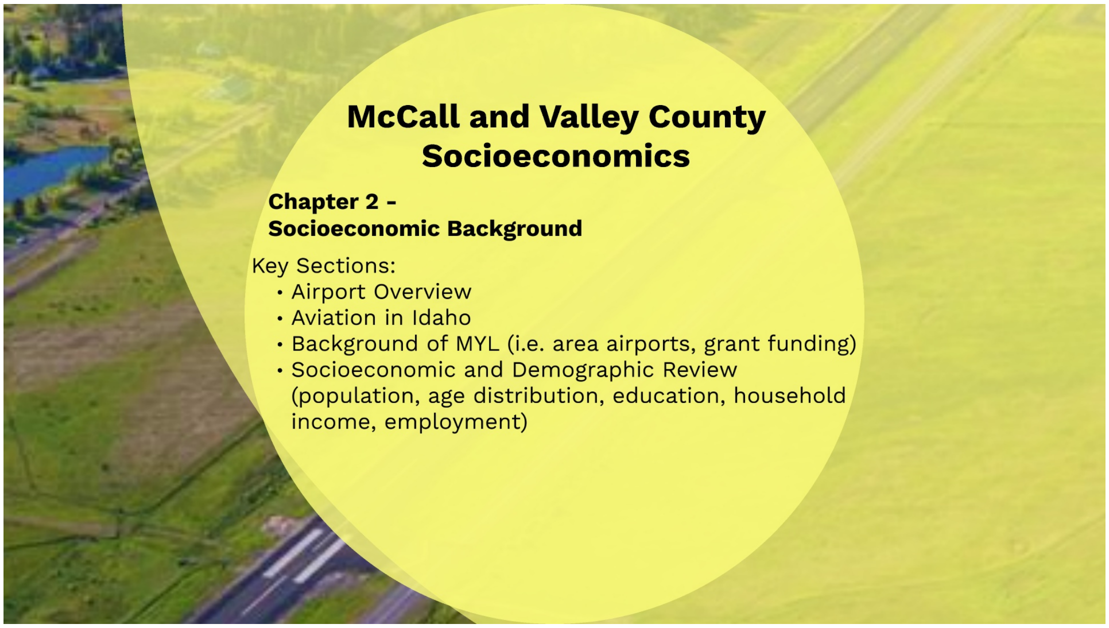



Rick Stein
Airport Manager
Wayne Reiter
Aviation Planner
Welcome
Jared Wingo
Planning Lead
Kevin Bissell
Project Manager

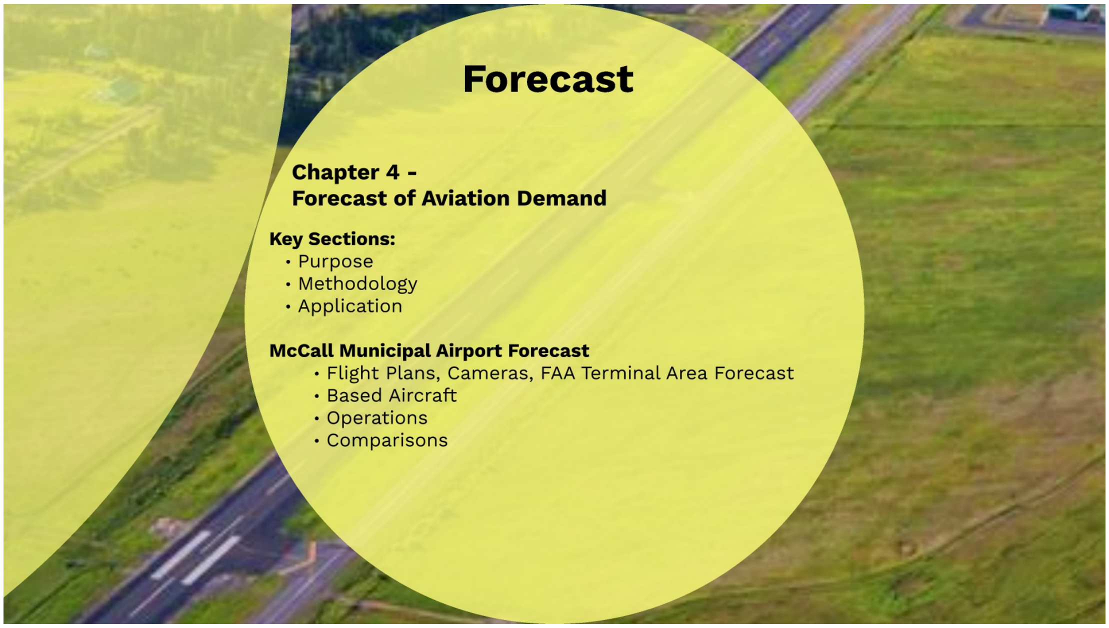

McCall Municipal Airport Master Plan
Public Meeting 2
City of McCall
Welcome
Project Status
Chapter 2- Socioeconomics
Chapter 3- Inventory
Chapter 4- Forecast
Next Steps
Conclusion
T-O ENGINEERS


Completion of First
4 Chapters
Chapter 1
Airports and
Master Plans
Chapter 2
Socioeconomic
Overview and
Background
Chapter 3
Airside and
Landside
Inventory
Chapter 4
Forecast of
Aviation
Demand

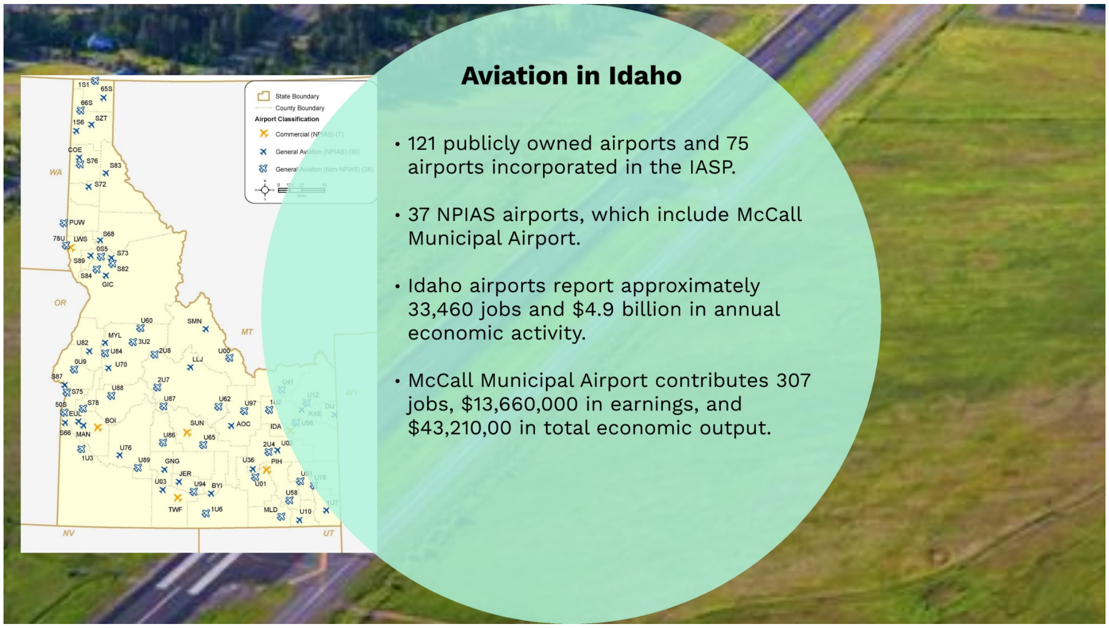

Covered During Public Meeting #1
July 2020
Chapter 1: Airports and Master Plans
Introduction
Key Sections:
• FAA and Airport Funding
• National Aviation System
• Master Plans
• Airport Reference Code (ARC)

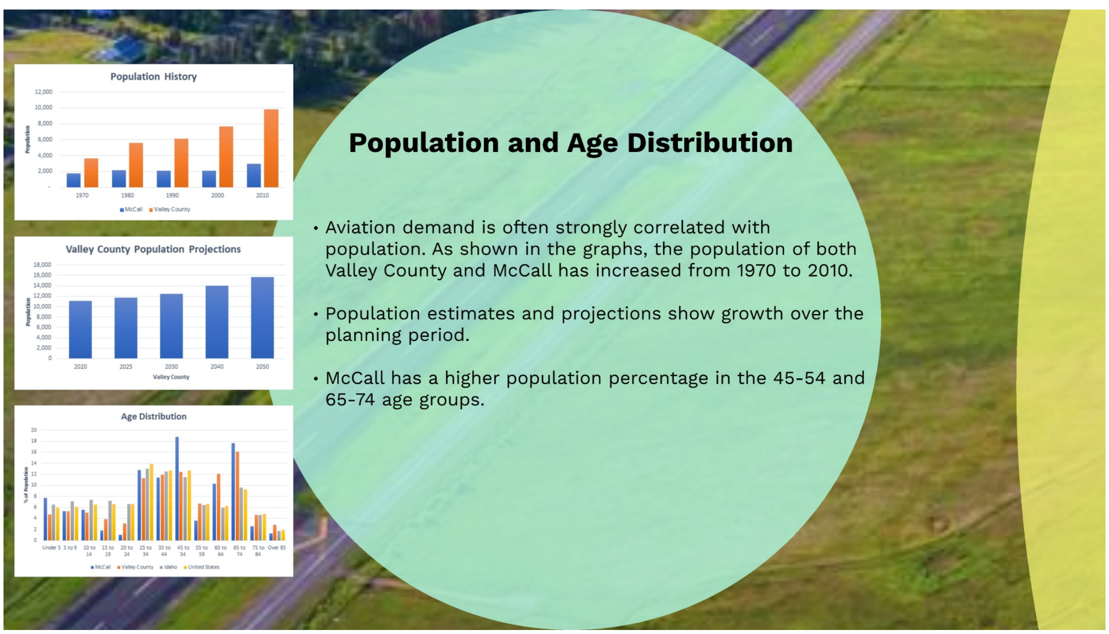

McCall and Valley County Socioeconomics
Chapter 2 - Socioeconomic Background
Key Sections:
• Airport Overview
• Aviation in Idaho
• Background of MYL (i.e. area airports, grant funding)
• Socioeconomic and Demographic Review (population, age distribution, education, household income, employment)

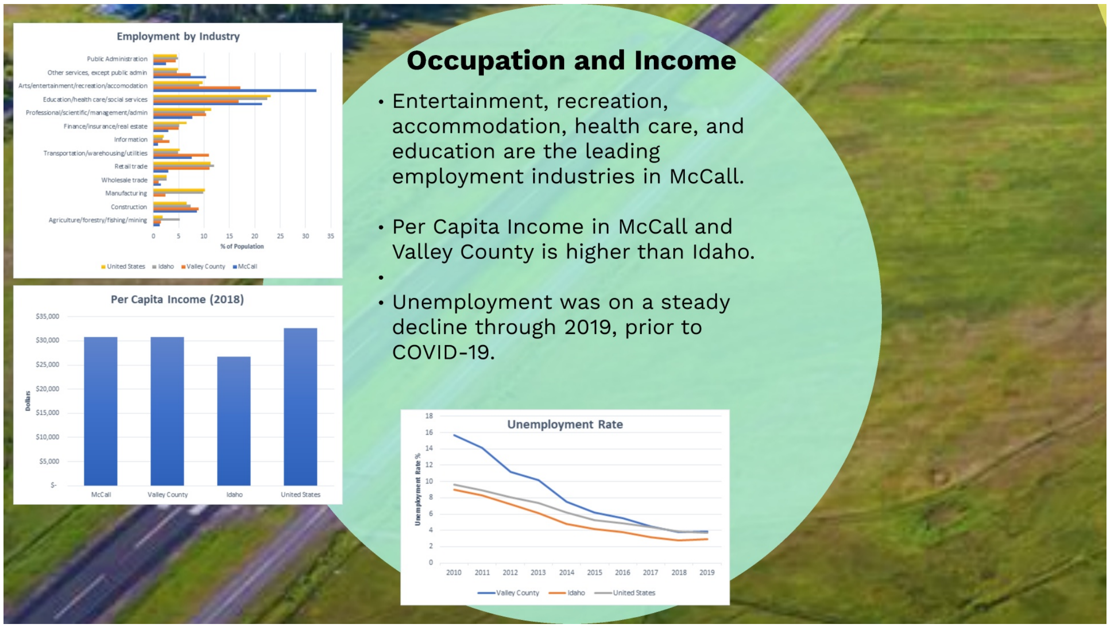

Inventory
Chapter 3 - Airside and Landside Inventory
Key Sections:
• Natural and Physical Environment (i.e. topography, soil, climate, wind, zoning)
• Based Aircraft
• Pavement Condition Index (PCI)
• Existing Airport Facilities (i.e. runways, taxiways, aprons, parking, access)
• Navigational Aids (NAVAIDS)
• Structures (i.e. hangars, terminal buildings)

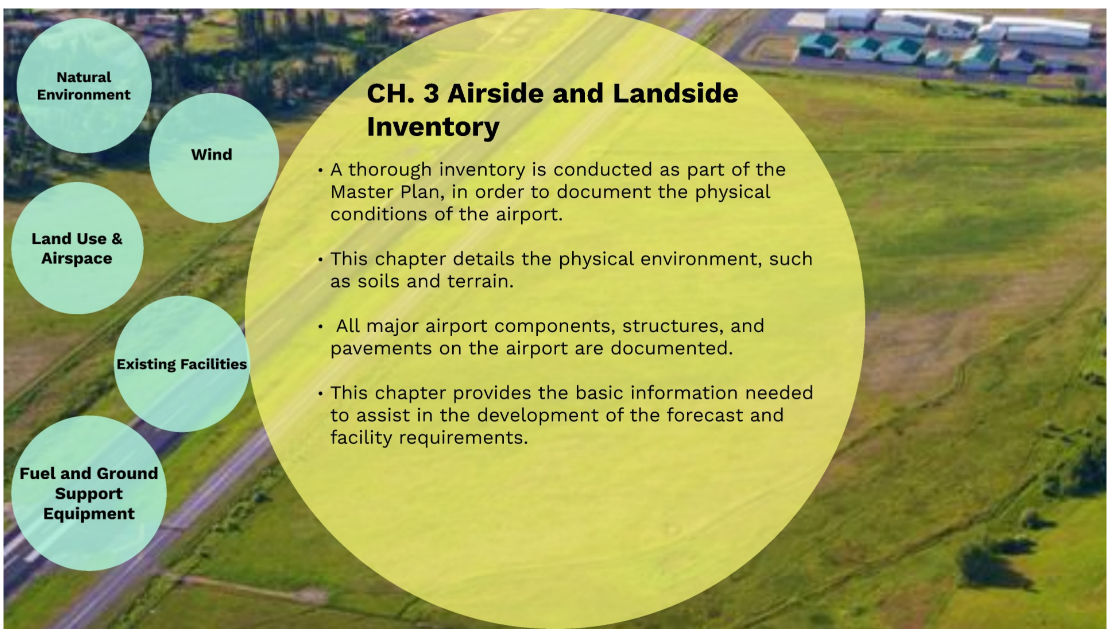

Forecast
Chapter 4 -
Forecast of Aviation Demand
Key Sections:
• Purpose
• Methodology
• Application
McCall Municipal Airport Forecast
• Flight Plans, Cameras, FAA Terminal Area Forecast
• Based Aircraft
• Operations
• Comparisons

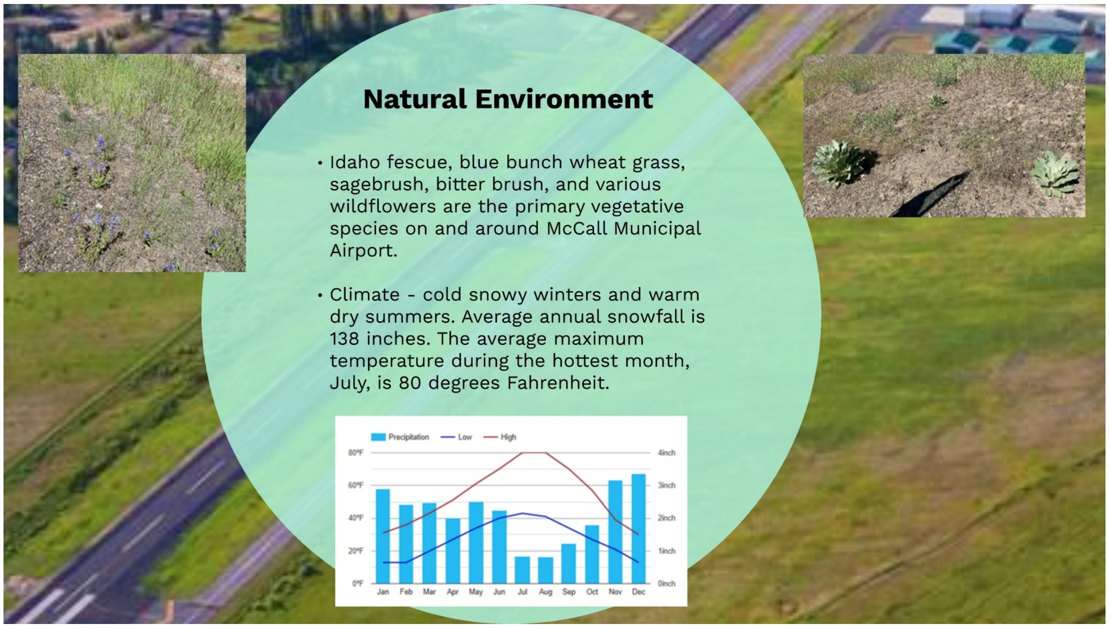

Aviation in Idaho
Population
Occupation and Income
CH. 2 Socioeconomic Review
The socioeconomic overview and background provides a general depiction of McCall and the surrounding area.
A socioeconomic analysis of the region is important to a master plan because aviation trends and economic trends are closely related.


Aviation in Idaho
• 121 publicly owned airports and 75 airports incorporated in the IASP.
• 37 NPIAS airports, which include McCall Municipal Airport.
• Idaho airports report approximately 33,460 jobs and $4.9 billion in annual economic activity.
• McCall Municipal Airport contributes 307 jobs, $13,660,000 in earnings, and $43,210,00 in total economic output.


Population History
Valley County Population Projections
Age Distribution
Population and Age Distribution
• Aviation demand is often strongly correlated with population. As shown in the graphs, the population of both Valley County and McCall has increased from 1970 to 2010.
• Population estimates and projections show growth over the planning period.
• McCall has a higher population percentage in the 45-54 and 65-74 age groups.

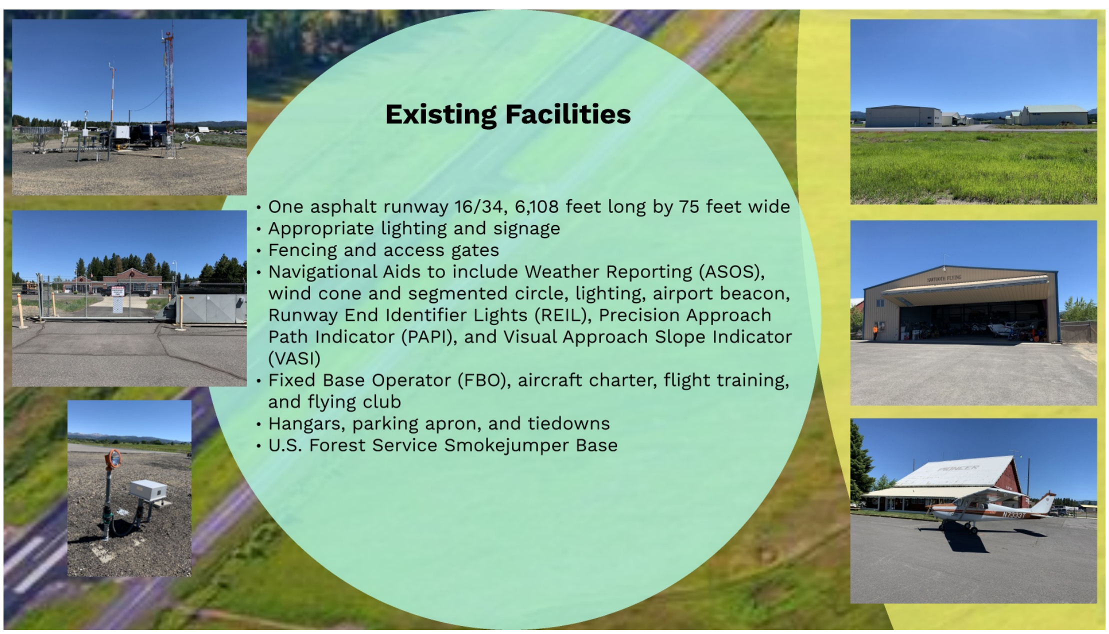

Employment by Industry
Public Administration
Other services, except public admin
Arts/entertainment/recreation/accomodation
Education/health care/social services
Professional/scientific/management/admin
Finance/insurance/real estate
Information
Transportation/warehousing/utilities
Retail trade
Wholesale trade
Manufacturing
Construction
Agriculture/forestry/fishing/mining
% of Population
United States Idaho Valley County McCall
Per Capita Income (2018)
Dollars
McCall Valley County Idaho United States
Occupation and Income
• Entertainment, recreation, accommodation, health care, and education are the leading employment industries in McCall.
• Per Capita Income in McCall and Valley County is higher than Idaho.
•
• Unemployment was on a steady decline through 2019, prior to COVID-19.
Unemployment Rate
Unemployment Rate %
2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
Valley County Idaho United States


Natural Environment
Wind
Land Use & Airspace
Existing Facilities
Fuel and Ground Support Equipment
CH. 3 Airside and Landside Inventory
• A thorough inventory is conducted as part of the Master Plan, in order to document the physical conditions of the airport.
• This chapter details the physical environment, such as soils and terrain.
• All major airport components, structures, and pavements on the airport are documented.
• This chapter provides the basic information needed to assist in the development of the forecast and facility requirements.

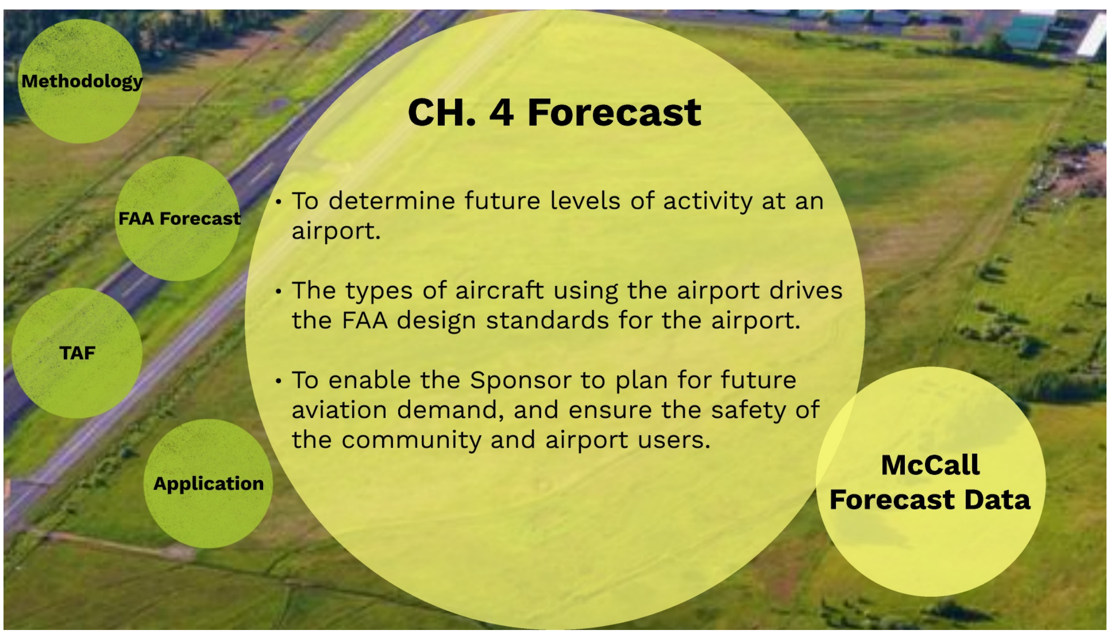

Natural Environment
• Idaho fescue, blue bunch wheat grass, sagebrush, bitter brush, and various wildflowers are the primary vegetative species on and around McCall Municipal Airport.
• Climate - cold snowy winters and warm dry summers. Average annual snowfall is 138 inches. The average maximum temperature during the hottest month, July, is 80 degrees Fahrenheit.
Precipitation
Low
High
80°F
60°F
40°F
20°F
0°F
4inch
3inch
2inch
1inch
0inch
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec


IFR Wind Rose
VFR Wind Rose
All Weather Wind Rose
Wind
• Wind predominantly blows from the south.
• Runway 16/34 maintains greater than 95% wind coverage for all weather scenarios.


Land Use and Airspace
• Land use immediately surrounding the airport consist of rural residential, civic, community commercial, and industrial.
• Airport Operation Protection Zones above the airport and community consist of the primary surface, transitional zone, runway instrument approach zone, horizontal zone, and conical zone.
• Airspace at the surface is Class G, and becomes Class E at 700 feet above ground Level.
* The main differences between the uncontrolled (Class G) and the controlled (Class E) airspace are the cloud clearance and visibility requirements for pilots.
McCall
MC CALL (MYL)
ASOS 119.925
5024 *L 61 122.8
5000


Existing Facilities
• One asphalt runway 16/34, 6,108 feet long by 75 feet wide
• Appropriate lighting and signage
• Fencing and access gates
• Navigational Aids to include Weather Reporting (ASOS), wind cone and segmented circle, lighting, airport beacon, Runway End Identifier Lights (REIL), Precision Approach Path Indicator (PAPI), and Visual Approach Slope Indicator (VASI)
• Fixed Base Operator (FBO), aircraft charter, flight training, and flying club
• Hangars, parking apron, and tiedowns
• U.S. Forest Service Smokejumper Base


SELF SERVICE
Fuel and Ground Service Equipment (GSE)
• 24-hour self serve fuel station for 100LL.
• Full-service Jet A and 100LL.
• Snow Removal Equipment (SRE) and building
• Deicing vehicle


Methodology
FAA Forecast
TAF
Application
CH. 4 Forecast
• To determine future levels of activity at an airport.
• The types of aircraft using the airport drives the FAA design standards for the airport.
• To enable the Sponsor to plan for future aviation demand, and ensure the safety of the community and airport users.
McCall Forecast Data

Forecast Methodologies

Approved FAA forecast methodologies include:

- Regression Analysis
  - Ties statistical demand to economic measures
- Trend Analysis
  - Uses historical patterns, and applies them to future trends
- Market Share Analysis
  - Top-down approach using national, regional, and local economic trends, and applied to local trends
- Smoothing
  - Statistical technique applied to historical data trends

FAA Forecast

- Baseline for Terminal Area Forecast (TAF)
- Uses national economic growth trends
- Includes additional statistics from General Aviation Manufactures Association (GAMA) and Transportation Research Board (TRB).

