CHAPTER A

Inventory of Existing Conditions

1. Introduction

The focus of this Master Plan document is on the total Friedman Memorial Airport (SUN or "the Airport") facility and its environs, with the overall planning goal being the development of an aviation facility that will allow air services to survive and thrive. This initial *Inventory of Existing Conditions* chapter examines three basic elements involved with the existing and future development of the Airport. These elements are: 1) airport facilities (runways, taxiways, aircraft parking aprons, terminal buildings, hangars, maintenance facilities, ground access, etc.); 2) the relationship to the overall airport and airspace systems; and, 3) the airport environs. Subsequent chapters detail the Airport's forecast of aviation activity, the ability of airport facilities to safely and efficiently meet the needs associated with the projected aviation activity, the compatibility of the Airport with surrounding land uses, and recommended future development within and around airport property. The Inventory chapter consists of the following sections:

- **Airport Background**
- **Previous Planning Studies**
- **Airport Role**
- **Airport Facilities**
- **Airspace Systems and NAVAIDS**
- **Airport Environs**
- **Environmental Review**

1.1. Airport Background

As illustrated in **Figure A1** and **Figure A2**, the Airport is located in Blaine County, and the City of Hailey, Idaho. The Airport is the primary airport providing commercial and general aviation air services for the Wood River Valley and South Central Idaho, including the communities of Hailey, Bellevue, Ketchum, Sun Valley, and Carey.

In 1931, the Friedman family deeded a portion of their land to the City of Hailey for use as an airport, with the condition that, if the land should ever cease to be used as an airport, the property would revert back to the Friedman heirs. In the years since, the Airport has expanded and grown its facilities and traffic through investment from the City of Hailey, Blaine County, the State of Idaho, and the Federal Aviation Administration (FAA). Commercial passenger service at the Airport began in 1960, and since then passenger service has thrived. In 1994, the Friedman Memorial Airport Authority (FMAA) was formed, replacing the Blaine County Airport Commission.

The Airport currently faces numerous design and reliability constraints at its existing site, including but not limited to non-compliance with FAA design standards related to size of aircraft operating at the airport; surrounding mountainous terrain that limits aircraft approaches and departures; and an Airport property footprint that restricts its ability to meet potential long-term needs. For several decades, the FMAA has evaluated the limitations of the current Airport site and explored the potential need to replace the Airport at an alternate site that poses fewer constraints.

In 2005, the United States Congress passed a law that states "not later than December 31, 2015, the owner and operator of an airport certificated under 49 U.S.C. 44706 shall improve the airport's runway safety areas to comply with the Federal Aviation Administration design standards required by 14 CFR Part 139." Partially because the runway safety area (RSA) at the Airport does not meet FAA design standards, the FMAA has spent the last decade developing actionable plans for meeting the safety area standard, either at the existing site or an alternate site.

An Airport Master Plan completed in 2004 resulted in the FMAA approving a study for determining alternative airport locations and possible new airport sites. In 2006, a Site Selection and Feasibility Study concluded that the current airport site was no longer a viable option for future airport operations. Based on the results of these and previous planning studies, the FAA issued a Notice of Intent (NOI) to Prepare an Environmental Impact Statement (EIS) for a Replacement Airport Near Hailey, ID, in November 2007. As of August 2011, the FAA suspended indefinitely any further work on the EIS, citing increased anticipated costs of the project and potential impacts to wildlife.

Following suspension of the replacement airport EIS process in 2011, the FMAA led an 18-month public process to determine the appropriate path forward for the airport. In January 2013, Airport Alternatives Technical Analysis, Alternative 6, *Less Than Full Compliance – No Land Acquisition* was selected as the path forward for achieving temporary compliance with FAA standards at the existing site. Six Modification of Airport Design Standards (MOS) were approved by the FAA in November 2013, stipulating specific airfield improvements while imposing restrictions on aircraft types and operating procedures. The stipulations included a limit of airport use to aircraft less than 95,000 pounds gross weight, and with wingspans less than 100 feet (unless an FAA-approved operational procedure is put into place to mitigate impacts related to wingspans greater than 100 feet).

The recent public process resulted in the adoption of a "dual path" approach for future Airport facility planning. The FAA is in support of this approach, which is focused on satisfying the operational requirements of existing and potential future airport users, whether at the existing Airport site or at a replacement site. Given the renewed focus upon the existing Airport site, along with additional changes that have transpired within the aviation industry on a local, regional, and national level, the FMAA has identified the need to update its Master Plan. This Airport Master Plan Update is a means of analyzing current and forecasted operational characteristics and facilities to further evaluate the ability of the existing Airport site to meet the needs of its users.