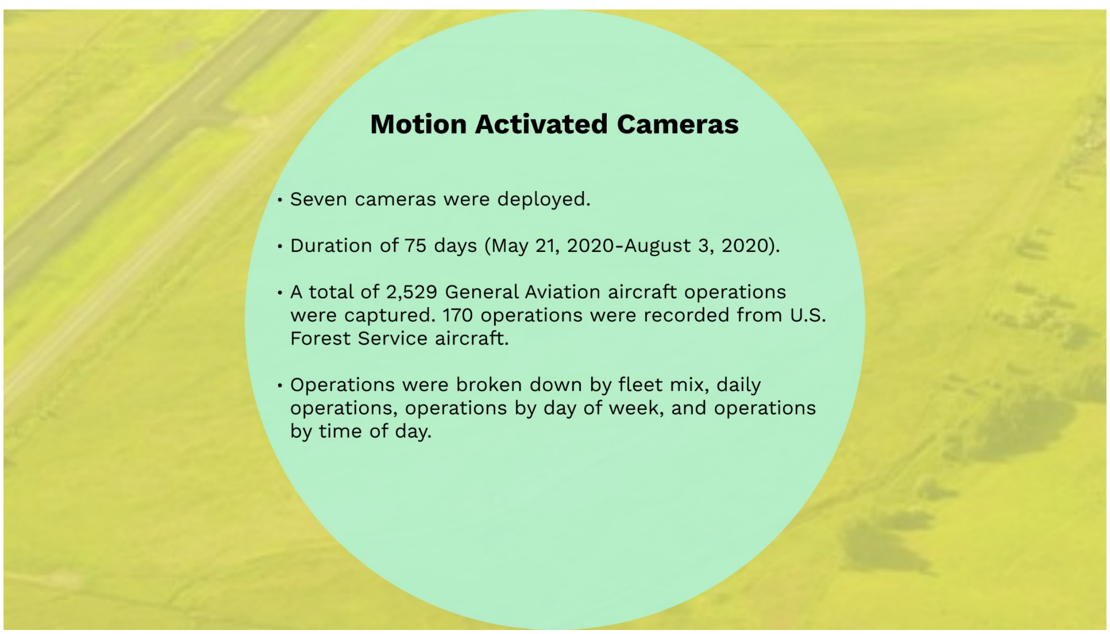
FAA Terminal Area Forecast

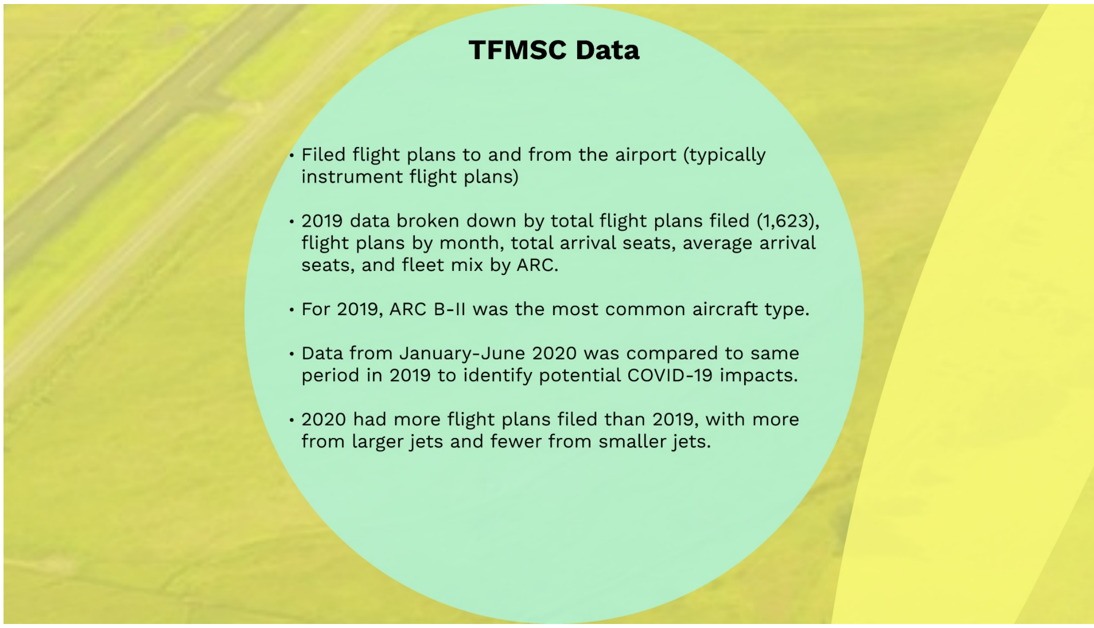
- Summary of historical and forecast statistics as published by the FAA.
- Uses demand-driven forecast based on local and national economies and aviation trends.
- Allows users to create forecast models applicable to individual airports.

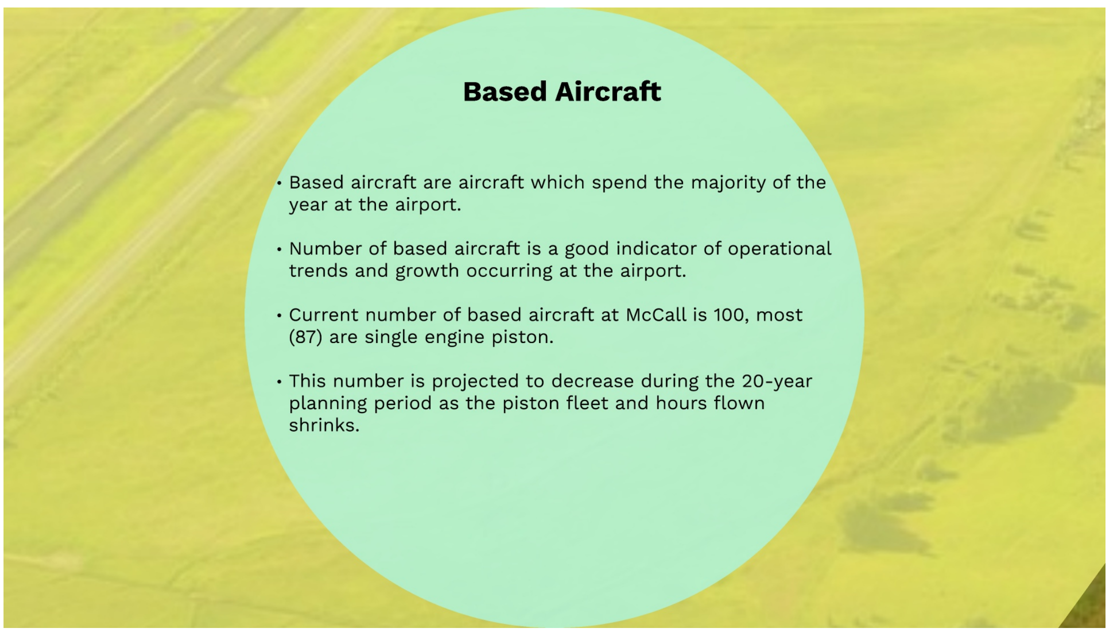
Application and Evaluation

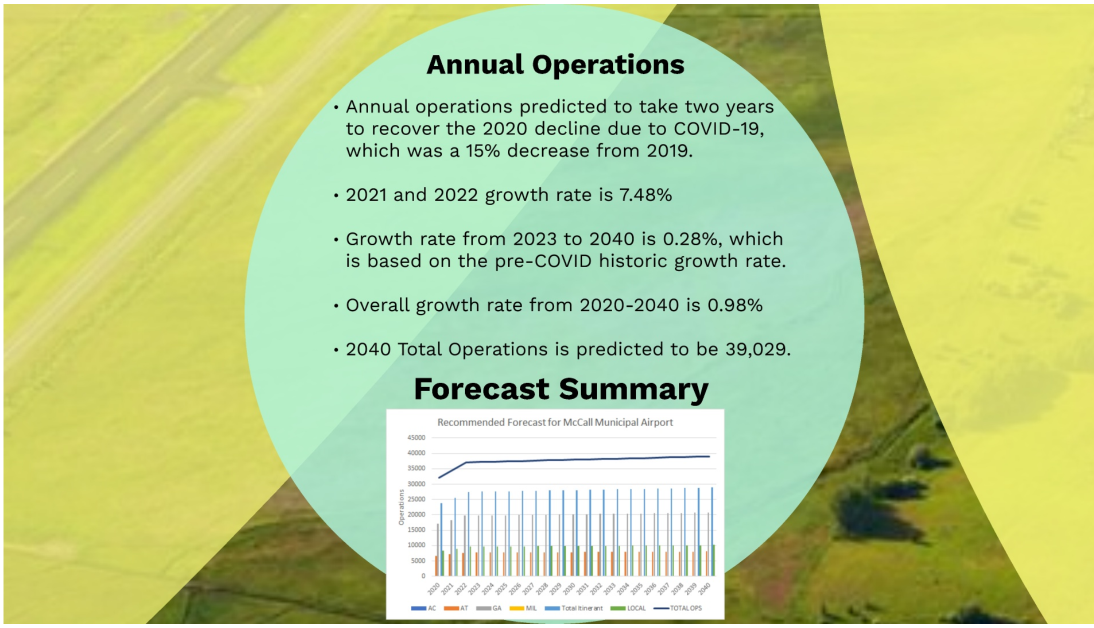
- A combination of methods may be used to most appropriately fit the airport and community.
- Different methodologies will produce different results; therefore, justifications and explanations must be provided for the preferred forecast.
- All forecasts must be approved by the FAA and accepted by the Sponsor.


Motion Activated Cameras
TFMSC
Based Aircraft
Annual Operations
Design Aircraft
McCall Municipal Airport Forecast
• Motion Activated Cameras
• Traffic Flow Management System Count (TFMSC)
• Based Aircraft
• Operations
• Design Aircraft


Motion Activated Cameras
• Seven cameras were deployed.
• Duration of 75 days (May 21, 2020-August 3, 2020).
• A total of 2,529 General Aviation aircraft operations were captured. 170 operations were recorded from U.S. Forest Service aircraft.
• Operations were broken down by fleet mix, daily operations, operations by day of week, and operations by time of day.


TFMSC Data
• Filed flight plans to and from the airport (typically instrument flight plans)
• 2019 data broken down by total flight plans filed (1,623), flight plans by month, total arrival seats, average arrival seats, and fleet mix by ARC.
• For 2019, ARC B-II was the most common aircraft type.
• Data from January-June 2020 was compared to same period in 2019 to identify potential COVID-19 impacts.
• 2020 had more flight plans filed than 2019, with more from larger jets and fewer from smaller jets.

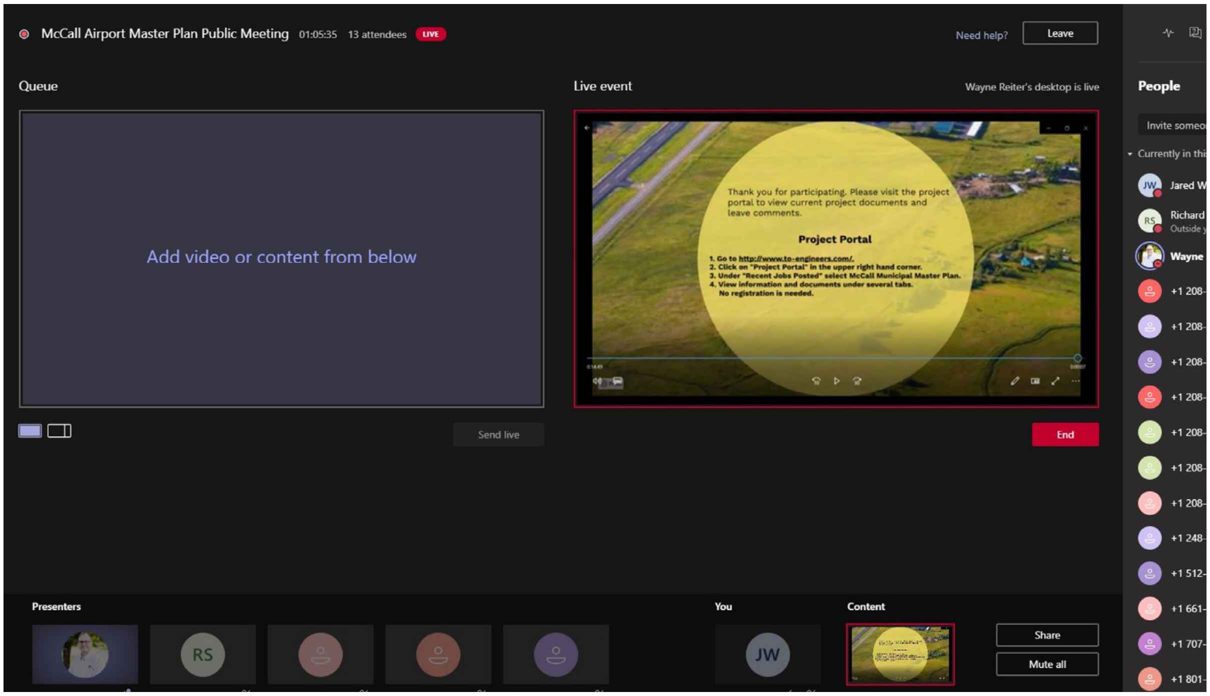

Based Aircraft
• Based aircraft are aircraft which spend the majority of the year at the airport.
• Number of based aircraft is a good indicator of operational trends and growth occurring at the airport.
• Current number of based aircraft at McCall is 100, most (87) are single engine piston.
• This number is projected to decrease during the 20-year planning period as the piston fleet and hours flown shrinks.


Annual Operations
• Annual operations predicted to take two years to recover the 2020 decline due to COVID-19, which was a 15% decrease from 2019.
• 2021 and 2022 growth rate is 7.48%
• Growth rate from 2023 to 2040 is 0.28%, which is based on the pre-COVID historic growth rate.
• Overall growth rate from 2020-2040 is 0.98%
• 2040 Total Operations is predicted to be 39,029.
Forecast Summary
Recommended Forecast for McCall Municipal Airport
Operations
AC
AT
GA
MIL
Total Itinerant
LOCAL
TOTAL OPS


Design Aircraft
• The design aircraft is the most demanding aircraft with at least 500 annual operations.
• This aircraft establishes the design standard for the airport planning.
• The design aircraft for McCall Municipal Airport is a Cessna Citation XLS+, an ARC B-II Large business Jet


Facility Requirements & Alternatives Analysis
• Facility Requirements - Aviation facilities necessary to safely accommodate aviation demand, as identified in the Forecast.
• Development of Alternatives - Identify and evaluate different airfield configurations to meet the facility requirements and desires of the City of McCall, airport users, and the community at-large.


Thank you for participating. Please visit the project portal to view current project documents and leave comments.
Project Portal
1. Go to http://www.to-engineers.com/.
2. Click on "Project Portal" in the upper right hand corner.
3. Under "Recent Jobs Posted" select McCall Municipal Master Plan.
4. View information and documents under several tabs.
No registration is needed.



MEETING 2 COMMENTS

- I am interested in some of the backgorund assumptions behind the ADG counts and the reduction in aircraft overall and piston aircraft based here. Can I submit these via the website?
- Great Presentation. Thank you for putting this together and for having a Master Plan for our Airport. Are you planning to allow for new Hangar pads in the Master Plan? Is the City considering building T-Hangars that would possibly be for rent? If so, do they have any idea of what T-Hangars might rent for? Could you please send a link to .pdf drawings showing the current Master Plan. Also, Will there be a grass strip landing area planned in the Master Plan? Thank You.
- There is a common perception there is an increaseing demand for hangars at KMYL. However, Figure 4.30 shows a decrease aircraft based at KMYL of almost 13% from 2020 to 2040. This includes a decrease in single engine aircraft based of almost 20% and total aircraft of approximately 13%. These trends would indicate there is need for additional hangars at KMYL. Is this a valid interpretation of the data presented in Figure 4.30. If not, please explain.
- If there is pent up demand for hangars that has been omitted from this study, don't you think you are underestimating the number of future based aircraft?
- My Question regarding figure 4.30 has typo. The question should state: These trends would indicate there is NO need for additional hangars at KMYL. Is this a valid interpretation of the figure 4.30?

City of McCall

McCall Municipal Airport Master Plan Meeting Supplement

June 2021

Meeting Agenda:

1. Welcome and Introductions
2. Project Update
3. Facility Requirements Summary
4. Alternative Drawings
5. Next Steps
6. Public Comments

Online Comment Forms:

https://www.mccall.id.us/airportmasterplan

https://www.to-engineersprojectinfo.com/jobs/1550/details/mccall-municipal-airport-master-plan

Contact Information:

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McCall Municipal Airport Master Plan

T-O ENGINEERS

Airport Master Plans

An Airport Master Plan is a comprehensive study of an airport that describes short-, medium-, and long-term development plans needed to support future aviation demand.

The elements of an Airport Master Plan are outlined by the Federal Aviation Administration (FAA); however, the complexity and level of detail for each element depends upon the size, function, issues, and challenges of the airport.

The McCall Municipal Airport Master Plan will present a strategy for development while considering the potential environmental and socioeconomic impacts throughout the planning period.

The McCall Municipal Airport Master Plan will meet the following objectives:

- Understand airport issues, opportunities, and constraints.
- Consider the impacts of aviation trends.
- Identify the capacity of existing airport infrastructure.
- Determine need for airport improvements.
- Estimate project costs and funding sources.
- Develop a schedule for project implementation.
- Obtain stakeholder and public input.

Airport Master Plan Process

The project begins with a pre-planning phase to determine the scope of work (completed), then will systematically follow the steps shown in the figure.

The McCall Municipal Airport Master Plan will incorporate a significant amount of public involvement to ensure the best final product possible. Effective public involvement includes numerous parties, including but not limited to: aircraft owners, airport staff, public officials, funding agencies, and the general public.

The earlier public input is communicated, the easier it is to incorporate into the planning process.

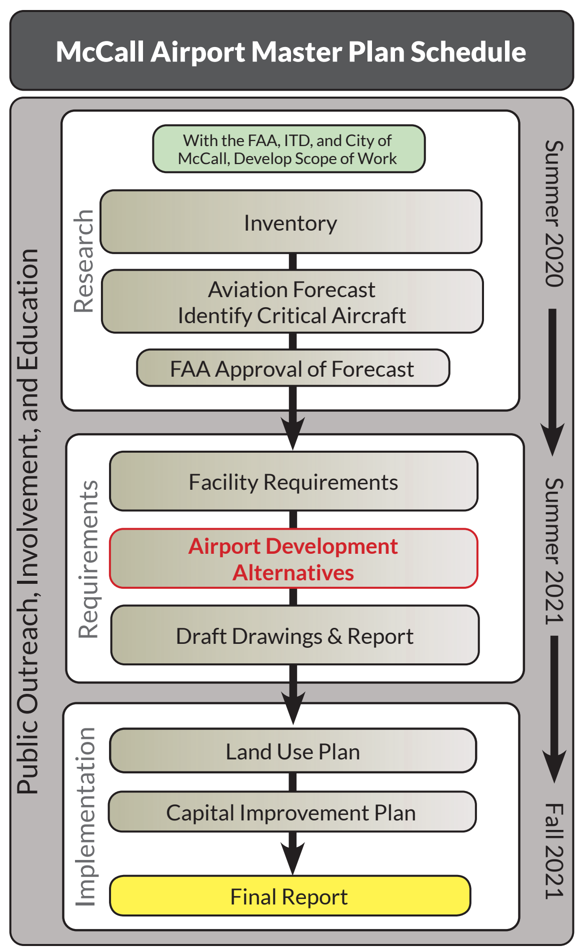
Throughout the Airport Master Plan project information will be available online to include a project schedule, announcements for upcoming meetings, draft documents, references, as well as a portal to ask questions and provide comments.

The website can be accessed through the T-O Engineers Project Portal, McCall Municipal Airport Master Plan:

https://www.to-engineersprojectinfo.com/jobs/1550/details/mccall-municipal-airport-master-plan

Or through the McCall Municipal Airport website:

https://www.mccall.id.us/airportmasterplan



McCall Municipal Airport Master Plan

T-O ENGINEERS

Frequently Asked Questions

Q: What is an Airport Master Plan?

A: An Airport Master Plan is a comprehensive study of an airport that describes short-, medium-, and long-term development needs to meet future aviation demand.

Q: Why is an Airport Master Plan needed?

A: An Airport Master Plan provides the developmental framework for individual airports to ensure appropriate planning for future needs. An Airport Master Plan is typically updated every 5-10 years due to FAA changes in airport design, swings in the economy, and transformational changes in aviation and how people travel.

The last Airport Master Plan completed for McCall Municipal Airport was in 2007.

Q: What are the major elements of an Airport Master Plan?

A: Airport Master Plans are developed based on guidance from the FAA Advisory Circular (AC) 150/5070-6B, Airport Master Plans.

- *Inventory of Existing Conditions*
- *Aviation Forecast*
- *Facility Requirements*
- *Environmental Considerations*
- *Alternatives Development*
- *Airport Layout Plan (ALP)*
- *Facilities Implementation*

Q: What are the Airport Master Plan Objectives:

A: The objectives of an Airport Master Plan are:

- *To understand airport issues, opportunities and constraints.*
- *Consider the impacts of aviation trends.*
- *Identify the capacity of existing airport infrastructure.*
- *Determine the need for airport improvements.*
- *Estimate project costs and funding sources.*
- *Develop a schedule for project implementation.*
- *Obtain stakeholder and public input.*

McCall Municipal Airport Master Plan

T-O ENGINEERS

Q: Who Approves a Master Plan?

A: The Airport Sponsor, in this case the City of McCall, approves the Airport Master Plan.

FAA approval is required for the Airport Master Plan Forecast, as well as the Airport Layout Plan (ALP). The FAA also provides a review of the Master Plan documents, and accepts the final document.

Q: What results from an Airport Master Plan?

A: The Sponsor Approved Airport Master Plan becomes the guiding document for follow-on projects and airport development.

McCall Municipal Airport Master Plan

T-O ENGINEERS

Facility Requirements Summary

Deficiencies

- 402-foot runway extension for a future runway length of 6,510 feet to meet minimum runway length recommendation.
- Update runway designation to 17/35.
- Increase the size of the Runway 16 blast pad to meet standard dimensions.
- Repaint faded runway markings.
- Replace and upgrade runway lighting to LED.
- Designate Taxiway B properly on the Airport Layout Plan.
- Complete wildlife fencing and/or fill in gaps.
- Upgrade Taxiways B-1 and B-2 to meet current taxiway fillet standards.
- Repurpose general aviation hangar taxiways as taxilanes and designate them appropriately.
- Remedy the nonstandard TOFA between Hangars 211 and 212.
- Eliminate wide expanse of pavement at Taxiway B-1 and Runway 16.
- Remedy direct runway access at Taxiways A-2 and B-2.
- Replace existing PAPI and VASI with 4-light PAPI system.
- Remove tree and terrain obstructions.

Considerations

- Relocate the ASOS.
- Update the Airport Influence Area Overlay Zones to reflect the updated ALP.
- Explore additonal hangar options.
- Upgrade and reconfigure vehicle parking options.
- Explore general aviation terminal options.
- Replace the diagonal taxiway to improve circulation and efficiency.
- Identify additional helicopter parking areas.
- Explore snow storage areas.

McCall Municipal Airport Master Plan

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Alternative Drawings

General Aviation Terminal and Krahn Lane Extension

- 9,600 SF terminal building with space for City offices, leased office space, and a pilot lounge.
- 13 aircraft parking spaces for jets and turboprops.
- 20 vehicle parking spaces.
- Fencing and gates.
- Land acquisition required, approximately 17 acres.

Infield Development Phase 1 and East-West Taxiway

- New Taxiway D to replace the diagonal taxiway (ADG-II).
- Two new north-south taxilanes, Taxilane G (ADG-II) and Taxilane F (ADG-I).
- Paved apron space for 47 small and 13 medium tie downs, and seven small, two medium, and two large hangars.
- Reconfiguration of the transient apron with 38 small, 10 medium, and four large tie downs.
- New apron for two fire aircraft.
- New access road for the segmented circle.

Infield Development Ultimate

- Relocated ASOS.
- One additional large hangar and two additional medium hangars.

North Airfield Alternatives

- Standard fillets for Taxiways A-2, B-1, and B-2.
- Realignment of Taxiway B-1.
- Realignment of Taxiway B-1 and removal of wide expanse of pavement.
- Install elevated runway guard lights at Taxiway A-2 and B-2.
- Expand blast pad to meet current design standards.
- Install new 4-light PAPI.
- Replace and upgrade runway lights to LED.

South Airfield Alternatives

- 402 foot runway extension to bring runway length to 6,510 feet.
- New connector Taxiway A-6.
- Relocated ASOS.
- Wildlife fence extension.
- Land acquisition.
- Install new 4-light PAPI.
- General aviation terminal complex.

Taxiway and Taxilane Nomenclature

- Proper naming of taxiways and taxilanes.

McCall Municipal Airport Master Plan

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Next Steps

- Select a preferred alternative. (June 2021)
- Initiate agency coordination and complete the Environmental Overview. (July 2021)
- Complete the Alternatives chapter. (July 2021)
- Create the ALP drawing set. (August 2021)
- Develop an implementation plan. (September 2021)
- Complete the Draft Airport Master Plan document and hold a public meeting. (October 2021)
- Complete the Final Airport Master Plan document and take it to City Council. (November 2021)

PAGE 5 - THE STAR-NEWS - THURSDAY, MAY 20, 2021

EVENTS / THE ARTS

Children's Theater to continue performances of 'Frederick'

The McCall Children's Theater will continue its presentation of "Frederick" this Friday and Saturday at The Barn at Historic Roseberry and online.

"Frederick" is the story of how five mouse friends prepare for the darkest days of winter in differing ways.

Performances will be Friday at 7 p.m. and Saturday at 2 p.m. Cost is $15 per ticket and $5 for children age 12 and younger. Virtual tickets will be $20 apiece.

There will be a limit of 50 seats for each event. Social distancing, requiring masks and other COVID-related safety protocols will be followed.

A special fundraising dinner will begin at 6 p.m. Saturday. Cost will be $50 per ticket. Proceeds will benefit the McCall Arts and Humanities Children's Theater program.

For more information or to purchase tickets, visit www.mccallarts.org and click on "Children's Theater."

"Frederick" is directed by Dawn Kolden with music direction by Linda Moyer.

Cast members are Victoria Sell, Cason Sisneros, Sophie Snyder, Kyrie Bean, Alice Rydalch, Lilly Brasher, Elaina Gamble, Sierra Berry, Camas Backus, Quincy Sorensen, Dayne Arrasmith, Emma Fausett, Tabatha Vrany, Desaray Ames, Maddy Blankman, Caroline Snyder, Ashlyn Campbell, Ella Lewis, Emma Blankman and Dempsy Bitton.

Congregational church plans annual plant sale for May 29

The Community Congregational Church in McCall will host its annual Memorial Day weekend plant sale on Saturday, May 29, from 8 a.m. to 3 p.m. in the church parking lot.

Items for sale from Edwards Greenhouse in Boise will include flowering baskets, pre-planted pots, annuals, perennials, tomato plants, herbs, vegetables and soil amendments.

Proceeds will benefit the church's community outreach programs.

The Community Congregational Church parking lot is located at First and Park streets.

Garden club to host annual plant sale May 29 in Cascade

The Long Valley Garden Club will host its annual Plant Sale fundraiser on Saturday, May 29, from 9 a.m. to 4 p.m. at the Valley County Fairgrounds.

Items for sale will include hanging baskets, perennials, annuals, tomatoes, peppers and other vegetables.

Proceeds will benefit the club's beautification projects in McCall, Donnelly, Cascade and New Meadows.

The Valley County Fairgrounds are located at 520 S. Front St. in Cascade.

Friends of M. Valley library to host used book sale May 29

The Friends of the Meadows Valley Public Library will host their used book sale on Saturday, May 29, from 10 a.m. to 4 p.m. on the library lawn.

Items for sale will include used books, audio books and DVDs.

The library is also seeking volunteers to help with setup and cleanup.

Setup will begin at 9 a.m. on Saturday and will include moving tables and boxed items to the front lawn and setting materials out on the table.

Cleanup will begin at 3:50 p.m. and will include packing up unsold items and putting them back in the storage area behind the library.

The Meadows Valley Library is located at 400 Virginia St. in New Meadows.

MCCALL MUNICIPAL AIRPORT

Airport Master Plan
Public Open House

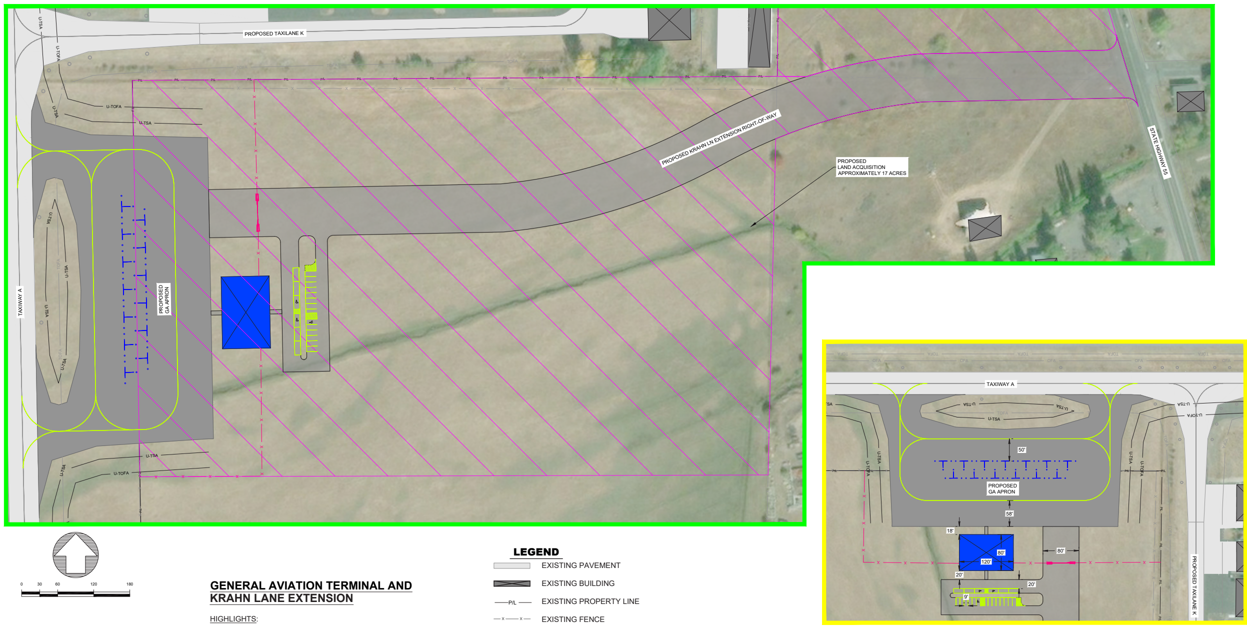
Wednesday, June 2nd, 9:00 am - 5:00 pm

Legion Hall, 216 East Park Street, McCall, ID 83638

The master plan will define the type and extent of development required to accommodate short-term and long-term aviation demand for the McCall Municipal Airport. This meeting will present a summary of the facility requirements and the draft alternatives for future airport development.

To receive project notifications or additional information, please contact Richard Stein, Airport Manager, City of McCall at 208-634-1488 or rstein@mccall.id.us. You may also visit www.MYLmasterplan.com, the T-O Engineers Project Portal at https://www.to-engineersprojectinfo.com/, or scan the QR code below.

City of McCall



GENERAL AVIATION TERMINAL AND KRAHN LANE EXTENSION

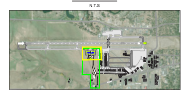
HIGHLIGHTS:

- 9,600 S.F. TERMINAL BUILDING WITH ROOM FOR CITY OFFICES, LEASED OFFICE SPACE, AND PILOT LOUNGE.
- 13 SPACES FOR TURBOPROPS AND CORPORATE JETS.
- 20 VEHICLE SPACES.
- FENCING AND GATES.
- REQUIRES ACQUISITION OF APPROXIMATELY 17 ACRES.

LEGEND

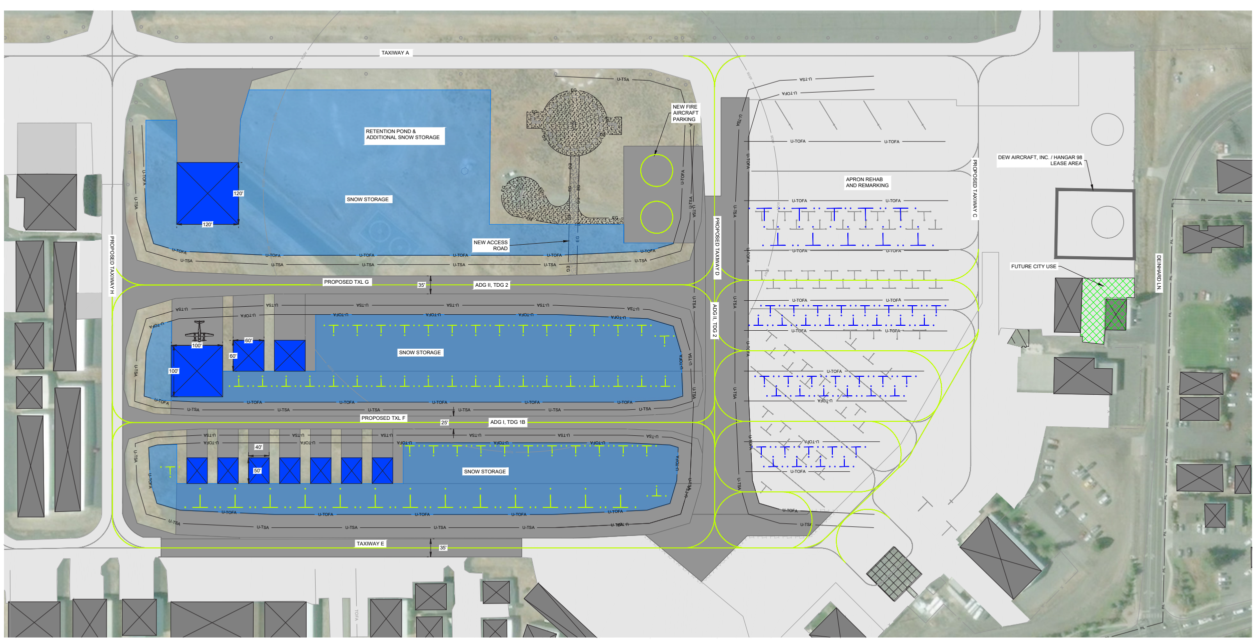
- EXISTING PAVEMENT
- EXISTING BUILDING
- EXISTING PROPERTY LINE
- EXISTING FENCE
- EXISTING PAVEMENT MARKINGS
- EXISTING TAXIWAY OBJECT FREE AREA
- PROPOSED BUILDING
- PROPOSED PAVEMENT
- PROPOSED LAND ACQUISITION
- PROPOSED PAVEMENT MARKINGS
- PROPOSED AIRCRAFT TIE-DOWN
- PROPOSED FENCE
- PROPOSED TAXIWAY OBJECT FREE AREA
- PROPOSED TAXIWAY SAFETY AREA

KEY MAP



City of McCall

T-O ENGINEERS



INFIELD AREA DEVELOPMENT PHASE 1

EXISTING TRANSIENT APRON:

- TOTAL TIE-DOWNS = 64

ULTIMATE BUILDOUT:

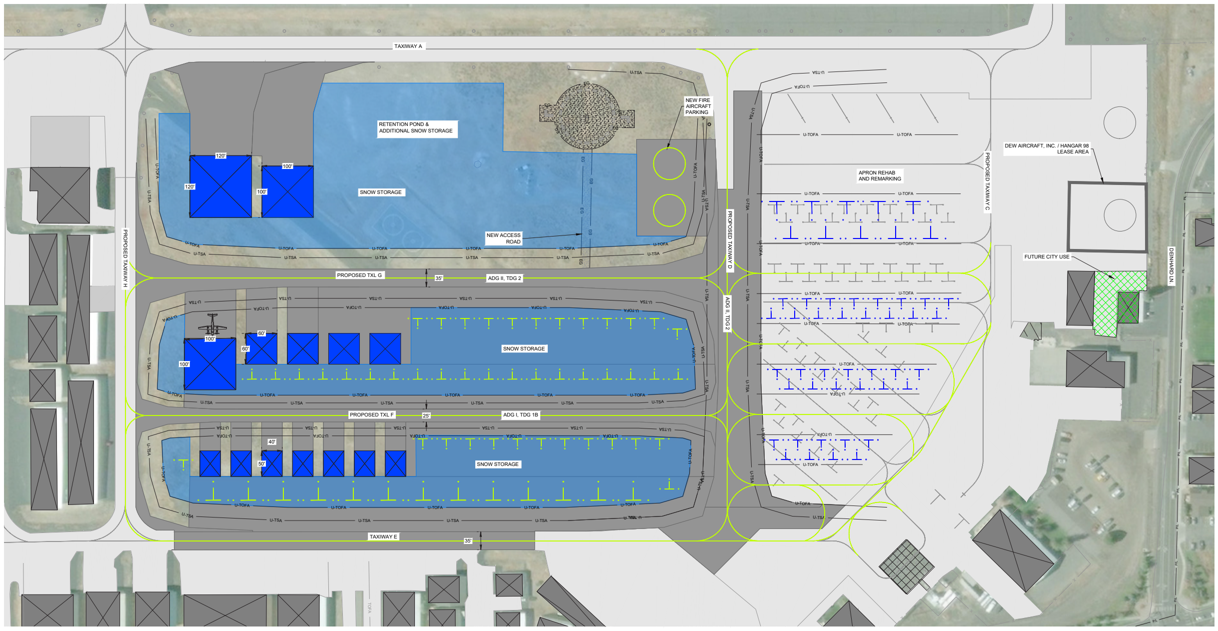
- TOTAL TIE-DOWNS = 112

LEGEND

- EXISTING PAVEMENT
- EXISTING BUILDING
- EXISTING PAVEMENT MARKINGS
- EXISTING TAXIWAY OBJECT FREE AREA (TOFA)
- EXISTING TAXIWAY SAFETY AREA (TSA)
- AUTOMATED SURFACE OBSERVING SYSTEM (ASOS)
- EXISTING AIRCRAFT TIE-DOWN
- PROPOSED BUILDING
- PROPOSED PAVEMENT
- PROPOSED PAVEMENT MARKINGS
- PROPOSED AIRCRAFT TIE-DOWN (GA APRON)
- PROPOSED AIRCRAFT TIE-DOWN (INFIELD AREA)
- PROPOSED TAXIWAY OBJECT FREE AREA (U-TOFA)
- PROPOSED TAXIWAY SAFETY AREA (U-TSA)

City of McCall

T-O ENGINEERS



INFIELD AREA DEVELOPMENT
ULTIMATE PHASE

2 ADDITIONAL 60' X 60' HANGARS
1 ADDITIONAL 100' X 100' HANGAR
ASOS HAS BEEN RELOCATED SOUTH

EXISTING TRANSIENT APRON:

- TOTAL TIE-DOWNS = 64

ULTIMATE BUILDOUT:

- TOTAL TIE-DOWNS = 109

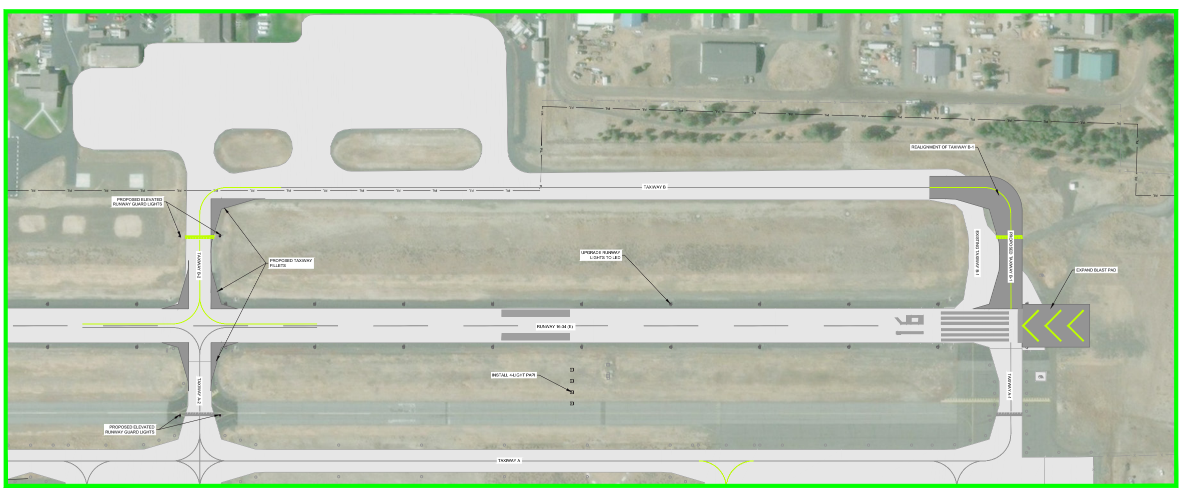
LEGEND

EXISTING PAVEMENT
EXISTING BUILDING
EXISTING PAVEMENT MARKINGS
TOFA — EXISTING TAXIWAY OBJECT FREE AREA (TOFA)
TSA — EXISTING TAXIWAY SAFETY AREA (TSA)
EXISTING AIRCRAFT TIE-DOWN
PROPOSED BUILDING
PROPOSED PAVEMENT
PROPOSED PAVEMENT MARKINGS
PROPOSED AIRCRAFT TIE-DOWN (GA APRON)
PROPOSED AIRCRAFT TIE-DOWN (INFIELD AREA)
U-TOFA — PROPOSED TAXIWAY OBJECT FREE AREA (U-TOFA)
U-TSA — PROPOSED TAXIWAY SAFETY AREA (U-TSA)

0 35 70 140 210

City of McCall

T-O ENGINEERS



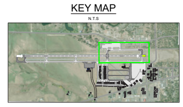
0 40 80 160 240

NORTH ALTERNATIVES

HIGHLIGHTS:

- PROPOSED TAXIWAY FILLETS FOR A-2, B-1, AND B2
- PROPOSED REALIGNMENT OF TAXIWAY B-1
- REMOVE WIDE EXPANSE OF PAVEMENT AT TAXIWAY B-1
- INSTALL ELEVATED RUNWAY GUARD LIGHTS AT TAXIWAY A-2 AND B-2
- EXPAND BLAST PAD
- NEW 4-LIGHT PRECISION APPROACH PATH INDICATOR (PAPI)
- UPGRADE RUNWAY LIGHTS TO LED

KEY MAP
N.T.S

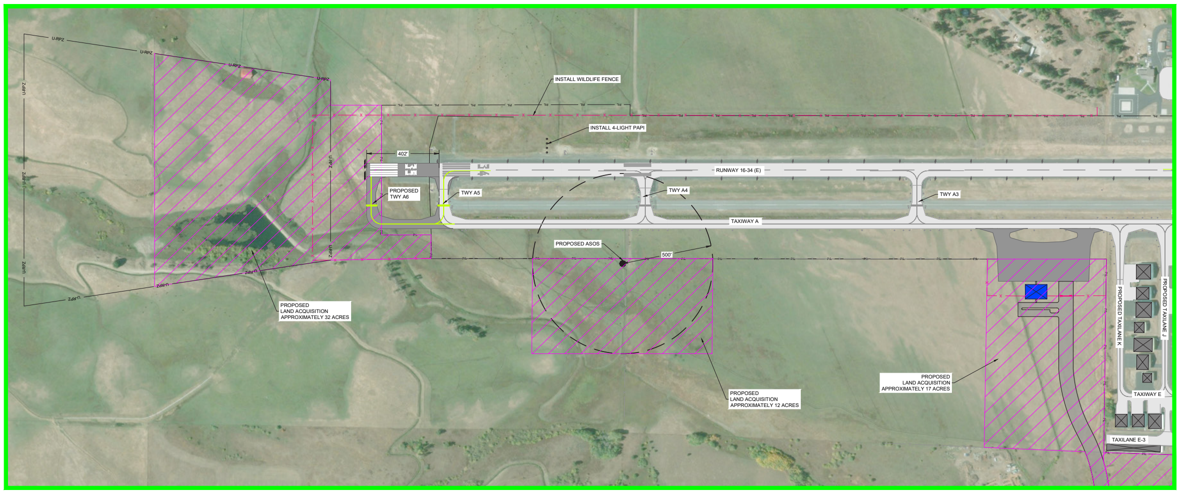


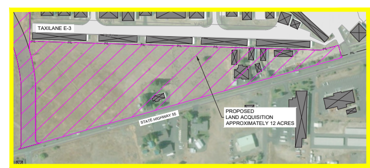
LEGEND

EXISTING PAVEMENT
EXISTING BUILDING
P/L EXISTING PROPERTY LINE
EXISTING FENCE
EXISTING PAVEMENT MARKINGS
PROPOSED PAVEMENT
PROPOSED PAVEMENT MARKINGS

City of McCall

T-O ENGINEERS





SOUTH ALTERNATIVES

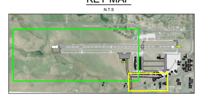
HIGHLIGHTS:

- 402 FOOT RUNWAY EXTENSION
- NEW CONNECTOR TAXIWAY A-6
- RELOCATED WEATHER STATION (ASOS)
- WILDLIFE FENCE EXTENSION
- NEW 4-LIGHT PRECISION APPROACH PATH INDICATOR (PAPI)
- LAND ACQUISITION OF APPROXIMATELY 73 ACRES

LEGEND

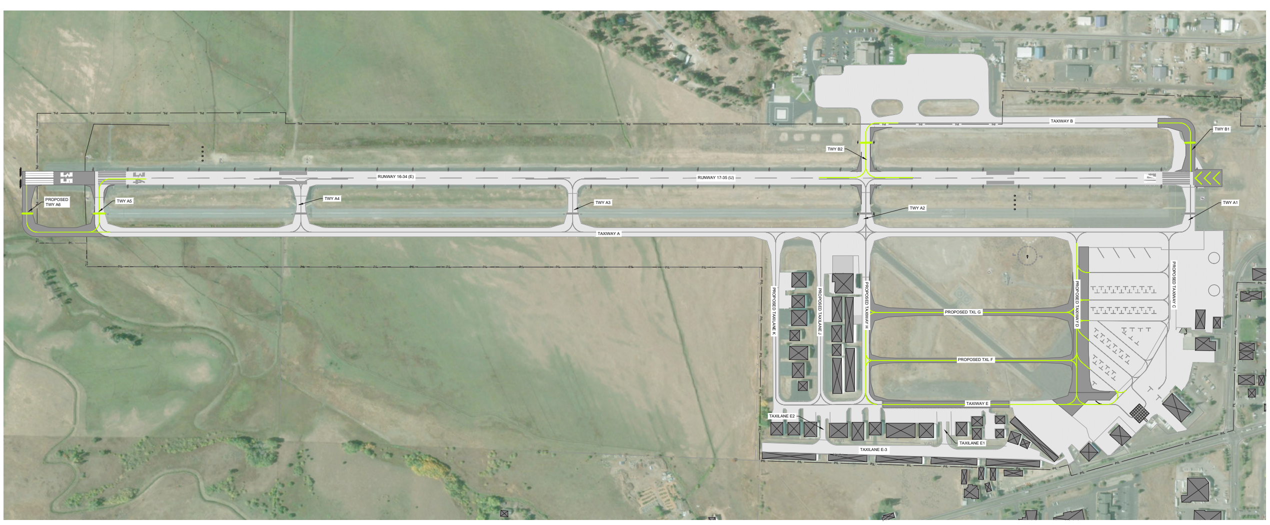
- EXISTING PAVEMENT
- EXISTING BUILDING
- EXISTING PROPERTY LINE
- EXISTING FENCE
- EXISTING PAVEMENT MARKINGS
- PROPOSED PAVEMENT
- PROPOSED LAND ACQUISITION
- PROPOSED PAVEMENT MARKINGS
- PROPOSED FENCE
- PROPOSED RUNWAY PROTECTION ZONE

KEY MAP



City of McCall

T-O ENGINEERS



TAXIWAY / TAXILANE NOMENCLATURE

LEGEND

- EXISTING PAVEMENT
- EXISTING BUILDING
- EXISTING PROPERTY LINE
- EXISTING FENCE
- EXISTING PAVEMENT MARKINGS
- PROPOSED PAVEMENT
- PROPOSED PAVEMENT MARKINGS

City of McCall

T-O ENGINEERS

Project: Airport Master Plan Meeting
Date: 6/2/2021
Page: of

T-O ENGINEERS

Doug Phillips
Karin Didisse
Mark Pooley
Brian Parker
Laura Nichols
Kylee Hatfield
Mike Dorris
Karyn Janiak
Charles C. Jones

+2 Anonymous

Prepared By:

City of McCall

McCall Municipal Airport Master Plan
Comment Form

Contact Information (optional):

Name or Affiliation: Doug Phillips

Address:

Phone: Email:

Please provide your comments about the McCall Municipal Airport Master Plan:

Looks great! Happy to help advocate if needed

If you would like to return this comment form outside of the public meeting, please send it to:

Richard Stein, AAE, Airport Manager
336 Deinhard Lane, Hangar 100
McCall, ID 83638
208-634-1488
rstein@mccall.id.us

City of McCall

McCall Municipal Airport Master Plan Meeting Supplement

March 3, 2022

Meeting Documents

1. Airport Master Plan Chapters

2. Airport Layout Plan (ALP)

Hardcopy documents will be available for review during the meeting. Comment forms will be available.

Documents can be viewed online at any time through the City of McCall's airport website, via link, or directly from the T-O Engineers project portal:

https://www.mccall.id.us/

https://www.to-engineersprojectinfo.com/jobs/1550/details/mccall-municipal-airport-master-plan

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208-370-3906

McCall Airport Master Plan To-Date

This Airport Master Plan commenced in June of 2020, during the lockdowns associated with COVID-19 and amid widespread uncertainty within the aviation industry. Consequently, traditional public involvement (in-person) required re-imagining using a blend of virtual, in-person, and hybrid meeting formats and intake of public comments.

As of March of 2022, the following elements have been completed, and are summarized within this supplement:

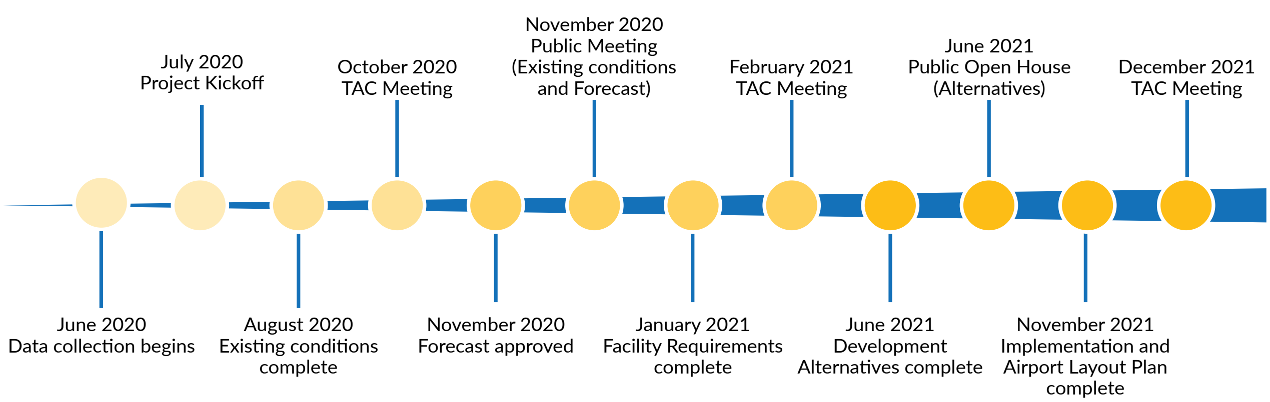
- Existing Conditions: Inventory of airport facilities, setting, environmental and socioeconomic overview.
- Aviation Forecast: Baseline and projections of operations, fleet mix, and based aircraft, along with critical aircraft determination.
- Facility Requirements: Gap analysis of the existing facilities and what is needed to meet aviation demand.
- Alternatives Development: How to achieve the Facility Requirements and local goals.
- Implementation: Capital Improvement Plan (CIP), with project phasing, cost estimates, and financial analysis.
- Draft Airport Layout Plan (ALP): Series of technical drawings needed to secure funding for the CIP.
- Recycling and Waste Reduction Plan: Review of airport recycling options and recommendations.
- Public Involvement: Three public meetings and three Technical Advisory Committee (TAC) meetings.

Public Involvement

The public input for this Airport Master Plan has been achieved through a series of dedicated public meetings, online comment forms, a TAC, and monthly Airport Advisory Committee meetings.

- Kickoff Meeting (virtual): Pre-recorded and available on the City of McCall website. Advertised July 22, 2020.
- TAC Meeting (virtual): Held via Teams on October 16, 2020. Discussed existing conditions and forecast.
- Public Meeting (live, virtual): Held via Teams on November 17, 2020. Presented existing conditions and forecast. Advertised November 5 and 12, 2020.
- TAC Meeting (virtual): Held via Teams on February 18, 2021. Discussed facility requirements and proposed development alternatives.
- Public Open House (in-person): Held in Council Chambers on June 2, 2021 for 8 hours. Presented the proposed development alternative drawings. Advertised May 20, 2021.
- Airport Open House (in-person): Held at the airport on June 26, 2021 for 4 hours. Poster boards from June 2 Open House were displayed at a station with comment forms.
- Monthly Airport Advisory Committee Meetings (in-person and virtual): Updates provided by the planning team.
- TAC Meeting (virtual): Held via Teams on December 7, 2021. Discussed the draft master plan chapters and Airport Layout Plan.

Airport Master Plan Timeline



Existing Conditions

Known as the “Gateway to the Backcountry,” McCall Municipal Airport is owned and operated by the City of McCall with the assistance of an Airport Advisory Commitee.

McCall Municipal Airport (MYL):

- Elevation: 5,024 feet MSL
- Area: 197 acres
- Runway: 16/34, 6,108 feet long, 75 feet wide, asphalt, medium intensity runway lighting
- Weight Bearing Capacity: 86,500 pounds single wheel, 141,000 pounds double wheel, and 261,500 pounds double tandem wheel configurations.
- Instrument Approach Procedures: RNAV (GPS) RWY 16 and RWY 34
- Control Tower: No, temporary during fire season
- Services: Fuel, charter, tie down, hangars, flight training, flying club, fire fighting, medical, maintenance
- Average annual snow fall of 138 inches

Airport Economic Impact

From the 2020 Idaho Airport System Plan Update

- 307 jobs
- $13.6 million in earnings
- $20.5 million in GDP
- $43.2 million in total economic output

Aviation Demand Forecast and Critical Aircraft Determination

Great uncertainty due to COVID-19. Projection based on a 2-year recovery, then assuming a historic growth rate. Based aircraft prediction based on FAA projections prior to COVID-19, and historic impacts during shock events.

AVIATION FORECAST (APPROVED 11/18/2020)					
	2020	**2025**	**2030**	**2035**	**2040**
Operations	32,130	37,429	37,955	38,488	39,029
Based Aircraft	100	96	93	90	87

CRITICAL AIRCRAFT ATTRIBUTES	
Cessna Citation XLS+ (B-II, Large)	
Approach Speed	117 Knots
Wingspan	56’ 4”
Length	52’ 6”
Tail Height	17’ 2”
Maximum Take Off Weight	20,200 Pounds

McCall Municipal Airport Master Plan

T-O ENGINEERS

Master Plan Findings

The following findings are the result of the facility requirements, based on the inventory and forecast, and comments received through the public involvement process.

- Future runway length of 6,510 feet needed to meet minimum runway length recommendation (402-foot extension).
- Airfield geometry and nomenclature revisions needed to meet current standards and enhance safety.
- Numerous obstructions, mainly by trees and terrain, are penetrating the protective surfaces and impacting instrument approach procedures.
- The existing ASOS and retention basin impede full hangar development of the infield.
- Snow storage must be accounted for.
- Open space tie-downs are desired, as spaces have diminished with construction projects.
- Terminal area circulation improvements are desired, following the removal of the diagonal taxiway in 2020.
- Hangars are generally oversized for the aircraft being stored (reducing the number of hangars that can be built).
- The zoning south of the airport does not adequately protect the airport from encroachment.
- Demand for hangar space increased during the master plan study.
- Fire fighting operations typically overflow to the transient apron, along with support equipment.
- Pavement condition needs to be addressed.

Proposed Development Summary

Major development proposals are summarized below:

- Phased hangar and taxilane development of the infield. Includes provisions for tie-downs and snow storage.
- Installation of a new taxiway connecting Taxiway A to Taxiway E at the south edge of the transient apron.
- Reconstruction and reconfiguration of the transient apron pavement and tie-down spaces.
- Phased scheduled pavement maintenance of the runway, taxiways, and taxilanes.
- Install a new fire fighting pad to accomodate large helicopters and support equipment.
- Relocate the ASOS to the south end of the airport.
- Create a new General Aviation Terminal area, with an extension of Krahn Lane.
- Airfield geometry improvements to the Runway 16 blast pad and Taxiways B-1, A-1, and B-2.
- Extend the runway to the south by 402 feet (new total length of 6,510 feet)
- Install wildlife fencing to control wildlife intrusions.

Development Phasing Plan Summary

Phase 1 (1-5 years) Summary

- Construction of Taxiway D
- Begin infield hangar development
- Rehabilitate the runway
- Reconstruct and reconfigure the transient apron
- Rehabilitate hangar taxiways and taxilanes
- Reconfigure A-1, B-1, A-2, and blast pad

Phase 2 (6-10 years) Summary

- Land acquisition for ASOS, runway extension, and GA terminal
- Pavement maintenance
- Obstruction removal
- Continue infield development
- Relocate ASOS
- Construct wildlife fencing
- Acquire SRE

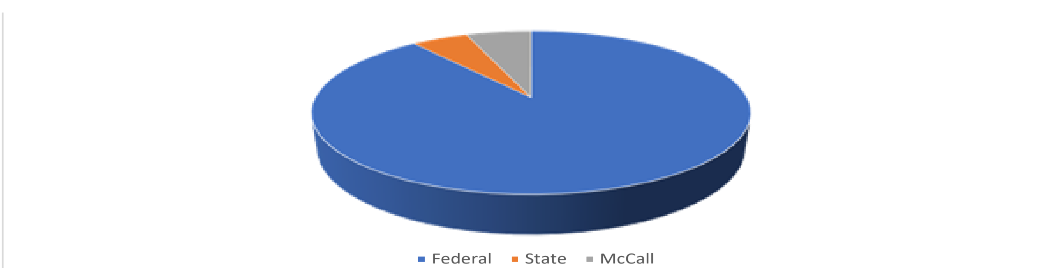
Phase 3 (11-20 years) Summary

- Extend Runway
- Pavement maintenance
- Land acquisition for S.H. 55 triangle
- Acquire SRE

Cost Estimate Summary

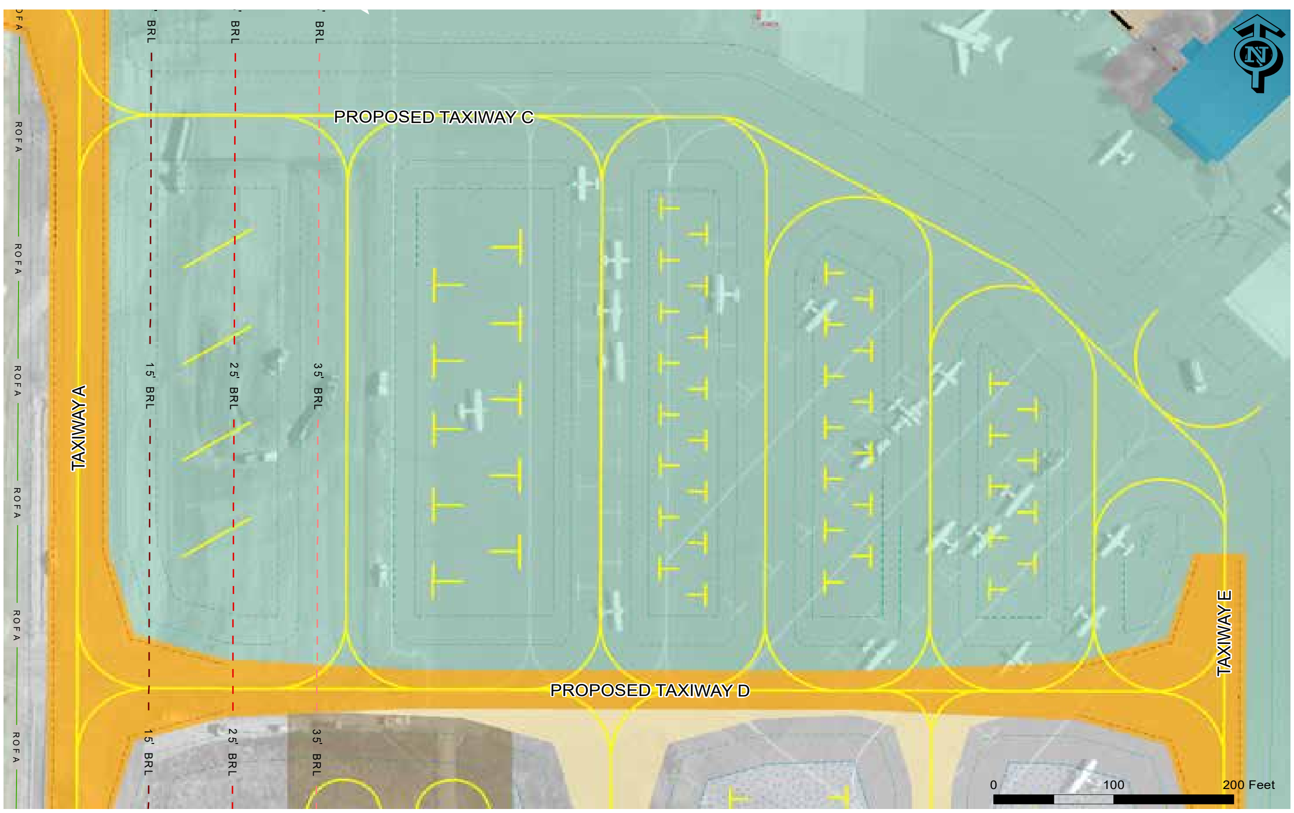
Phase	Federal (90%)	State (5%)	McCall (5%)	Total
Short-Term	$11,415,500.00	$634,194.45	$934,194.45*	$12,983,888.89
Medium-Term	$15,282,500.00	$849,027.78	$849,027.78	$16,980,555.56
Long-Term	$7,880,000.00	$437,777.78	$437,777.78	$8,755,555.56
Total	$34,578,000.00	$1,921,000.01	$2,221,000.00	$38,720,000.00

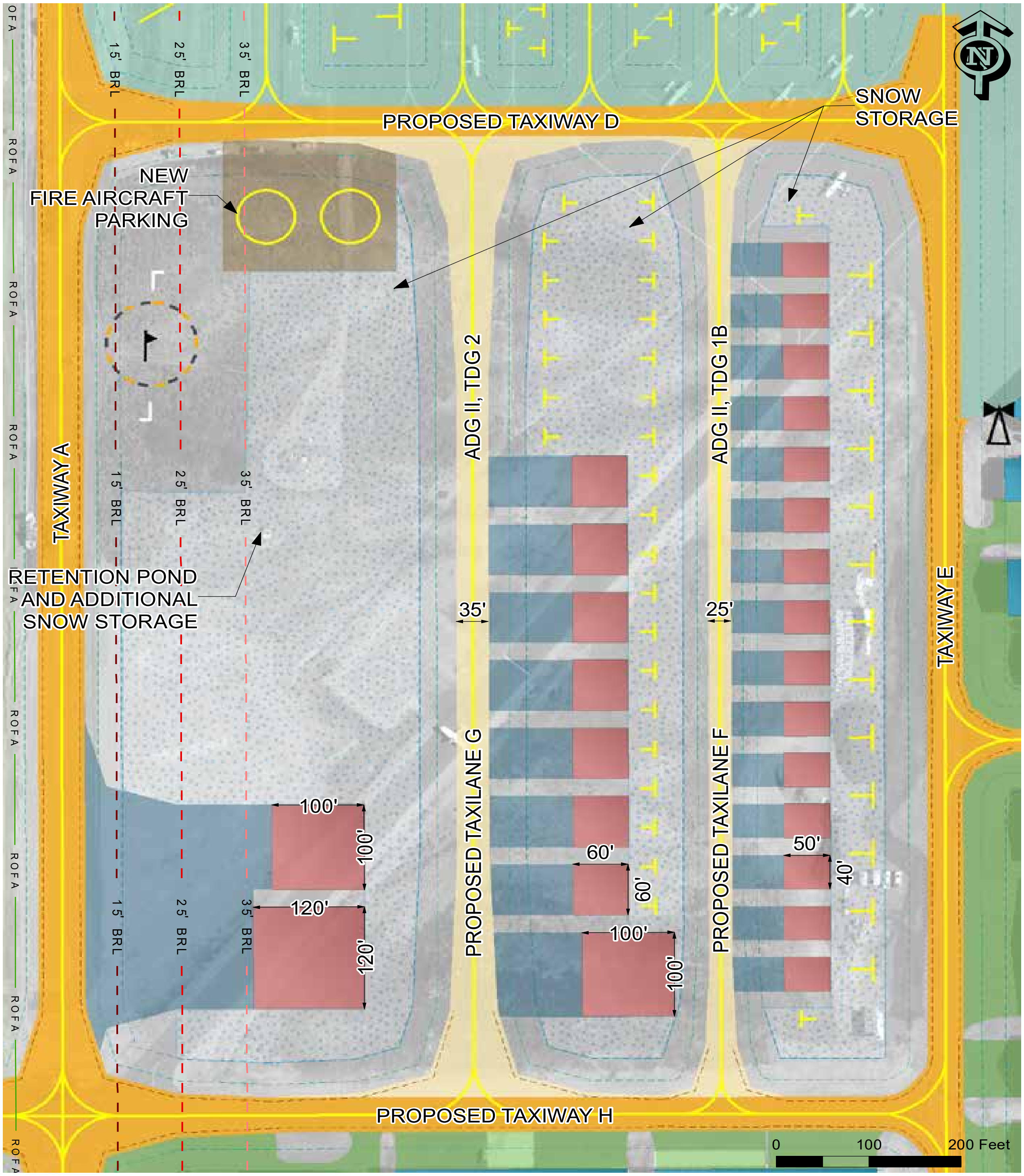
** $300k in local funds only for extension of utilities to the infield.*



Next Steps

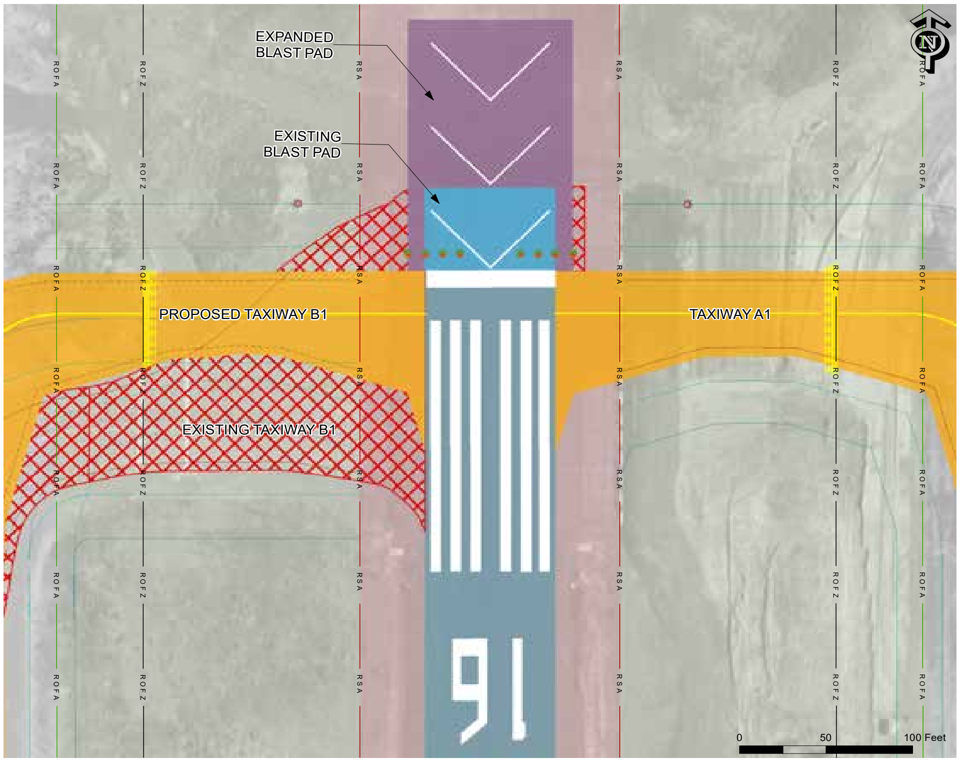
- Hold a public meeting to present the draft ALP and master plan chapters. Allow 30 day comment period.
- Update documents based on feedback.
- Submit ALP and report to FAA for review
- Revise ALP based on FAA comments
- Present final ALP and master plan report to City Council for adoption
- Following adoption, the City, ITD, and FAA will sign the ALP

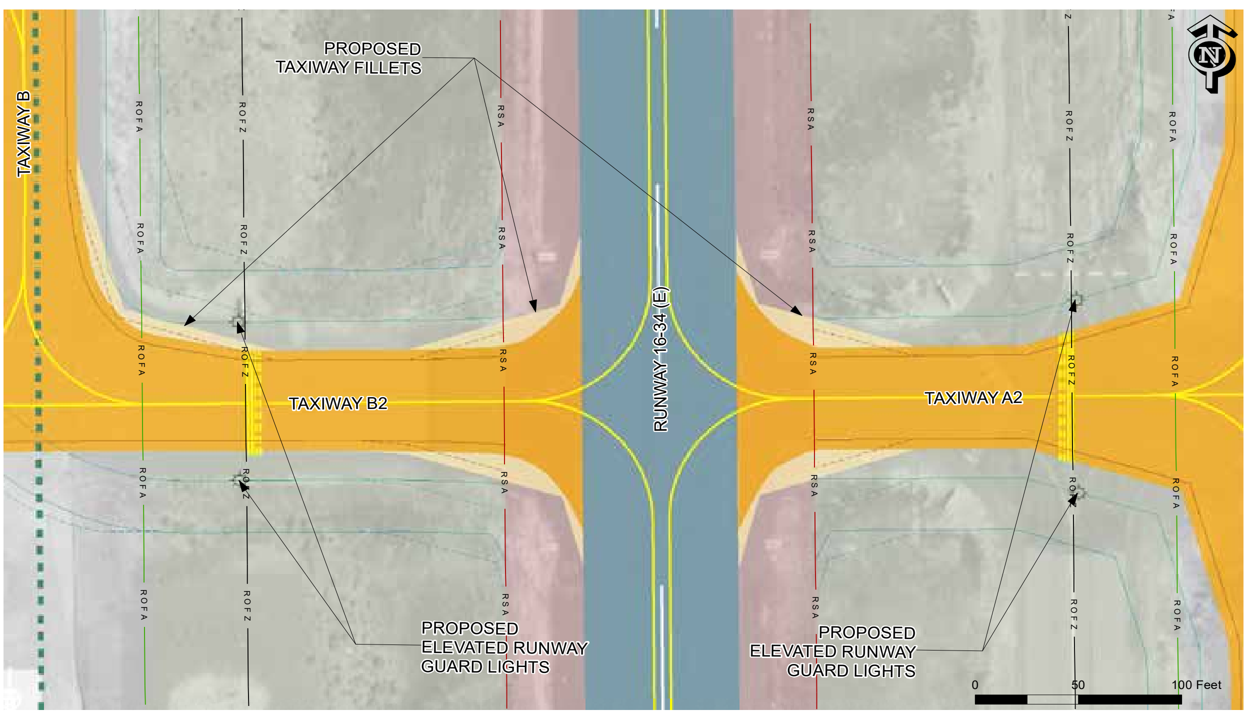




McCall Municipal Airport Master Plan

T-O ENGINEERS





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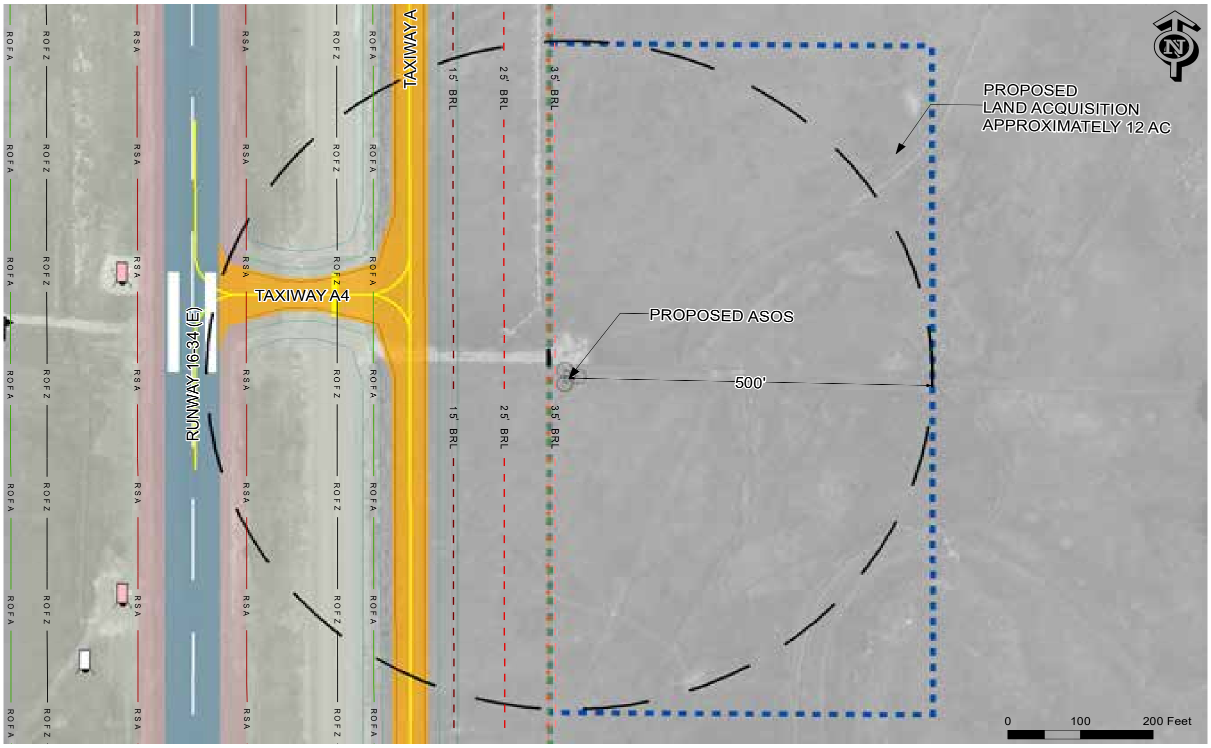
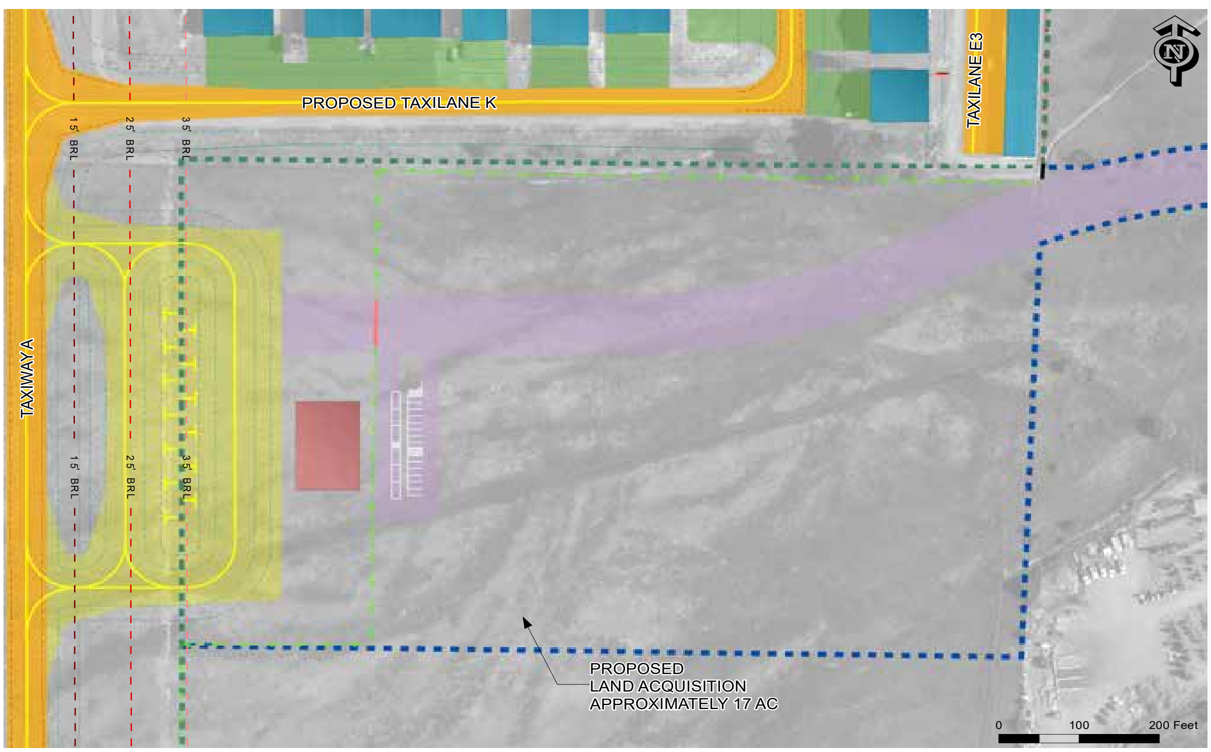
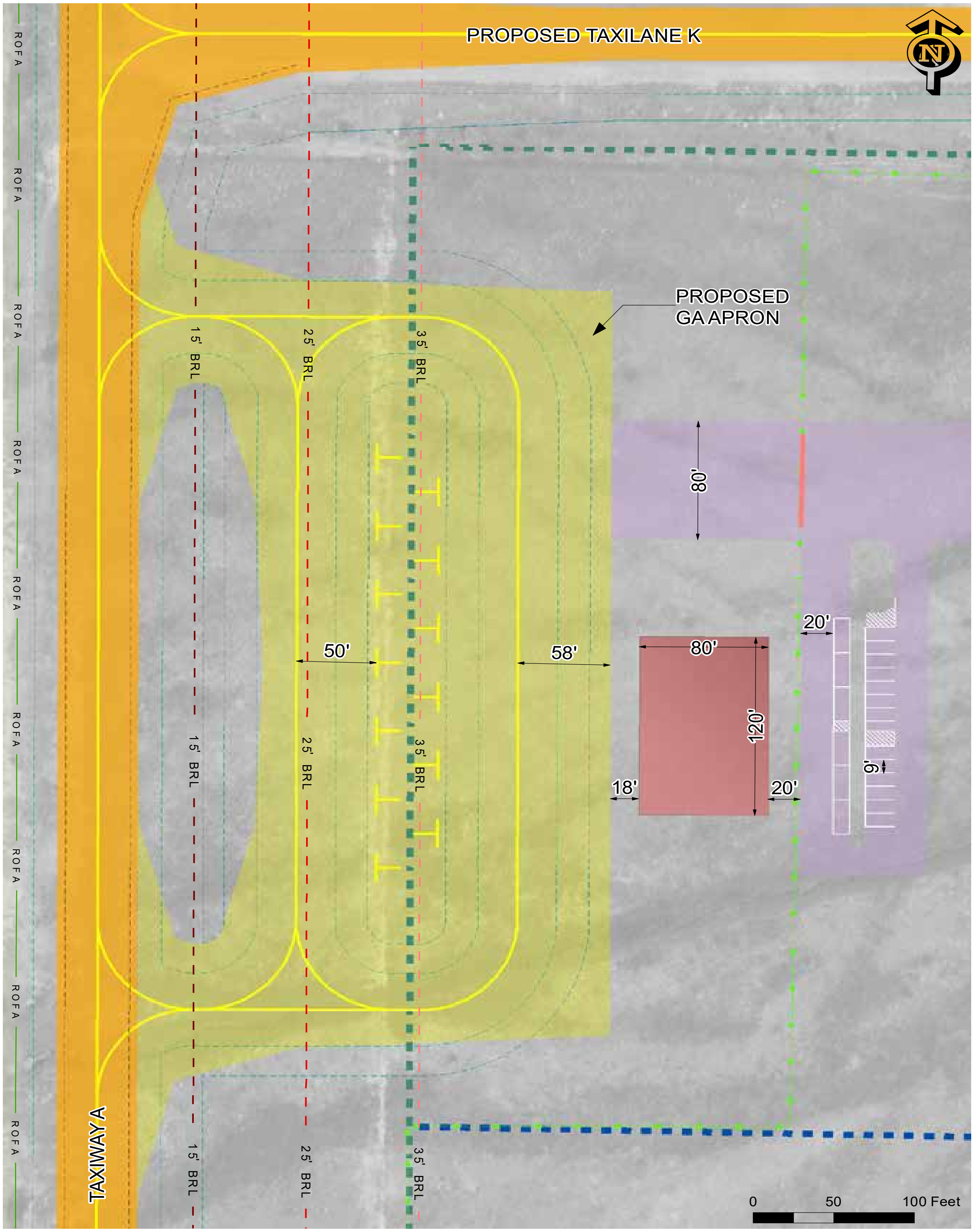




McCall Municipal Airport Master Plan

T-O ENGINEERS



McCall Municipal Airport Master Plan

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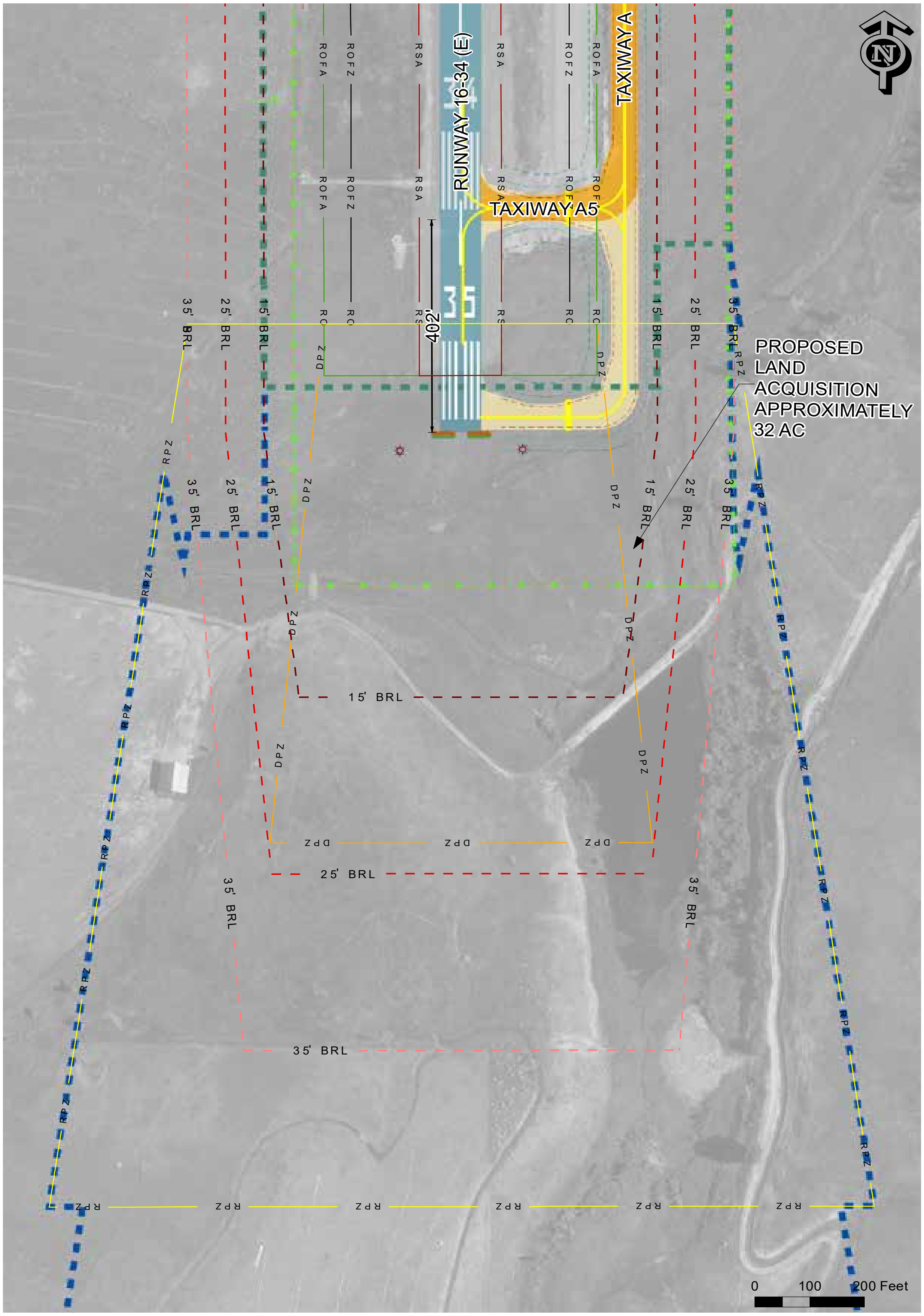
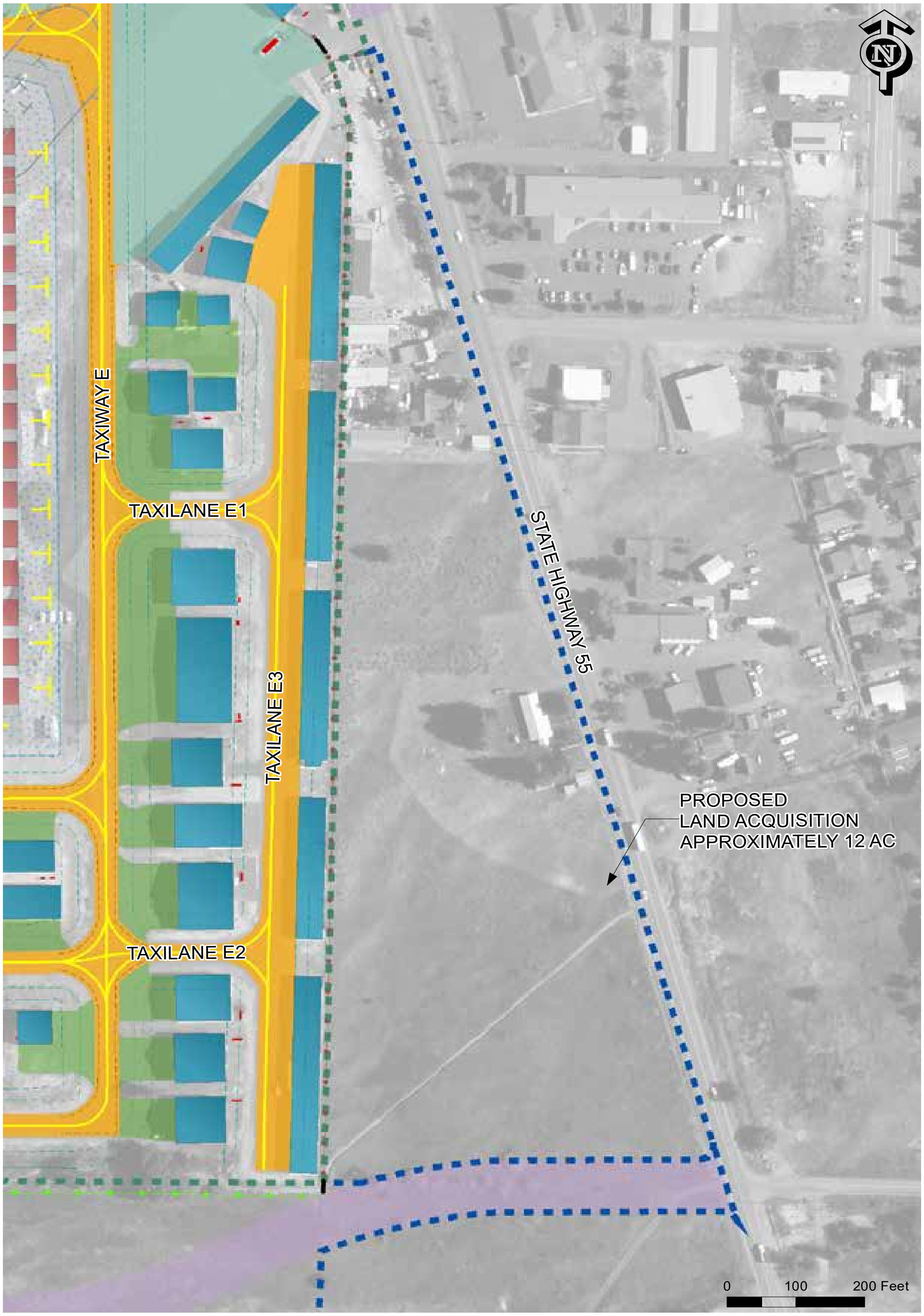


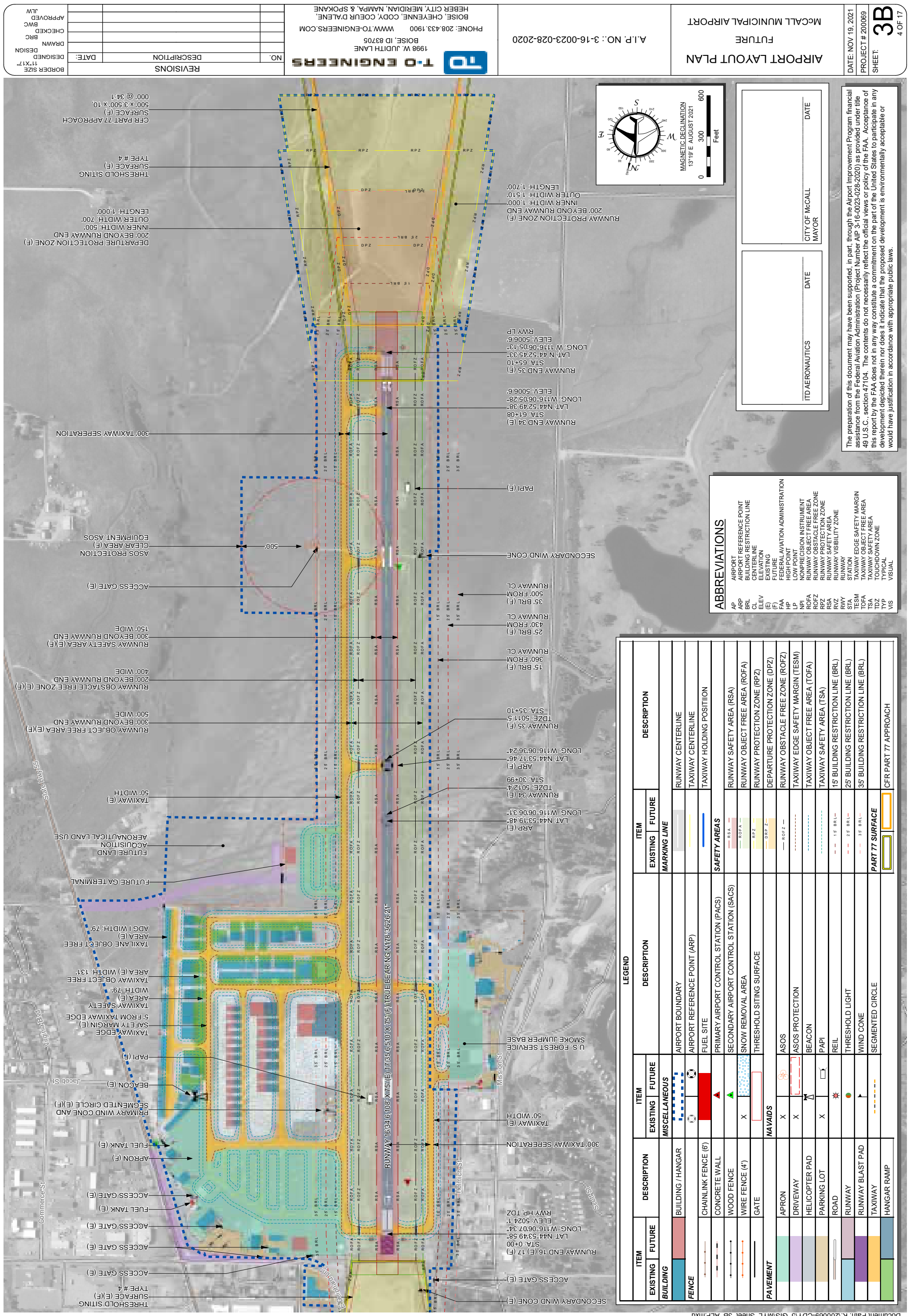
McCall Municipal Airport Master Plan

T-O ENGINEERS



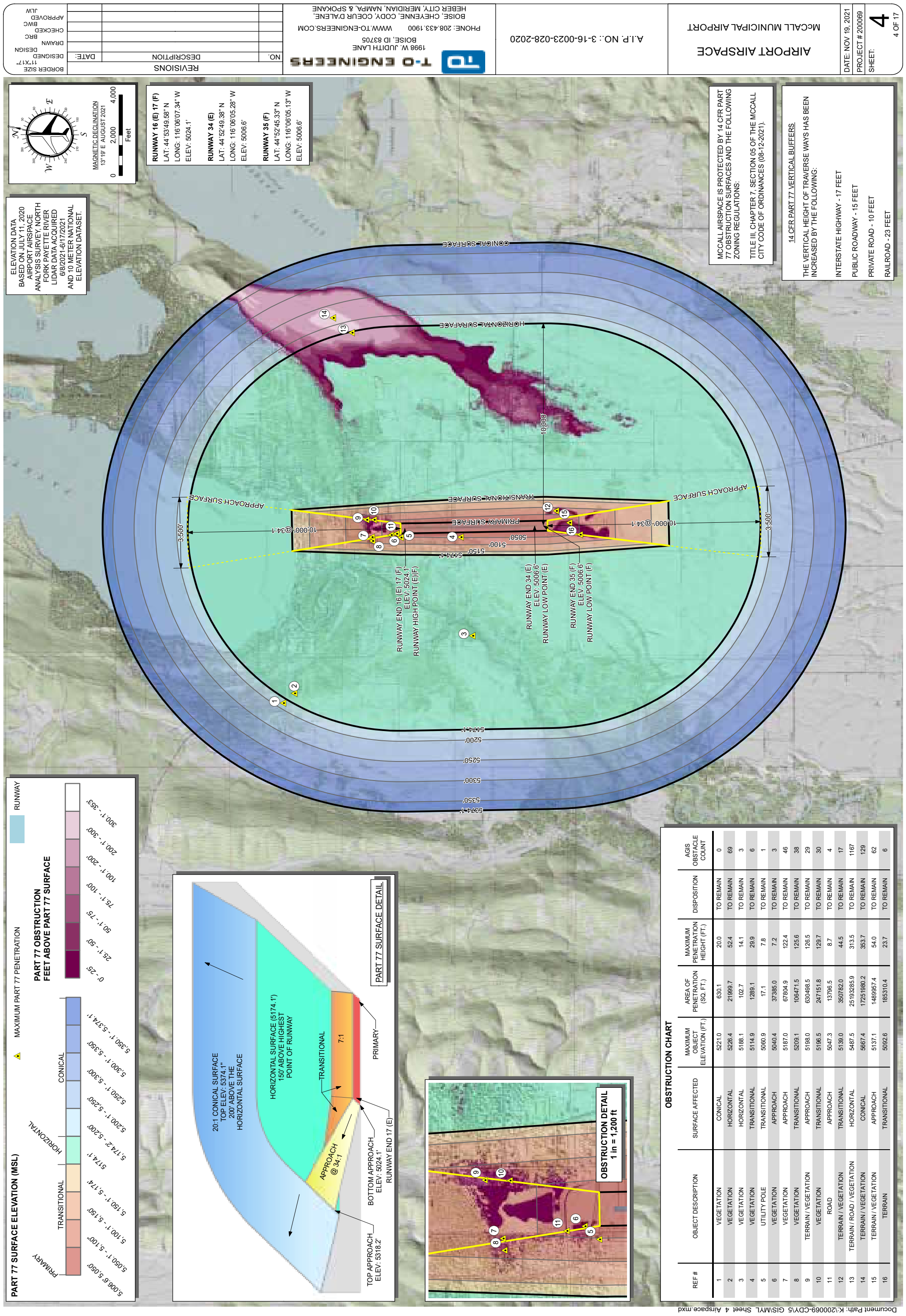
McCall Municipal Airport Master Plan

T-O ENGINEERS



McCall Municipal Airport Master Plan

T-O ENGINEERS



OBSTRUCTION CHART

REF #	OBJECT DESCRIPTION	SURFACE AFFECTED	MAXIMUM OBJECT ELEVATION (FT.)	AREA OF PENETRATION (SQ. FT.)	MAXIMUM PENETRATION HEIGHT (FT.)	DISPOSITION	AGIS OBSTACLE COUNT
1	VEGETATION	CONICAL	5221.0	630.1	20.0	TO REMAIN	0
2	VEGETATION	HORIZONTAL	5226.4	21999.7	52.4	TO REMAIN	69
3	VEGETATION	HORIZONTAL	5188.1	102.7	14.1	TO REMAIN	3
4	VEGETATION	TRANSITIONAL	5114.9	1289.1	29.9	TO REMAIN	6
5	UTILITY POLE	TRANSITIONAL	5060.9	17.1	7.8	TO REMAIN	1
6	VEGETATION	APPROACH	5040.4	37385.0	7.2	TO REMAIN	3
7	VEGETATION	APPROACH	5187.0	67804.9	122.4	TO REMAIN	46
8	VEGETATION	TRANSITIONAL	5209.1	106471.5	125.6	TO REMAIN	38
9	TERRAIN / VEGETATION	APPROACH	5198.0	630498.5	126.5	TO REMAIN	29
10	VEGETATION	TRANSITIONAL	5196.5	247151.8	129.7	TO REMAIN	30
11	ROAD	APPROACH	5047.3	13796.5	8.7	TO REMAIN	4
12	TERRAIN / VEGETATION	TRANSITIONAL	5139.0	350782.0	44.5	TO REMAIN	17
13	TERRAIN / ROAD / VEGETATION	HORIZONTAL	5487.5	25193285.9	313.5	TO REMAIN	1167
14	TERRAIN / VEGETATION	CONICAL	5667.4	17251980.2	353.7	TO REMAIN	129
15	TERRAIN / VEGETATION	APPROACH	5137.1	1489957.4	54.0	TO REMAIN	62
16	TERRAIN	TRANSITIONAL	5092.6	185310.4	23.7	TO REMAIN	6

T·O ENGINEERS

McCall Municipal Airport –Airport Master Plan
Meeting 4 – Draft Master Plan Documents
March 3, 2022
2:00 PM to 5:00 PM

Name	Company/Representing	Address	Contact Number(s)	Email Address
Pam Bush Rich Bush				
L. Putnam				
Jeff Riechmann				
Dan Scott				
Gusti Laidlaw				
Andy Laidlaw				
Melinda Voia Cathy Miller				
MICHAEL ANDERSON				

McCall Municipal Airport –Airport Master Plan
Meeting 4 – Draft Master Plan Documents
March 3, 2022
2:00 PM to 5:00 PM

T-O ENGINEERS

Name	Company/Representing	Address	Contact Number(s)	Email Address
ERICA LAIDLAW				
Sherry [illegible]				
Tamara DeBoer				
Jon Rentzsch				
Jeff : Sigsby Edwards				
Mike Weiss				
Robb Parish				
JIM STUTZMAN				

McCall Municipal Airport –Airport Master Plan
Meeting 4 – Draft Master Plan Documents
March 3, 2022
2:00 PM to 5:00 PM

T-O ENGINEERS

Name	Company/Representing	Address	Contact Number(s)	Email Address
Charles Jones				
Anette Spickard	City			
Brianna Bambic				
Michelle Rentzsch				
SUZANNE PAISLEY				
SCOTT CARLTON	DF Development LLC			
Anne McKee	McKee RE			

PAGE 2 - THE STAR-NEWS - THURSDAY, FEBRUARY 17, 2022

New Valley COVID-19 cases keep falling, at 22 for week

12th death in county confirmed from virus

BY TOM GROTE
The Star-News

New cases of COVID-19 reported in Valley County last week continued to fall, according to the county's two hospitals.

A total of 22 new cases were reported by the county's two hospitals, down from the 62 new cases the previous week and down from 119 cases the prior week.

Cascade Medical Center reported no new cases during the past week, CEO Tom Reinhardt said.

The two hospitals have reported 2,627 cases of COVID-19 since the pandemic started nearly two years ago.

A 12th death confirmed from COVID-19 was reported this week by Central District Health.

Troy James Presler, 74, of Donnelly, died Jan. 23 of COVID-19 complications, according to obituary information provided to The Star-News.

Three other deaths in Valley County have been ruled as "probable" from the virus.

Adams County has had 14 deaths related to COVID-19 since the pandemic started, according to Southwest District Health.

Total cases in Adams County since the pandemic started was set at 533 this week, or 13 cases more than reported last week.

Clinics & Tests

St. Luke's Clinic–Payette Lakes Family Medicine is now offering the Moderna COVID-19 vaccine and boosters to anyone age 18 and older. Pfizer-BioNTech vaccines continue to be offered for anyone age 5 and older.

Also available are Pfizer-BioNTech COVID-19 vaccine boosters for ages 12 to 15 and to moderately or severely immunocompromised youths age 5 to 11.

Pfizer vaccines are offered on Monday, Tuesday, Thursday and Fridays. The Moderna vaccine is offered on Wednesdays only.

Those wanting to get a vaccination can schedule through MyChart at stlukesonline.org/mychart or call 208-381-9500.

Parents of minors should create a MyChart for eligible children and set up proxy access. Instructions are available at stlukesonline.org.

Walk-ins are welcome Monday through Friday, 8 a.m. to 5 p.m., for adults who are seeking their initial COVID-19 vaccine dose only.

St. Luke's McCall and Cascade Medical Center have take-home COVID-19 tests available. The saliva-based test offers results for COVID-19 in two to three days.

Cascade Medical Center offers a walk-in vaccination clinic from 8 a.m. to 5 p.m. on Tuesdays, Wednesdays and Thursdays. The Moderna vaccine is available on Tuesdays and Thursdays.

Fire

(Continued from Page 1)

"The plan for the rebuild at this time relies solely on the insurance company," Ben Watkins said.

Work was underway to set up a temporary pharmacy and coffee bar, he said.

Cleanup of the site had not started as of Tuesday.

Patient files and prescription records were saved, Watkins said.

"We are actively transferring prescriptions for our customers as we did not lose our pharmacy files due to being stored at an off-site secure location," he said.

Patients who need to transfer a prescription can call the pharmacy number at 208-382-4202 or call their prescribing doctor's office, he said.

Watkins

(Continued from Page 1)

The pharmacy employed seven people in addition to the Watkinses.

The Cascade Community Church is coordinating rides to nearby pharmacies for people who need help with transportation.

"Our church is hoping to act as a hub to get information to those in need," church administrative assistant Alison Haupt said.

"We have a growing list of those willing to help others in our community and are ready to help how we can," Haupt said.

Volunteers willing to pick-up prescriptions or drive people to the pharmacy can contact the church by phone at 208-382-4216 or by email at cccoffice109@gmail.com.

Mountain Community Transit, which operates bus routes between McCall and Cascade, has also offered to assist Watkins customers in need of transportation to a pharmacy in McCall.

"We are on a tight schedule, but not so tight that we can't do some things for some folks," operations supervisor Stephen Hackler said.

The bus service runs Monday through Friday. Visit www.treasurevalleytransit.com and select "Mountain Community Transit" under the "service areas" menu or call 208-634-0003.

The Cascade Fire Community Fund has already received about $4,700 in donations for Watkins Pharmacy, fund president Mindi Anderson said.

Funds will go towards pharmacy employees who have been affected as well as the costs of setting up a temporary pharmacy, Anderson said.

Donations can be made at www.cascaderuralfire.com by selecting "Cascade Fire Nonprofit" under the "more" menu.

The nonprofit was established last year to assist victims of fires in the Cascade area.

Library

(Continued from Page 1)

Cascade library patrons with checked out books should keep the books until the library re-opens or may return them to the Donnelly library, Scheline said.

Damages Unknown

There is no estimated cost for damages to the library building or the about 13,700 items in the library's inventory, including books and equipment, Scheline said.

Water sprayed by firefighters battling the fire at Watkins Pharmacy flooded into the building.

Several inches of water covering the floor raised humidity in the library to as high as 85%, but crews had brought humidity down to about 25% as of Tuesday, Shepard said.

"The first day when I walked in, the water was dripping from bookcases," Scheline said. "Every single one of those books in some form or fashion has sustained damage."

The books are currently drying and undergoing a microbial ozone treatment, after which it will be determined how many books are too damaged to keep, she said.

Ozone gas is also being used to treat the library building for smoke damage, including the lingering smell left from smoke that infiltrated the library.

All computers and electronics in the library were tested and currently work, but it will be six months before it is known if the moisture damaged them, Scheline said.

"They may work now, but they may not work in a month," she said.

Carpets in the 2,226 square foot building will need to be replaced due to water damage, Scheline said.

Once the carpet is removed, crews can begin to determine the extent of damage to the library building itself, she said.

All of the books need to be removed from the library building before additional restoration work can begin, but library officials have not yet determined where the books will be stored.

All four of the Cascade library's part-time employees will be able to continue working for the Donnelly library, Scheline said.

The library does not currently have space for book donations, but is accepting money donations directly to the library or to the Friends of the Cascade Public Library at P.O. Box 10, Cascade, ID 83611.

Olympics

(Continued from Page 1)

Three races remain on the cross-country program for the 2022 winter games.

The Classic Team Sprint took place on Wednesday, but results were not available. The men's 50k mass-start freestyle will be held Saturday, and the women's 30k mass-start freestyle will be held on Sunday.

The U.S. team had not announced on Tuesday whether Patterson, 30, or his sister, Caitlin, 32, would be racing in the final events. Caitlin Patterson had yet to start an event as of Tuesday.

The Pattersons are attending their second Winter Olympic games. They previously skied for the United States at the 2018 Winter Olympic Games in PyeongChang, South Korea.

The siblings were born in McCall and competed with the McCall Nordic Ski Team until 2005, when the family moved to Anchorage, Alaska.

RedRidge

(Continued from Page 1)

The application was first presented at a P&Z meeting on Jan. 13 at the Valley County Courthouse in Cascade.

Thursday's deliberations were a continuation of that meeting.

The subdivision about six miles south of McCall is being proposed by McCall Associates LLC, the same firm behind the Blackhawk Lake, Blackhawk Ranch and Blackhawk on the River developments.

McCall Associates LLC, represented by Brian Dickens, told commissioners on Thursday that each lot in the development would use one septic system and not attempt to connect with a nearby water and sewer system.

At the Jan. 13 meeting, Dickens had proposed that some lots could tie into the nearby West Mountain Sewer and Water system, a private system which serves the Blackhawk on the River and Payette Estates subdivisions.

Dickens also clarified several aspects of the application requested by the commission including wildlife protection measures, road agreements, design specifics and soil conditions.

McCall Associates LLC intends to sell the entire development at auction, which is tentatively scheduled for June, Dickens said.

The application received 17 letters in opposition and none in favor.

Those opposed objected to the proposed connection to West Mountain Sewer and Water and also worried about the environmental effects that 135 individual wells and septic systems would have on the aquifer and watershed.

At the hearing, one person testified in favor and two in opposition.

Dickens had said that the subdivision would include rules mandating that septic tanks be properly maintained and emptied every three to five years.

Blackhawk on the River resident Chris Oberti asked how that rule would be enforced.

"Who the heck is gonna go out there and tell everybody 'hey, every five years you're gonna have to pump your septic'? Oberti said. "Do we have a septic tank police force out there?"

Initial plans for the property from 2004 included over 1,000 homes and included a golf course, hotel and equestrian center.

The RedRidge development as proposed was previously approved in 2008 as RedRidge at Blackhawk, but the development was stalled by the economic recession that started the same year.

In 2013, the RedRidge area was included in a proposal encompassing all Blackhawk developments, but county approvals expired before it could be developed.

Blackhawk developments began in 1992 with Blackhawk Lake Estates. Phases two through five as well as a common area and multi-family development have since been added.

Access to RedRidge Preserve would be by two private roads off of West Mountain Road.

The project would be built in 10 phases on about 1,600 acres, with lots ranging from three to 17 acres.

Construction of phase one with 30 lots could be completed this year or in 2023 with phases two through five with 75 additional home sites to be completed by 2026, the application said.

Dickens said that work was done after the 2008 approval on some roads and lot development within the project and phase one was about 60% complete.

PAGE 5 - THE STAR-NEWS - THURSDAY, FEBRUARY 24, 2022

Letters

(Continued from Page 4)

Let's be clear on which political party opposes racism today

With regard to the Feb. 17, 2022, letter to the editor, "The U.S. was not founded to establish a racist country," which concluded with the recommendation to "switch political parties to the one that has always stood against racism and slavery, the GOP."

I would like to remind readers that indeed omitting and editing facts of American history to make a point is misleading at best. Notably the historical "facts" listed in the letter stopped at almost 60 years ago, thus missing the changes in our political parties since then.

Mentioned but not explored was one of the most significant pieces of legislation, the Civil Rights Act of 1964, which among other things, prohibited discrimination on the basis of race, gender, religion or national origin as well as prohibiting the use of different voter registration standards for blacks and whites, and also creating the Equal Employment Opportunity Commission.

This act was signed into law by Democratic President Lyndon B. Johnson, alienating many Southern Democrats, including Democratic Sen. Thurmond of South Carolina, mentioned in the previous letter, who subsequently switched to the Republican Party.

As many readers may recall, after the passage of this act, the GOP adopted what would come to be known as "The Southern Strategy" in an effort to woo disgruntled Southern voters who could never forgive the Democratic Party for its support of the Civil Rights Act. This strategy began with the Republican presidential campaign of Barry Goldwater in 1964 and was further refined in 1968 by Richard Nixon and his advisors.

Realizing they could not appeal to voters directly on issues of white supremacy or racism, they used coded language such as "states' rights" and "law and order" which were widely understood to mean Southern resistance to civil rights.

Other emotionally fraught terms used by Republican candidates and elected officials included "welfare state," "forced busing," and "affirmative action," which successfully appealed to large numbers of Southern voters who subsequently switched to the Republican Party.

Today the result of this transition is evident by the number of GOP controlled states, particularly in the South, where Republican lawmakers have proposed and in some cases passed, voter suppression legislation which would limit voting by mail, early in-person voting, reduce poll hours, narrow the eligibility to vote absentee, increase voter ID requirements, reduce the number/restrict the location of ballot drop boxes, and even prohibit the handing out of bottled water to those voters forced to wait in increasingly long lines.

Opponents point out that these new voter suppression tactics by GOP led state legislatures as blatant attempts to curtail the influence of Black and minority voters who were instrumental in helping Democrats in the 2020 election.

So to the statement , "if you oppose racism, I recommend that you switch parties to the one that has always stood against racism and slavery. Welcome to the GOP!" I reply that I would have joined it in Lincoln's time but now, as I see what is happening with the GOP today and do my research, I say no thanks!

Kim Tidwell
McCall

Register Republican to keep crazies from further influence

As unaffiliated registered voters, my wife and I just registered Republican to vote in this year's primary to add our vote in keeping the "crazies" from any further influence In Idaho leadership positions.

We hope more independent-minded folks and Democrats will do the same. But you must do it soon as our esteemed legislature is attempting to add emergency legislation in restricting the party registration process to no later than March 11, 2022, for a primary scheduled in May.

Gonna keep those non-purified believers in check, you know. We look forward to registering non-affiliated once again post primary.

James F. Miller
Boise and Donnelly

Trident won't be the last hoping to develop endowment lands

On Wednesday, Feb. 9, Brody Aston introduced a new piece of legislation that would significantly change the way the Idaho Department of Lands organizes, hires, and conducts business. Mr. Aston is a lobbyist with Westerberg and Associates working on behalf of Trident Holdings LLC.

Most significantly, House Bill 587 proposes to create a new position responsible for land exchange oversight, select and manage outside experts (including private attorneys), and implement new and undefined hiring standards.

The Idaho Conservation League and Idaho Wildlife Federation, both founding members of United Payette, are tracking the bill's progress, currently in the Resources and Conservation Committee.

It is now abundantly clear that Trident has not given up on its plan to acquire significant lands around Payette Lake, with apparent intentions of developing those lands into resorts, conference centers, and many luxury homes.

Last August IDL rejected Trident's land exchange application, and many Valley County residents, visitors, and lovers of Payette Lake had hoped this particular danger had passed. United Payette, a broad coalition of concerned citizens and organizations, continued working toward a sustainable solution that supports the permanent conservation of the McCall area endowment lands.

United Payette recently signed a memorandum of understanding with Valley County officials which enables a task force, made up of UP members, a county representative and others who represent diverse recreational endeavors, to negotiate with the Idaho Department of Lands to come up with short-term conservation-based solutions for parcels within the McCall endowment lands.

In addition, a local citizens advisory group will be established to help manage any leases UP negotiates for the county. The long-range preservation of endowment lands in the McCall area involving a U.S. Forest Service land exchange is an option being explored, and will take time.

UP is also preparing for the likely auction of Cougar Island this spring or summer. Currently, a Cougar Island task force is exploring conservation-based solutions for the island. Parcel G, located on the east side of Payette Lake and one of the last public access beaches, may also appear on the IDL auction timeline.

Although Trident represents the most recent entity hoping to acquire and develop coveted endowment lands, it won't be the last. Other development interests may come along with more extensive resources and capabilities that could threaten the landscape and water resources that many have used for recreation, hunting, fishing, and solace for generations.

This is why United Payette members and supporters dedicate their time and financial resources to keeping the Payette endowment lands accessible to the public. If you would like to join our effort by contributing either funds, your time, or both, go to our website www.unitedpayette.org or email us at unitedpayette@gmail.com.

We are actively recruiting Parcel G task force members and always appreciate hearing local perspectives that can be incorporated into sustainable long-term solutions.

Julie Manning,
United Payette
Debbie Fereday,
Payette Endowment
Lands Alliance
Randy Fox,
Idaho Conservation
League
Daniel Ritz,
Idaho Wildlife
Federation

MCCALL MUNICIPAL AIRPORT

Airport Master Plan Public Open House

Thursday, March 3rd, 2:00 pm - 5:00 pm

Legion Hall, 216 East Park Street, McCall, ID 83638

The master plan will define the type and extent of development required to accommodate short-term and long-term aviation demand for the McCall Municipal Airport. This meeting will present the draft Airport Master Plan chapters and Airport Layout Plan.

To receive project notifications or additional information, please contact Emily Hart, Airport Manager, City of McCall at 208-634-1488 or ehart@mccall.id.us. You may also visit www.mccall.id.us/departments/Airport/mylmasterplan, the T-O Engineers Project Portal at https://www.to-engineersprojectinfo.com/, or scan the QR code below.

City of McCall

VALLEY COUNTY COMMISSIONER UPDATE

5 things to know this month

1. New Dispatch Center Complete

Valley County has made major improvements to the dispatch center with new equipment and a new home in the Emergency Operations Center. Dispatchers now have four stations on a computer-based radio system to better respond to calls. Previously, Valley County operated with three aging radios. The new equipment has multiple screens that can access a lot of information at one time to help with the speed and accuracy of each response.

Funding was a combination of money from the 911 Trust, grants, federal funds and the county's maintenance budget. Valley County currently employs six dispatchers and has two open positions. For information on applying, visit www.co.valley.id.us.

2. WCM Fiber Network Survey

Valley County is working hard in partnership with the West Central Mountains Fiber Network taskforce to develop a plan and pursue funding to connect ALL of Valley County's 16,000 households and businesses with affordable broadband access.

To help us better understand current speeds, access, and pricing around the Valley, we invite you to take a quick 8-question survey at **www.wcmfiber.com**.

3. New Online Crime Report Form

The Valley County Sheriff's Office launched a new online form available to the public to file reports for incidents occurring in Valley County but outside of McCall city limits. Online forms include: Lost Property, Traffic Collision - non-injury, vehicles have been moved and there is less than $1,500 in damage, Additional Statement Forms for previously reported incidents, Property Requests, Crime Reports, Crime Information Tips, Narcotics Tips, Abandon Vehicles, Fraudulent Use of Credit or Debit Card, and Traffic Complaints.

4. Road Department Inventory Management System Implemented

A new inventory management system recommended by the Road Advisory Committee was approved and is being implemented this month for Road Department inventory, equipment, and parts. This system is part of efforts to set benchmarks for accountability and better monitor use of department assets.

5. Meeting Dashboard

A new feature of our website is the meeting dashboard which aggregates all meeting information for commissioners, P&Z, road advisory, waterways and more. See what's on the calendar and access meeting agendas, packets, and minutes in one place.

YouTube | Stream all public meetings LIVE or watch later
WWW.CO.VALLEY.ID.US
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Want more info?
Sign up for the Commissioner Newsletter on our website: www.co.valley.id.us

COMMENTS SUBMITTED VIA THE ONLINE COMMENT FORM

- The current airport has confusing taxiway names. We currently have Taxiway A and Taxilane A, yet they are 2 different lanes. Same situation with Taxiway and Taxilane B. The master plan will add many new taxiways. I propose we rename Taxilane E to Taxilane Zulu (Z), and rename Taxilanes A,B,C to Taxilanes Yankee (Y), Xray(X), and Whiskey (W). That will allow ample naming of other existing taxiways and future taxiways by either counting up from the existing Taxiways A and B, which are the primary parallel taxiways, or counting down from the Z,Y,X,W nomenclature as the future needs arise.
- Taxilane A currently does not provide sufficient clearance for Hangar users and Aircraft Design Group II aircraft. The current master plan will make this taxilane a major route. Taxilane A should be moved further North in the master plan to allow both ADG II aircraft useage as well as ramp spaces for the adjacent hangars along Taxilane A.
- The master plan should identify locations for snow stowage. An increase in future hangars and taxiways will make snow stowage spaces even more critical than they are currently. Taxiway wingtip clearances can be hazardous when snow stowage builds up. Costs to transport snow offsite will be large, and should be quantified if that option is baselined.
- I appreciate all of the technical requirements to keep this a safe and efficient facility for aviation into the future. I fully trust that there are really smart people involved that will make this happen. I'd like to see how your master plan dovetails in with the vision that is had for the McCall and the surrounding area into the future. The growth that is going on this year will clearly continue and the volumes of visitors will continue to increase. Besides serving those that live and vacation here, how are we envisioning expanding our role and services to enhance our 'gateway to the backcountry' mantra? Right now, the airport feels very utilitarian to me. Which, by the way, is probably appropriate. If McCall and the surrounding area wants to continue to grow as a destination for people to enjoy and spend money in our wonderful environment, then having an inviting, efficient, and effective transportation hub is critical - this is what I can envision for the airport facility. Enough for now. I do look forward to seeing how our community and airport leadership envision the future for McCall and the role that our airport will continue to play. It has always been a significant contributor and should continue to play an important role in our growth and prosperity.
- Regester
- The plan should also include: consideration of realignment of Deinhard Ln to facilitate it becoming SH55; placement and recruitment of complementary business uses; improvements to meet City Code scenic route, design, and development standards; and public amenities development such as public art and historic interpretation.
- Please consider adding width to the existing runway in the future for both added safety margins as well as to enable more of the USFS large airtanker aircraft fleet to operate from McCall and fight the (growing) fire concern in our community as well as our regional area.
- Due the change in aircraft types used by the USFS for fire retardant delivery the McCall Airtanker Base is under-utilized as a reload base for the Large Airtankers because the runway is only 75 feet in width. In the past this was adequate however most aircraft in service and currently under contract (BAe-146 and RJ-85 specifically) have a flight manual requirement to operate from runways of 100 feet in width or more. It currently takes an average of 10-20 minutes longer to dispatch aircraft from Boise, Coeur d'Alene or La Grande, OR for fires that, in the past operated from McCall Airport.
- The benefit to Valley County and the McCall community would be the quicker fire response as well as the added local revenue from lodging, meals and services the aircraft and flight crews would require for support.

- There other factors that also could mean additional benefit that I'd be willing to share if there is an interest in this suggestion and I would be willing to meet with any/all of the McCall Airport Advisory committee to discuss it further. Please contact me if inclined to seek more info or clarification. Thank you for your time and opportunity to comment.
- Removing the diagonal taxiway was the dumbest idea ever and we've already had numerous conflicts as a result.
- It would be great to set aside some land for hangers owned by the city of McCall and leased to tenants. These could be in the form of T-hangers in large rows. You can really pack in a lot of airplanes into a small footprint using these hangers. And they would be a great source of revenue for the city going forward. It would also be nice to have the option to buy private hangers. There are not many available now and they would be in high demand if developed.
- Please make sure to include additional hangers in the plans.
- I would like to see airline service to Seattle and Boise.
- Anything that makes the Trident land grab more of a reality is a firm no. Rich guy fancy pants private planes come to mind...
- Hello. I am looking for a flight that leaves Boise international airport and arrives at McCall municipal airport. Is this possible?
- I am in strong support of extending runway length and adding services to support the addition of commercial flights from major metro airports around the northwest. This would support ongoing economic growth and development of McCall, Donnelly, Brundage, and Tamarack. Thank you for soliciting public input.
- I would like to comment on what I consider an important matter for the Airport Master Plan to address and that is, noise from mainly single engine piston powered propeller driven aircraft. I live approximately 2 air miles southeast of the airport and the low level, full power, maximum RPM takeoffs that fly over my neighborhood is unacceptable and frankly not necessary. As McCall grows so will the number of aircraft using the airport and subsequently the amount of noise produced from aircraft. I think now is the time for the Master Plan to delineate noise sensitive areas, such as residential areas, and come up with a voluntary noise abatement program.

  There are many examples of airports, particularly in resort communities such as McCall, that have implemented such programs. One of the best examples is the Friedman Memorial Airport (SUN) which serves the Sun Valley region. They have preferred hours of operation from 0700-2300 and recommended landing and departure procedures to help with noise abatement. They ask that propeller driven aircraft reduce power and prop RPM as soon as possible after takeoff and fly certain headings until a determined altitude is reached. Compliance with their noise abatement program is voluntary and dependent upon weather, aircraft performance capabilities, and pilot experience among other things.

  If the McCall Airport Master Plan could incorporate a noise abatement plan now it would surely benefit those of us who live here now and those who will move here in the future.

  Thanks for accepting my comments.

U.S. Department
of Transportation
**Federal Aviation
Administration**

Northwest Mountain Region
Colorado · Idaho · Montana · Oregon · Utah
Washington · Wyoming

Helena Airports District Office
2725 Skyway Dr., Suite 2
Helena, MT 59602

November 18, 2020

Rick Stein, Airport Manager
McCall Municipal Airport
216 East Park Street
McCall, ID 83638

McCall Municipal Airport
McCall Airport
Forecast Approval

Dear Mr. Stein:

The Federal Aviation Administration (FAA) reviewed forecast information for the subject airport. The final forecast was received October 1, 2020. The FAA approves the below forecast (Table 4.28) as presented in the Master Plan Forecast Chapter.

The FAA also approves B-II family of aircraft for the existing and future critical aircraft. We found the forecast to be supported by reasonable planning assumptions and current data. Your forecast appears to be developed using acceptable forecasting methodologies.

This forecast was prepared prior to the impacts of COVID-19. The forecast approval is based in reference to the data and methodologies used and the conclusions at the time the document was prepared. However, consideration must still be given to the significant impacts of COVID-19 on aviation activity; as a result, there is lower than normal confidence in future growth projections. FAA approval of the forecast does not provide justification to begin airport development.

The approval of the forecast and critical aircraft does not automatically constitute a commitment on the part of the United States to participate in any development recommended in the master plan or shown on the ALP. Justification for future projects will be made based on activity levels at the time the project is requested for development, rather than this forecast approval. Further documentation of actual activity levels reaching the planning activity levels will be needed prior to FAA participation in funding for eligible projects. Further, the approved forecasts may be subject to additional analysis or the FAA may request a sensitivity analysis if this data is to be used for environmental or Part 150 noise planning purposes.

U.S. Department
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Administration**

Northwest Mountain Region
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Washington · Wyoming

Helena Airports District Office
2725 Skyway Dr., Suite 2
Helena, MT 59602

Table 4.28 Recommended Operations Forecast for McCall Municipal Airport									
Year	Itinerant Air Taxi	Itinerant GA	Itinerant Military	Total Itinerant	Local Civil	Local Military	Total Local	Total Operations	AAGR
2020	6,633	17,058	85	23,776	8,354	0	8,354	32,130	Baseline
2021	7,130	18,337	85	25,553	8,981	0	8,981	34,533	7.48%
2022	7,665	19,713	85	27,463	9,654	0	9,654	37,117	7.48%
2023	7,687	19,768	85	27,540	9,681	0	9,681	37,221	0.28%
2024	7,708	19,823	85	27,616	9,708	0	9,708	37,325	0.28%
2025	7,730	19,879	85	27,694	9,735	0	9,735	37,429	0.28%
2026	7,751	19,934	85	27,771	9,763	0	9,763	37,534	0.28%
2027	7,773	19,990	85	27,848	9,790	0	9,790	37,638	0.28%
2028	7,795	20,046	85	27,926	9,817	0	9,817	37,744	0.28%
2029	7,817	20,102	85	28,004	9,845	0	9,845	37,849	0.28%
2030	7,839	20,159	85	28,082	9,872	0	9,872	37,955	0.28%
2031	7,861	20,215	85	28,161	9,900	0	9,900	38,061	0.28%
2032	7,883	20,272	85	28,239	9,928	0	9,928	38,167	0.28%
2033	7,905	20,328	85	28,318	9,956	0	9,956	38,274	0.28%
2034	7,927	20,385	85	28,397	9,984	0	9,984	38,381	0.28%
2035	7,949	20,442	85	28,476	10,011	0	10,011	38,488	0.28%
2036	7,971	20,500	85	28,556	10,039	0	10,039	38,595	0.28%
2037	7,994	20,557	85	28,636	10,068	0	10,068	38,703	0.28%
2038	8,016	20,615	85	28,716	10,096	0	10,096	38,811	0.28%
2039	8,038	20,672	85	28,796	10,124	0	10,124	38,920	0.28%
2040	8,061	20,730	85	28,876	10,152	0	10,152	39,029	0.28%
CAGR	0.98%	0.98%	0.00%	0.98%	0.98%	0.00%	0.98%	0.98%	

If you have questions, please call me at 406-441-5408.

Sincerely,

KENNETH S EATON
Digitally signed by KENNETH S EATON
Date: 2020.11.18 13:40:09 -07'00'

Scott Eaton
FAA Airport Planner
Helena ADO

T-O ENGINEERS

June 30, 2021

RE: McCall Municipal Airport Master Plan Project

To Whom It May Concern:

T-O Engineers is currently working on an Airport Master Plan for McCall Municipal Airport (MYL) located in McCall, Idaho. The Airport Master Plan is being prepared according to guidance provided in FAA Advisory Circular 150/5070-6B, *Airport Master Plans*.

As a result of this study, the following improvements are under consideration:

- Development of hangars, tie-downs, taxiways, and taxilanes.
- A 402-foot runway extension to the south.
- Relocation of the Automated Surface Observation System (ASOS) to the south end of the airport.
- Expansion of a blast pad.
- A new general aviation terminal and extension of Krahn Lane to the west.
- Land acquisition.
- Extension of wildlife fencing.
- Installation of visual guidance systems.

The Airport Master Plan will include an environmental overview intended to help the airport owner and FAA determine the level of environmental review required for the proposed development. The following categories will be reviewed:

• Air Quality • Biological Resources • Climate • Coastal Resources • Department of Transportation Act: Section 4(f) • Farmlands • Hazardous Materials, Solid Waste, and Pollution Prevention • Historical, Architectural, Archeological, and Cultural Resources	• Land Use • Natural Resources and Energy Supply • Noise and Noise-Compatible Land Use • Socioeconomic Impacts, Environmental Justice, and Children's Health and Safety • Visual Effects • Water Resources • Cumulative Impacts

7950 N. Meadowlark Way, Suite A | Coeur d'Alene, ID 83815 | P: 208.762.3644 | to-engineers.com

T-O ENGINEERS

You may contact me at 208.370.3906 or wreiter@to-engineers.com if you need any further information or if you have any questions. If you observe any omitted agencies or incorrect contacts on the enclosed mailing list, please let me know.

Thank you for your assistance with this project.

Sincerely,

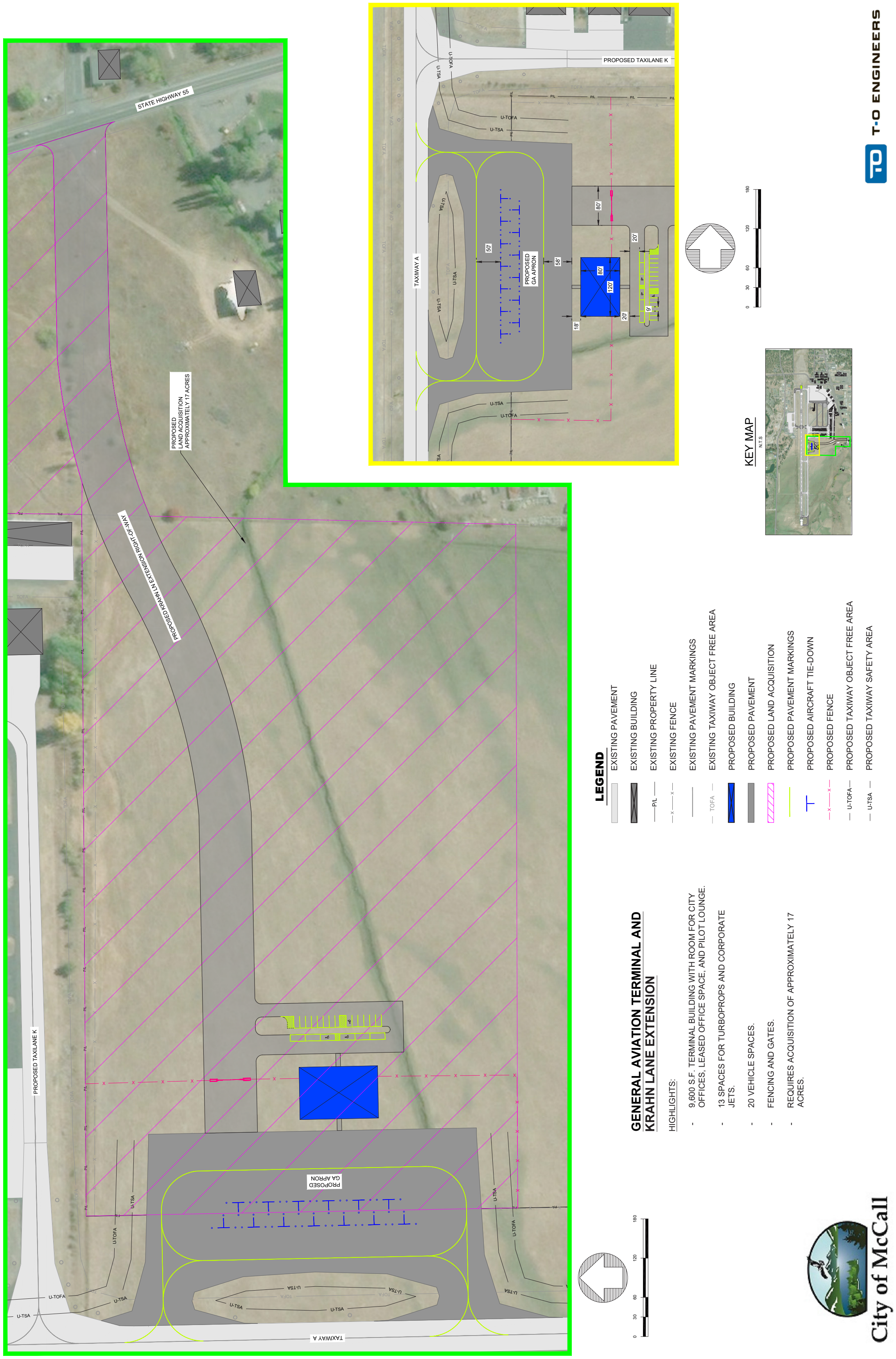
T-O Engineers

Wayne J. Reiter, A.A.E.

Enclosures: Agency Mailing List
Exhibits

7950 N. Meadowlark Way, Suite A | Coeur d'Alene, ID 83815 | P: 208.762.3644 | to-engineers.com

First	Last	Position	Company	Address	City	State	Zip Code	Phone	Email
Tanya	Thrift	District Manager	BLM - Boise District Office	3948 Development Ave.	Boise	ID	83705	208-384-3300	blm_id_boisedistrict@blm.gov
Carla	Wise	Branch Chief - Conservation & Consultation	U.S. Fish and Wildlife Service - Idaho Fish and Wildlife Office	1387 S Vinnell Way, Suite 368	Boise	ID	83709	208-378-5261	carla_wise@fws.gov
Aaron	Scheff	Regional Administrator	Idaho DEQ - Boise Regional Office	1445 N. Orchard St.	Boise	ID	83706	208-373-0420	aaron.scheff@deq.idaho.gov
David	Luft	Air Quality Manager	Idaho DEQ - Boise Regional Office	1445 N. Orchard St.	Boise	ID	83706	208-373-0550	David.Luft@deq.idaho.gov
Lance	Holloway	Surface Water Qualtiy Manager	Idaho DEQ - Boise Regional Office	1445 N. Orchard St.	Boise	ID	83706	208-373-0550	Lance.Holloway@deq.idaho.gov
		Manager	U.S. Army Corps of Engineers - Boise Outreach Office	720 Park Boulevard, Suite 245	Boise	ID	83712	208-433-4464	Boise.Office@usace.army.mil
		Regional Manager	Idaho Fish and Game - Southwest Regional Office - McCall	555 Deinhard Lane	McCall	ID	83638	208-634-8137	
Susan	Sturges	NEPA Reviewer	EPA Region 10 - Idaho Operations Office	1200 6th Ave., Suite 155	Seattle	WA	98101	206-553-2117	sturges.susan@epa.gov
Curtis	Elke	State Conservationist	USDA- Natural Resources Conservation Service	9173 W. Barnes Drive, Suite C	Boise	ID	83709	208-378-5701	curtis.elke@usda.gov
Ashley	Molloy	Historic Preservation Review Officer	State Historic Preservtion Office	210 Main Street	Boise	ID	83702	208-488-7463	ashley.brown@ishs.idaho.gov
Pete	L'Orange	Historic Preservation Planner	State Historic Preservtion Office	210 Main Street	Boise	ID	83702	208-488-7471	pete.lorange@ishs.idaho.gov
Cass	Jones	Stream Channel Protection Specialist	Idaho Department of Water Resources	322 E. Front Street, Suite 648	Boise	ID	83702	208-287-4800	Cass.Jones@idwr.idaho.gov
Linda	Jackson	Forest Supervisor	USFS - Payette National Forest	500 N. Mission St., Building 2	McCall	ID	83638	208-634-0700	brian.d.harris@usda.gov
Anette	Spickard	City Manager	City of McCall	216 East Park Street	McCall	ID	83638	208-634-1003	aspickard@mccall.id.us
Rick	Stein	Airport Manager	City of McCall	336 Deinhard Lane Hanger 100	McCall	ID	83638	208-634-1488	rstein@mccall.id.us
Jennifer	Schildgen	Airport Planner	Idaho Transportation Dept. Aeronautics	3483 Rickenbacker St.	Boise	ID	83705	208-334-8640	Jennifer.Schildgen@itd.idaho.gov


GENERAL AVIATION TERMINAL AND KRAHN LANE EXTENSION
HIGHLIGHTS:
- 9,600 S.F. TERMINAL BUILDING WITH ROOM FOR CITY OFFICES, LEASED OFFICE SPACE, AND PILOT LOUNGE.
- 13 SPACES FOR TURBOPROPS AND CORPORATE JETS.
- 20 VEHICLE SPACES.
- FENCING AND GATES.
- REQUIRES ACQUISITION OF APPROXIMATELY 17 ACRES.
LEGEND
EXISTING PAVEMENT
EXISTING BUILDING
EXISTING PROPERTY LINE
EXISTING FENCE
EXISTING PAVEMENT MARKINGS
EXISTING TAXIWAY OBJECT FREE AREA
PROPOSED BUILDING
PROPOSED PAVEMENT
PROPOSED LAND ACQUISITION
PROPOSED PAVEMENT MARKINGS
PROPOSED AIRCRAFT TIE-DOWN
PROPOSED FENCE
PROPOSED TAXIWAY OBJECT FREE AREA
PROPOSED TAXIWAY SAFETY AREA
STATE HIGHWAY 55
PROPOSED LAND ACQUISITION APPROXIMATELY 17 ACRES
PROPOSED KRAHN LN EXTENSION RIGHT-OF-WAY
PROPOSED TAXILANE K
PROPOSED GA APRON
TAXIWAY A
KEY MAP
T-O ENGINEERS
City of McCall

0 40 80 160 240

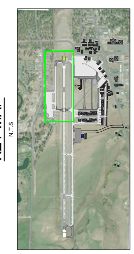
NORTH ALTERNATIVES

HIGHLIGHTS:

- PROPOSED TAXIWAY FILLETS FOR A-2, B-1, AND B2
- PROPOSED REALIGNMENT OF TAXIWAY B-1
- REMOVE WIDE EXPANSE OF PAVEMENT AT TAXIWAY B-1
- INSTALL ELEVATED RUNWAY GUARD LIGHTS AT TAXIWAY A-2 AND B-2
- EXPAND BLAST PAD
- NEW 4-LIGHT PRECISION APPROACH PATH INDICATOR (PAPI)
- UPGRADE RUNWAY LIGHTS TO LED

KEY MAP

N.T.S

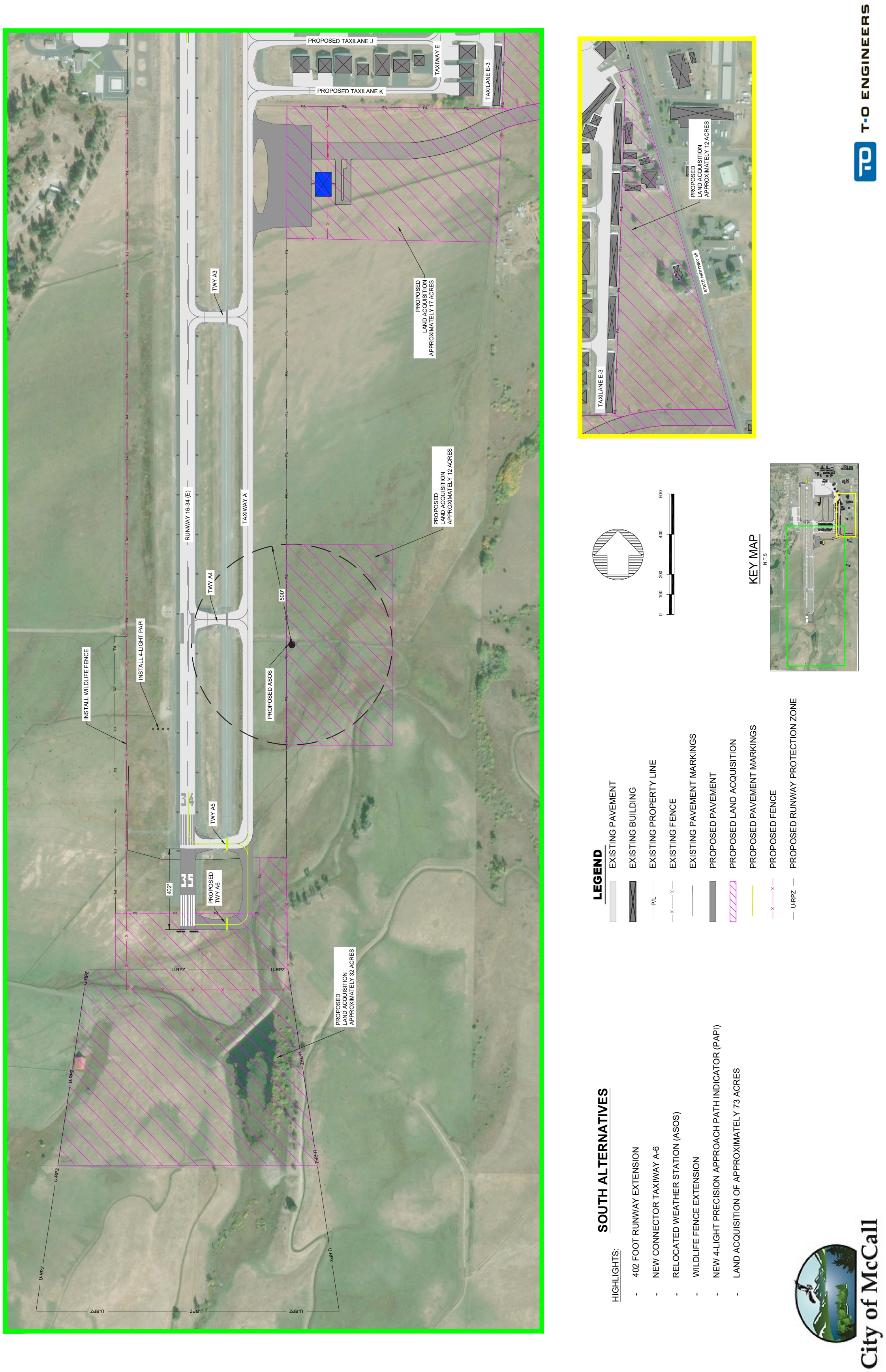


LEGEND

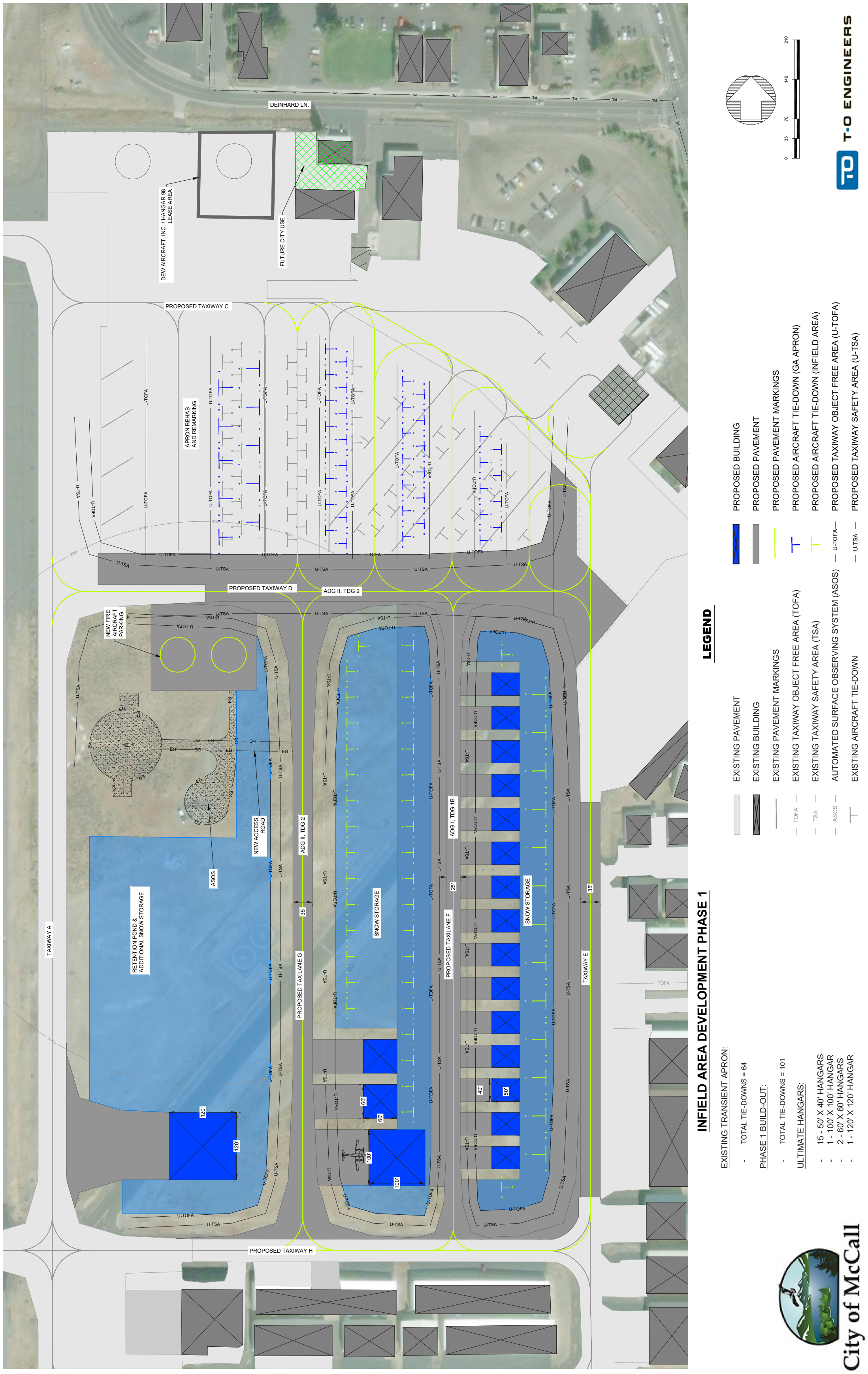
- EXISTING PAVEMENT
- EXISTING BUILDING
- EXISTING PROPERTY LINE
- EXISTING FENCE
- EXISTING PAVEMENT MARKINGS
- PROPOSED PAVEMENT
- PROPOSED PAVEMENT MARKINGS

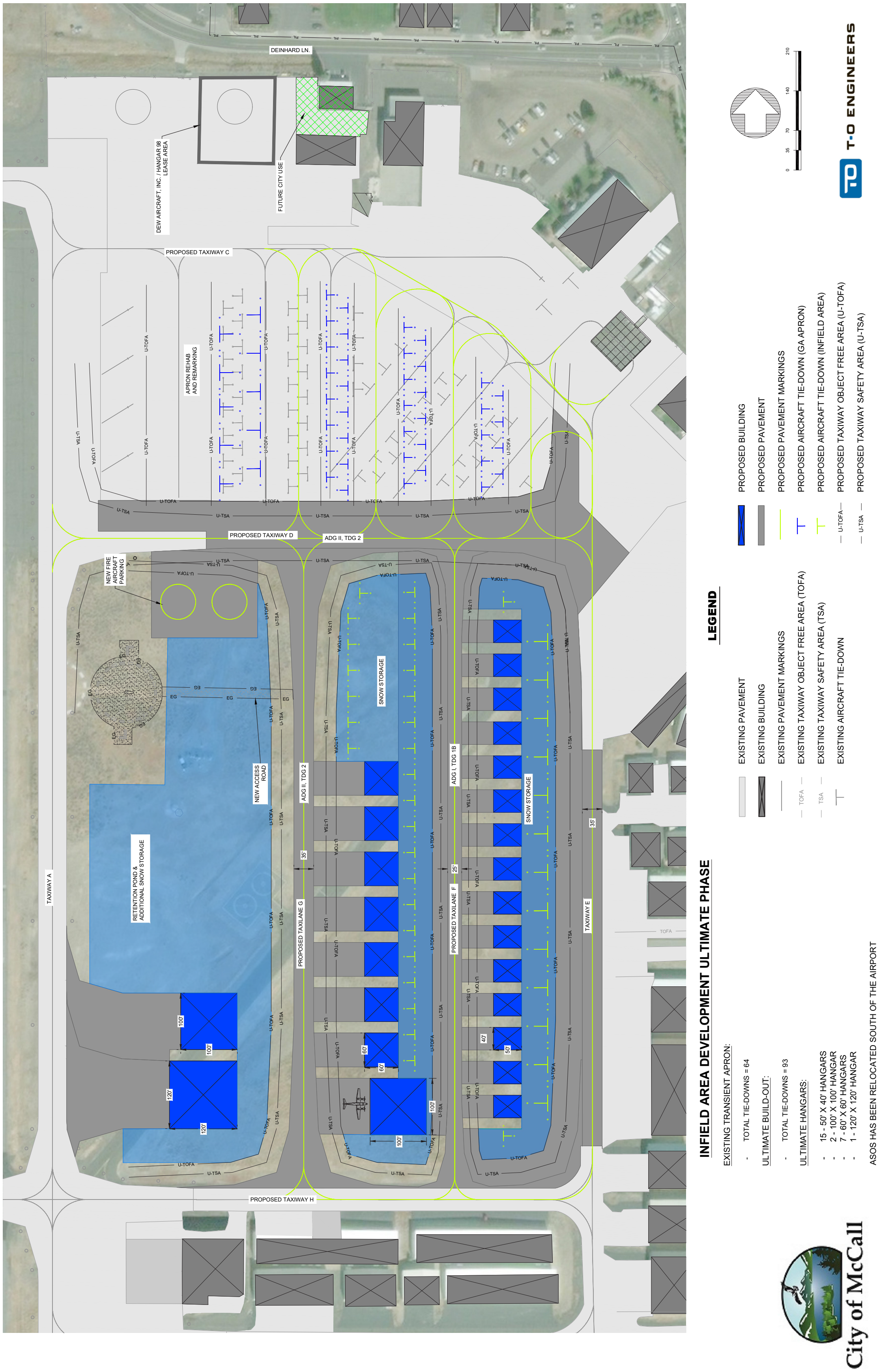
City of McCall

T-O ENGINEERS


PROPOSED TAXILANE J
PROPOSED TAXILANE K
TAXIWAY E
TAXILANE E-3
TWY A3
PROPOSED LAND ACQUISITION APPROXIMATELY 17 ACRES
RUNWAY 16-34 (E)
TAXIWAY A
PROPOSED LAND ACQUISITION APPROXIMATELY 12 ACRES
TWY A4
500'
INSTALL 4-LIGHT PAPI
INSTALL WILDLIFE FENCE
PROPOSED ASOS
TWY A5
402'
PROPOSED TWY A6
PROPOSED LAND ACQUISITION APPROXIMATELY 32 ACRES
U-RPZ
TAXILANE E-3
PROPOSED LAND ACQUISITION APPROXIMATELY 12 ACRES
STATE HIGHWAY 55
0
100
200
400
800
KEY MAP
N.T.S.
LEGEND
EXISTING PAVEMENT
EXISTING BUILDING
EXISTING PROPERTY LINE
EXISTING FENCE
EXISTING PAVEMENT MARKINGS
PROPOSED PAVEMENT
PROPOSED LAND ACQUISITION
PROPOSED PAVEMENT MARKINGS
PROPOSED FENCE
PROPOSED RUNWAY PROTECTION ZONE
SOUTH ALTERNATIVES
HIGHLIGHTS:
- 402 FOOT RUNWAY EXTENSION
- NEW CONNECTOR TAXIWAY A-6
- RELOCATED WEATHER STATION (ASOS)
- WILDLIFE FENCE EXTENSION
- NEW 4-LIGHT PRECISION APPROACH PATH INDICATOR (PAPI)
- LAND ACQUISITION OF APPROXIMATELY 73 ACRES
T-O ENGINEERS
City of McCall


TAXIWAY / TAXILANE NOMENCLATURE
LEGEND
EXISTING PAVEMENT
EXISTING BUILDING
EXISTING PROPERTY LINE
EXISTING FENCE
EXISTING PAVEMENT MARKINGS
PROPOSED PAVEMENT
PROPOSED PAVEMENT MARKINGS
T-O ENGINEERS
City of McCall
TWY B1
TWY A1
PROPOSED TAXIWAY C
PROPOSED TAXIWAY D
TAXIWAY B
PROPOSED TXL G
PROPOSED TXL F
TAXIWAY E
TAXILANE E1
TWY A2
PROPOSED TAXIWAY H
TAXILANE E-3
TWY B2
PROPOSED TAXILANE J
PROPOSED TAXILANE K
TAXILANE E2
TWY A3
TAXIWAY A
TWY A4
TWY A5
PROPOSED TWY A6
0
100
200
400
600


INFIELD AREA DEVELOPMENT PHASE 1
EXISTING TRANSIENT APRON:
TOTAL TIE-DOWNS = 64
PHASE 1 BUILD-OUT:
TOTAL TIE-DOWNS = 101
ULTIMATE HANGARS:
15 - 50' X 40' HANGARS
1 - 100' X 100' HANGAR
2 - 60' X 60' HANGARS
1 - 120' X 120' HANGAR
LEGEND
EXISTING PAVEMENT
EXISTING BUILDING
EXISTING PAVEMENT MARKINGS
EXISTING TAXIWAY OBJECT FREE AREA (TOFA)
EXISTING TAXIWAY SAFETY AREA (TSA)
AUTOMATED SURFACE OBSERVING SYSTEM (ASOS)
EXISTING AIRCRAFT TIE-DOWN
PROPOSED BUILDING
PROPOSED PAVEMENT
PROPOSED PAVEMENT MARKINGS
PROPOSED AIRCRAFT TIE-DOWN (GA APRON)
PROPOSED AIRCRAFT TIE-DOWN (INFIELD AREA)
PROPOSED TAXIWAY OBJECT FREE AREA (U-TOFA)
PROPOSED TAXIWAY SAFETY AREA (U-TSA)
DEINHARD LN.
DEW AIRCRAFT, INC. / HANGAR 98 LEASE AREA
FUTURE CITY USE
PROPOSED TAXIWAY C
APRON REHAB AND REMARKING
PROPOSED TAXIWAY D
ADG II, TDG 2
NEW FIRE AIRCRAFT PARKING
NEW ACCESS ROAD
ASOS
RETENTION POND & ADDITIONAL SNOW STORAGE
TAXIWAY A
PROPOSED TAXILANE G
SNOW STORAGE
ADG I, TDG 1B
PROPOSED TAXILANE F
TAXIWAY E
PROPOSED TAXIWAY H
T-O ENGINEERS
City of McCall


INFIELD AREA DEVELOPMENT ULTIMATE PHASE
EXISTING TRANSIENT APRON:
- TOTAL TIE-DOWNS = 64
ULTIMATE BUILD-OUT:
- TOTAL TIE-DOWNS = 93
ULTIMATE HANGARS:
- 15 - 50' X 40' HANGARS
- 2 - 100' X 100' HANGAR
- 7 - 60' X 60' HANGARS
- 1 - 120' X 120' HANGAR
ASOS HAS BEEN RELOCATED SOUTH OF THE AIRPORT
LEGEND
EXISTING PAVEMENT
EXISTING BUILDING
EXISTING PAVEMENT MARKINGS
EXISTING TAXIWAY OBJECT FREE AREA (TOFA)
EXISTING TAXIWAY SAFETY AREA (TSA)
EXISTING AIRCRAFT TIE-DOWN
PROPOSED BUILDING
PROPOSED PAVEMENT
PROPOSED PAVEMENT MARKINGS
PROPOSED AIRCRAFT TIE-DOWN (GA APRON)
PROPOSED AIRCRAFT TIE-DOWN (INFIELD AREA)
PROPOSED TAXIWAY OBJECT FREE AREA (U-TOFA)
PROPOSED TAXIWAY SAFETY AREA (U-TSA)
T-O ENGINEERS
City of McCall
DEINHARD LN.
PROPOSED TAXIWAY C
PROPOSED TAXIWAY D
PROPOSED TAXIWAY H
TAXIWAY A
TAXIWAY E
SNOW STORAGE
RETENTION POND & ADDITIONAL SNOW STORAGE

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1445 N Orchard Street, Boise, ID 83706
(208) 373-0550

Brad Little, Governor
Jess Byrne, Director

July 16, 2021

By e-mail: wreiter@to-engineers.com

T-O Engineers
7950 N. Meadowlark Way, Suite A
Coeur d'Alene, Idaho 83815

Subject: McCall Municipal Airport Master Plan Project

Dear Mr. Reiter:

Thank you for the opportunity to respond to your request for comment. While DEQ does not review projects on a project-specific basis, we attempt to provide the best review of the information provided. DEQ encourages agencies to review and utilize the Idaho Environmental Guide to assist in addressing project-specific conditions that may apply. This guide can be found at: https://www.deq.idaho.gov/public-information/assistance-and-resources/outreach-and-education/.

The following information does not cover every aspect of this project; however, we have the following general comments to use as appropriate:

1. **AIR QUALITY**

- Please review IDAPA 58.01.01 for all rules on Air Quality, especially those regarding fugitive dust (58.01.01.651), trade waste burning (58.01.01.600-617), and odor control plans (58.01.01.776).

- All property owners, developers, and their contractor(s) must ensure that reasonable controls to prevent fugitive dust from becoming airborne are utilized during all phases of construction activities per IDAPA 58.01.01.651.

- DEQ recommends the city/county require the development and submittal of a dust prevention and control plan for all construction projects prior to final plat approval. Dust prevention and control plans incorporate appropriate best management practices to control fugitive dust that may be generated at sites.

- Citizen complaints received by DEQ regarding fugitive dust from development and construction activities approved by cities or counties will be referred to the city/county to address under their ordinances.

Response to Request for Comment
July 16, 2021
Page 2

- Per IDAPA 58.01.01.600-617, the open burning of any construction waste is prohibited. The property owner, developer, and their contractor(s) are responsible for ensuring no prohibited open burning occurs during construction.
- For questions, contact David Luft, Air Quality Manager, at (208) 373-0550.

2. WASTEWATER AND RECYCLED WATER

- DEQ recommends verifying that there is adequate sewer to serve this project prior to approval. Please contact the sewer provider for a capacity statement, declining balance report, and willingness to serve this project.
- IDAPA 58.01.16 and IDAPA 58.01.17 are the sections of Idaho rules regarding wastewater and recycled water. Please review these rules to determine whether this or future projects will require DEQ approval. IDAPA 58.01.03 is the section of Idaho rules regarding subsurface disposal of wastewater. Please review this rule to determine whether this or future projects will require permitting by the district health department.
- All projects for construction or modification of wastewater systems require preconstruction approval. Recycled water projects and subsurface disposal projects require separate permits as well.
- DEQ recommends that projects be served by existing approved wastewater collection systems or a centralized community wastewater system whenever possible. Please contact DEQ to discuss potential for development of a community treatment system along with best management practices for communities to protect ground water.
- DEQ recommends that cities and counties develop and use a comprehensive land use management plan, which includes the impacts of present and future wastewater management in this area. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation.

  For questions, contact Valerie Greear, Water Quality Engineering Manager at (208) 373-0550.

3. DRINKING WATER

- DEQ recommends verifying that there is adequate water to serve this project prior to approval. Please contact the water provider for a capacity statement, declining balance report, and willingness to serve this project.
- IDAPA 58.01.08 is the section of Idaho rules regarding public drinking water systems. Please review these rules to determine whether this or future projects will require DEQ approval.
- All projects for construction or modification of public drinking water systems require preconstruction approval.
- DEQ recommends verifying if the current and/or proposed drinking water system is a regulated public drinking water system (refer to the DEQ website at: https://www.deq.idaho.gov/water-quality/drinking-water/. For non-regulated systems, DEQ recommends annual testing for total coliform bacteria, nitrate, and nitrite.

- If any private wells will be included in this project, we recommend that they be tested for total coliform bacteria, nitrate, and nitrite prior to use and retested annually thereafter.
- DEQ recommends using an existing drinking water system whenever possible or construction of a new community drinking water system. Please contact DEQ to discuss this project and to explore options to both best serve the future residents of this development and provide for protection of ground water resources.
- DEQ recommends cities and counties develop and use a comprehensive land use management plan which addresses the present and future needs of this area for adequate, safe, and sustainable drinking water. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation.

  For questions, contact Valerie Greear, Water Quality Engineering Manager at (208) 373-0550.

4. SURFACE WATER

- Please contact DEQ to determine whether this project will require an Idaho Pollution Discharge Elimination System (IPDES) Permit. A Construction General Permit from DEQ may be required if this project will disturb one or more acres of land, or will disturb less than one acre of land but are part of a common plan of development or sale that will ultimately disturb one or more acres of land.
- For questions, contact James Craft, IPDES Compliance Supervisor, at (208) 373-0144.
- If this project is near a source of surface water, DEQ requests that projects incorporate construction best management practices (BMPs) to assist in the protection of Idaho's water resources. Additionally, please contact DEQ to identify BMP alternatives and to determine whether this project is in an area with Total Maximum Daily Load stormwater permit conditions.
- The Idaho Stream Channel Protection Act requires a permit for most stream channel alterations. Please contact the Idaho Department of Water Resources (IDWR), Western Regional Office, at 2735 Airport Way, Boise, or call (208) 334-2190 for more information. Information is also available on the IDWR website at: https://idwr.idaho.gov/streams/stream-channel-alteration-permits.html
- The Federal Clean Water Act requires a permit for filling or dredging in waters of the United States. Please contact the US Army Corps of Engineers, Boise Field Office, at 10095 Emerald Street, Boise, or call 208-345-2155 for more information regarding permits.

  For questions, contact Lance Holloway, Surface Water Manager, at (208) 373-0550.

5. SOLID WASTE, HAZARDOUS WASTE AND GROUND WATER CONTAMINATION

- **Solid Waste.** No trash or other solid waste shall be buried, burned, or otherwise disposed of at the project site. These disposal methods are regulated by various state regulations including Idaho's Solid Waste Management Regulations and Standards (IDAPA 58.01.06), Rules and Regulations for Hazardous Waste (IDAPA 58.01.05), and Rules and Regulations for the

Response to Request for Comment
July 16, 2021
Page 4

Prevention of Air Pollution (IDAPA 58.01.01). Inert and other approved materials are also defined in the Solid Waste Management Regulations and Standards

- **Hazardous Waste.** The types and number of requirements that must be complied with under the federal Resource Conservations and Recovery Act (RCRA) and the Idaho Rules and Standards for Hazardous Waste (IDAPA 58.01.05) are based on the quantity and type of waste generated. Every business in Idaho is required to track the volume of waste generated, determine whether each type of waste is hazardous, and ensure that all wastes are properly disposed of according to federal, state, and local requirements.
- **Water Quality Standards.** Site activities must comply with the Idaho Water Quality Standards (IDAPA 58.01.02) regarding hazardous and deleterious-materials storage, disposal, or accumulation adjacent to or in the immediate vicinity of state waters (IDAPA 58.01.02.800); and the cleanup and reporting of oil-filled electrical equipment (IDAPA 58.01.02.849); hazardous materials (IDAPA 58.01.02.850); and used-oil and petroleum releases (IDAPA 58.01.02.851 and 852). Petroleum releases must be reported to DEQ in accordance with IDAPA 58.01.02.851.01 and 04. Hazardous material releases to state waters, or to land such that there is likelihood that it will enter state waters, must be reported to DEQ in accordance with IDAPA 58.01.02.850.
- **Ground Water Contamination.** DEQ requests that this project comply with Idaho's Ground Water Quality Rules (IDAPA 58.01.11), which states that "No person shall cause or allow the release, spilling, leaking, emission, discharge, escape, leaching, or disposal of a contaminant into the environment in a manner that causes a ground water quality standard to be exceeded, injures a beneficial use of ground water, or is not in accordance with a permit, consent order or applicable best management practice, best available method or best practical method."

  For questions, contact Albert Crawshaw, Waste & Remediation Manager, at (208) 373-0550.

6. ADDITIONAL NOTES

- If an underground storage tank (UST) or an aboveground storage tank (AST) is identified at the site, the site should be evaluated to determine whether the UST is regulated by DEQ. EPA regulates ASTs. UST and AST sites should be assessed to determine whether there is potential soil and ground water contamination. Please call DEQ at (208) 373-0550, or visit the DEQ website https://www.deq.idaho.gov/waste-management-and-remediation/storage-tanks/leaking-underground-storage-tanks-in-idaho/ for assistance.
- If applicable to this project, DEQ recommends that BMPs be implemented for any of the following conditions: wash water from cleaning vehicles, fertilizers and pesticides, animal facilities, composted waste, and ponds. Please contact DEQ for more information on any of these conditions.

Response to Request for Comment
July 16, 2021
Page 5

We look forward to working with you in a proactive manner to address potential environmental impacts that may be within our regulatory authority. If you have any questions, please contact me, or any of our technical staff at (208) 373-0550.

Sincerely,

Aaron Scheff
Regional Administrator
DEQ-Boise Regional Office

EDMS#: 2021AEK136

Chapter 6
CIVIC, AIRPORT AND AGRICULTURE/FOREST ZONES

3.6.01: PURPOSE:

The McCall area comprehensive plan identifies the importance of a variety of land uses including public uses. It is the purpose of this chapter to implement the plan's vision through development regulations that allow for a range of public lands, buildings and services designed to be compatible in scale and character with their surrounding environment.

(A) Agriculture And Forest (AF) Zone: The AF land use designation is intended to provide a designation for agricultural areas, including forestlands, within the city. Some of these lands may be held in public ownership.

(B) Civic Use (CV) Zone: The CV land use designation is intended to provide for governmental offices and other civic facilities. This includes governmental, cultural and recreational facilities. Mixed use is allowed in combination with public uses.

(C) Airport (AP) Zone: The AP land use designation is intended for airport and aviation use by the McCall Municipal Airport and the surrounding related facilities and properties to implement the objectives of the McCall Municipal Airport Master Plan. Within the AP zone there is an Airport Perimeter (APP) zone which includes the land 150 feet from the interior edge of the AP zone. The Airport Internal (API) zone includes all other land in the AP zone that is internal to the APP zone. (Ord. 821, 2-23-2006, eff. 3-16-2006; amd. Ord 984, 12-19-2019, eff. 1-1-2020)

3.6.02: PERMITTED AND CONDITIONALLY PERMITTED USES WITHIN PUBLIC ZONES:

(A) Permitted And Conditionally Permitted Uses: Table 3.6.02, identifies the permitted and conditionally permitted uses within the Public Zones. The primary uses identified in table 3.6.02 of this section shall be permitted or conditionally permitted as indicated:

P: Where the symbol P appears, the use shall be permitted.

A: Where the symbol A appears, the use may be permitted subject to the issuance of an administrative permit in accordance with section 3.13.01 of this title.

C: Where the symbol C appears, the use may be permitted subject to the issuance of a conditional use permit in accordance with section 3.13.03, "Conditional Use Permit Standards", of this title.

No symbol, or a dash: The use is not permitted. (Ord. 821, 2-23-2006, eff. 3-16-2006)

TABLE 3.6.02
PERMITTED AND CONDITIONALLY PERMITTED USES
WITHIN PUBLIC ZONES

Allowed Use	AF	CV	AP
Accessory structure >1,500 square feet	A	A	A
Aeronautical	-	-	P
Agricultural service establishment	C	-	-
Agricultural structure	A	-	-
Agricultural use	P	-	-
Airport (public ownership)	C	-	P
Animals, small farm animals	P	A	-
Assembly plant (light manufacturing)	-	-	C
Camp	P	-	-
Cemetery	C	P	-
Church	C	C	-
Club or lodge or social hall	C	C	-
College or university	-	C	C
Conference or convention center	C	C	-
Dwelling, caretaker for an approved use	A	A	-
Dwelling, single-family detached	C	P	-
Dwelling unit[1]	-	C	-
Dwelling unit, local housing	A	A	A
Golf course and country club	C	C	-
Hospital or clinic	C	A	-
Hotel, motel, lodge	C	C	-

Kennel	A	-	-
Large scale retail business[3]	-	-	-
Livestock facility .300 AU	C	-	-
Manufacturing facility (light)	-	C	C
Mixed use[4,5]	-	C	-
Mortuary	C	A	-
Museum	C	C	C
Nursery, wholesale (only)	P	-	-
Nursing facility, skilled	-	A	-
Office building or use, relating to an approved development	C	A	C
Office, temporary construction	A	A	A
Park, public	C	P	-
Pit, mine, or quarry	C	-	C
Portable classroom	A	A	-
Post office or mail delivery service	-	A	-
Power plant	C	C	C
Professional offices or buildings	-	A	C
Public or quasi-public use	C	P	C
Public service facility	C	C	C
Research and development facility	-	C	C
Restaurant	-	C	C
Restaurant, formula[6]	-	C	C
Retail, formula[2]	-	C	-
Roadside produce stand	A	A	-
Sanitary landfill, restricted	C	A	-
School, public or private, including vocational	C	C	C
Soil or water remediation	C	-	-

Stable or riding school, commercial	C	C	-
Storage building and yard	C	C	C
Swimming pool, private or public	A	A	-
Temporary living quarters	A	A	C
Tower or antenna structure, commercial	C	C	C
Tower or antenna structure, private	A	A	C
Warehousing facility	-	-	C
Winery	C	-	-

Notes:
1.Housing must be a part of a mixed use project.
2.See section 3.8.18 of this title for limitations on retail, formula.
3See subsection 3.8.02(E) of this title.
4.Residential uses are permitted in mixed use building when the primary use of the ground floor is a nonresidential use allowed in the CV zone.
5.Multi-family housing must be a part of a mixed use project.
6.See section 3.8.17 of this title for limitations on restaurants, formula.

(B) All uses not listed in table 3.6.02 of this section shall require review by the Planning and Zoning Commission and a conditional use permit.

(C) All uses, except for those allowed by subsection 3.8.01(H), "Outdoor Display Areas", section 3.8.05, "Temporary Storage and Merchandising Facilities not to Become Permanent", of this title, and aircraft parking and light maintenance in the AP Zone- shall be conducted within enclosed structures. (Ord. 875, 5-27-2010; amd. Ord. 983, 12-19-2019, eff. 1-1-2020; Ord. 984, 12-19-2019, eff. 1-1-2020)

3.6.03: PUBLIC ZONES DEVELOPMENT STANDARDS:

The following property development standards shall apply to all land and permitted or conditionally permitted buildings located within their respective zones:

(A) Table 3.6.03 identifies the dimensional standards required within the public zones.

TABLE 3.6.03
DIMENSIONAL STANDARDS FOR PUBLIC ZONES

Dimensional Standards	AF	CV	AP	APP
Minimum property size	40 acres	3,000 square feet		
Minimum lease size	--	--	1,500 square feet	10,000 square feet
Minimum street frontage	n/a	50		75
Minimum setback from (in feet)[1]				
1. Arterial, collector, or section line street	30 ft.	0		
2. Other roadway	25 ft.	0		
3. Property line not fronting a roadway[2]	50 ft.	0		
Maximum site coverage of structures	5%	80%	100%	100%
Maximum height[3]	35 ft.	50 ft.	60 ft.	60 ft.
Minimum property width	100 ft.	30 ft.		
Minimum distance between structures			10 ft.	10 ft.
Landscaped buffer				20 ft.

Notes:
1.See section 3.7.03, "Scenic Route Zone", of this title.
2.Setbacks abutting a residential zone are the same as the residential zone setback to the subject property line.
3.Building heights adjacent to residential zones shall conform to the building height stepback requirements in section 3.8.14 of this title.

(B) FAA Airport Design standards identified in the current edition of Federal Aviation Administration (FAA) Advisory Circular 150/5300-13 Airport Design shall be adhered to when determining leaseholds and siting structures in the AP Zone.

(C) All buildings with a height over 35 feet shall require a conditional use permit and conform with the building stepback standards in chapter 8, "General Development Standards", of this title.

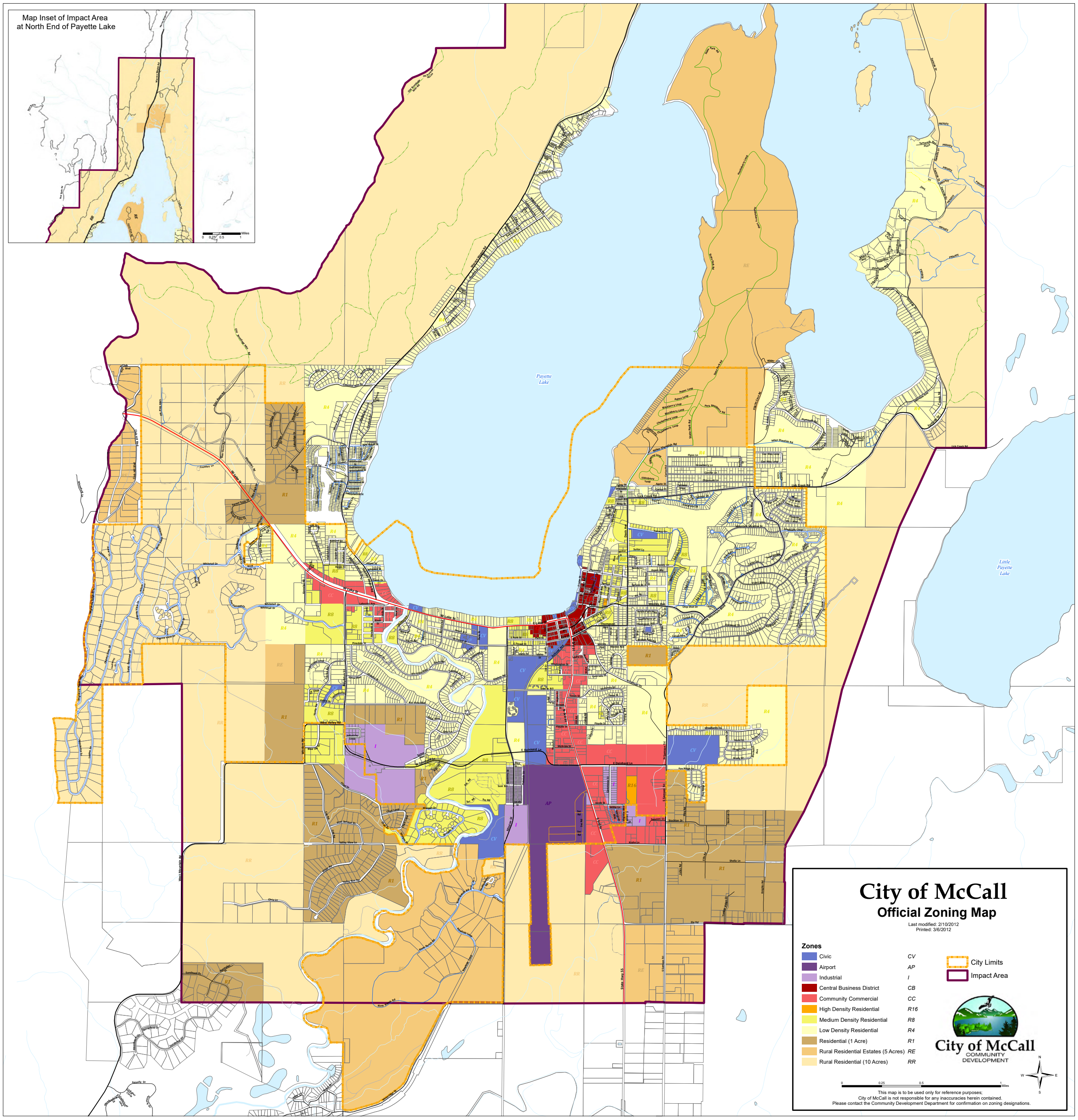
(D) Exception to the development standards may be allowed through the provisions of a planned unit development as set forth in Chapter 10 of this Title.

(E) Sidewalks, curbs and gutters may be required if specified in a development agreement as provided for in Title 9 "Subdivision and Development" of this code.

(F) Fending shall be in accordance with permitted forms for the applicable zone; see chapter 8, "General Development Standards", of this title and Title 9 "Subdivision and Development" of this code. In the AP Zone, fencing will be built to standards outlined in the current edition of FAA Advisory Circular AC 150/5370-10 Standards for Specifying Construction of Airports, where identified as necessary to comply with FAA grant assurances.

(G) City projects shall be built to sustainable construction standards as defined by Title 2, BUILDING REGULATIONS.

(H) Design review is required as provided for in chapter 16 "Design Review" of this title, except within the AP Zone. (Ord. 864, 2-12-2009; amd. Ord. 984, 12-19-2019, eff. 1-1-2020)


Map Inset of Impact Area
at North End of Payette Lake
Warren Wagon Rd
RR
RE
State Park Rd
E Side Rd
Miles
0 0.25 0.5 1
Payette Lake
Little Payette Lake
City of McCall
Official Zoning Map
Last modified: 2/10/2012
Printed: 3/6/2012
Zones
Civic CV
Airport AP
Industrial I
Central Business District CB
Community Commercial CC
High Density Residential R16
Medium Density Residential R8
Low Density Residential R4
Residential (1 Acre) R1
Rural Residential Estates (5 Acres) RE
Rural Residential (10 Acres) RR
City Limits
Impact Area
City of McCall
COMMUNITY DEVELOPMENT
N
W
E
S
0 0.25 0.5 1 Miles
This map is to be used only for reference purposes;
City of McCall is not responsible for any inaccuracies herein contained.
Please contact the Community Development Department for confirmation on zoning designations.

3.7.05 McCALL MUNICIPAL AIRPORT INFLUENCE OVERLAY ZONES:

3.7.050 PURPOSE:

The purpose of the McCall Municipal Airport Influence Overlay Zones is to implement the goals and policies of the McCall Area Comprehensive Plan and the McCall Municipal Airport Master Plan:

(A) To proactively protect the health, safety and general welfare and property of the users of the airport and the property and inhabitants in the airport vicinity;

(B) To operate, maintain, and develop the McCall Municipal Airport to ensure safe and efficient aeronautical facilities for all aviation users per City and FAA standards and requirements and in manner that it remains a safe neighbor to surrounding land uses; and

(C) To provide for land uses that are compatible with the airport operations, approach zones and aircraft noise. (Ord. 984, 12-19-2019, eff. 1-1-2020)

3.7.051 AIRPORT OPERATION PROTECTION ZONES:

(A) Purpose: Airport operation protection zones are established to protect the existing and future instrument approach minimums of the airport and maintain safe operation of the airport for landing, takeoff and maneuvering of aircraft. These zones do so by preventing the creation of hazards and nuisances to air navigation including obstructions and lighting.

(B) Applicability: In order to carry out these purposes, all of the land lying beneath the approach surfaces, transitional surfaces, horizontal surfaces, and conical surfaces as they apply to the McCall Municipal Airport shall be protected. Such zones are designated on "the current approach plan included in the Airport Layout Plan set included in the Airport Master Plan", incorporated herein by reference. An area located in more than one of the zones shall be subject to the more restrictive height limitation.

(C) Establishment of Zones: The various zones are hereby established and defined as follows:

1. Utility Runway Non-Precision Instrument Approach Zone: The inner edge of this approach zone coincides with the width of the primary surface and is five hundred feet (500') wide. The approach zone expands outward uniformly to a width of two thousand feet (2,000') at a horizontal distance of five thousand feet (5,000') from the primary surface. Its centerline is the continuation of the centerline of the runway.

2. Horizontal Zone: The horizontal zone is established by swinging arcs of five thousand feet (5,000') radii from the center of each end of the primary surface of each runway and connecting the adjacent arcs by drawing lines tangent to those arcs. The horizontal zone does not include the approach and transitional zones.

3. Conical Zone: The conical zone is established as the area that commences at the periphery of the horizontal zone and extends outward there from a horizontal distance of four thousand feet (4,000').

(D) Height Limitations: No structure shall be erected, altered, or maintained, and no tree shall be allowed to grow in any zone created by this section to a height in excess of the applicable height limit herein established for such zone. Such applicable height limitations are hereby established for each of the zones in question as follows:

1. Utility Runway Non-Precision Instrument Approach Zone: Slopes thirty-four feet (34') outward for each foot upward beginning at the end of and at the same elevation as the primary surface and extending to a horizontal distance of five thousand feet (5,000') along the extended runway centerline.

2. Transitional Zones:

a. Slope seven feet (7') outward for each foot upward beginning at the sides of and at the same elevation as the primary surface and the approach surface, and extending to a height of one hundred fifty feet (150') above the airport elevation which is five thousand twenty one feet (5,021') above mean sea level.

b. Height limits sloping seven feet (7') outward for each foot upward beginning at the sides of and at the same elevation as the approach surface and extending to where they intersect the conical surface.

c. Where the precision instrument runway approach zone projects beyond the conical zone, there are established height limits sloping seven feet (7') outward for each foot upward beginning at the sides of and at the same elevation as the approach surface, and extending a horizontal distance of ten thousand feet (10,000') measured at ninety degree (90°) angles to the extended runway centerline.

3. Horizontal Zone: Established at one hundred fifty feet (150') above the airport elevation or at a height of five thousand one hundred seventy-one feet (5,171') above mean sea level.

4. Conical Zone: Slopes twenty feet (20') outward for each foot upward beginning at the periphery of the horizontal zone and at one hundred fifty feet (150') above the airport elevation and extending to a height of three hundred fifty feet (350') above the airport elevation.

(E) Use Restrictions:

1. No use may be made of land or water within any zone established by this section in such a manner as to create electrical interference with navigational signals or radio communication between the airport and aircraft, make it difficult for pilots to distinguish between airport lights and other objects, result in glare in the eyes of pilots using the airport, impair visibility or ability to acquire and maintain visual acquisition of the airfield in the vicinity of the airport, create bird strike hazards, or otherwise in any way endanger or interfere with the landing, takeoff, or maneuvering of aircraft intending to use the airport.

2. The owner of any existing nonconforming structure or tree is required to permit the installation, operation, and maintenance markers and lights deemed necessary by the airport manager to indicate to the operators of aircraft in the vicinity of the airport the

presence of such airport obstruction. Markers and lights shall be installed, operated and maintained at the expense of the city.

(F) Permits Required:

1. Future Uses: Except as specifically provided in subsections a, b, and c of this section, no material change shall be made in the use of land, no structure shall be erected or otherwise established, and no tree shall be planted in any operation protection zone unless a permit is applied for and granted by the McCall Municipal Airport Manager. Each application for a permit shall indicate the purpose for which the permit is desired, in sufficient details to determine whether the use, structure, or tree would conform to these regulations. If such determination is in the affirmative, the permit shall be granted.

a. In the area lying within the limits of the horizontal zone and conical zone, no permit shall be required for any tree or structure less than seventy five feet (75') of vertical height above the ground, except when, because of terrain, land contour, or topographic features, such tree or structure would extend above the height limits prescribed for such zones.

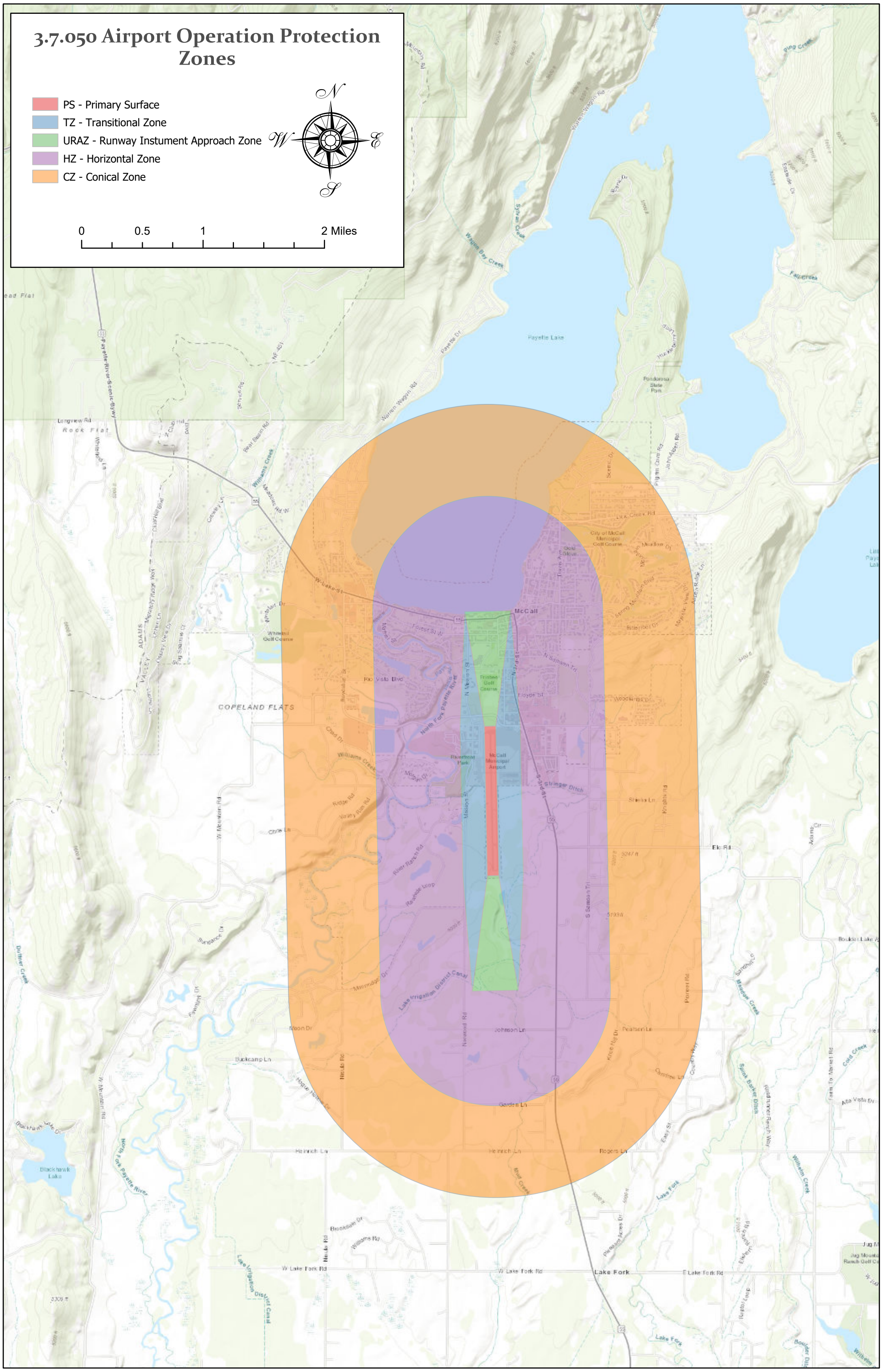
b. In areas lying within the limits of the approach zones, but at a horizontal distance of not less than four thousand two hundred feet (4,200') from each end of the runway, no permit shall be required for any tree or structure less than seventy five feet (75') of vertical height above the ground, except when such tree or structure would extend above the height limit prescribed for such approach zones.

c. In the areas lying within the limits of the transition zones beyond the perimeter of the horizontal zone, no permit shall be required for any tree or structure less than seventy five feet (75') of vertical height above the ground, except when such tree or structure, because of terrain, land contour, or topographic features, would extend above the height limit prescribed for such transition zones.

d. Nothing contained in any of the forgoing exceptions shall be construed as permitting or intending to permit any construction, or alteration of any structure, or growth of any tree in excess of any of the height limits established by this section except as set forth in section 3.7.051D of this chapter.

2. Existing Uses: No permit shall be granted that would allow the establishment or creation of an obstruction or permit a nonconforming use, structure, or tree to become a greater hazard to air navigation than it was on the effective date of the applicable regulations or than it is when the application for a permit is made. Except for abandoned or destroyed existing uses, all applications for such a permit shall be granted.

3. Variances: Any person may request a variance from the provisions of this section by applying and following the procedures set forth in Chapter 13 PERMITS AND APPLICATIONS. In considering a variance from the requirement of these provisions, the application shall be sent to the McCall Municipal Airport Manager for a recommendation prior to action by the Planning and Zoning Commission. (Ord. 984, 12-19-2019, eff. 1-1-2020)


3.7.050 Airport Operation Protection Zones
PS - Primary Surface
TZ - Transitional Zone
URAZ - Runway Instument Approach Zone
HZ - Horizontal Zone
CZ - Conical Zone
N
W
E
S
0
0.5
1
2 Miles
Payette Lake
McCall
COPELAND FLATS
Lake Fork

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