SOURCE: Google Maps, 2014.

FIGURE A1 **Airport Location Map**

SOURCE: Google Maps, 2014.

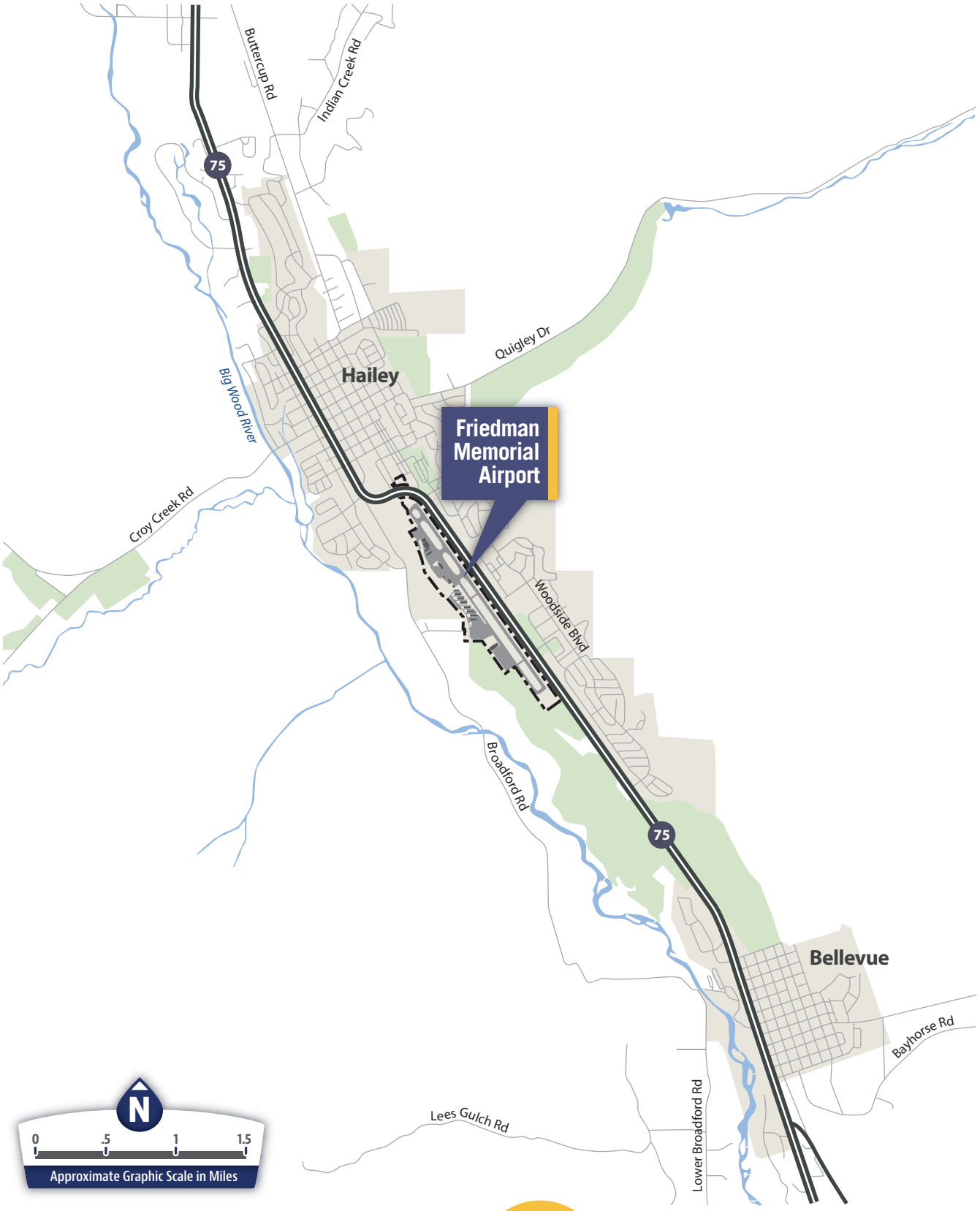


FIGURE A2 **Airport Vicinity Map**

1.2. Previous Planning Studies

A number of studies and planning documents have been completed over time relating to the growth, development, and operation of the Airport. Some of the more recent planning studies are summarized below.

1.2.1. 2004 Airport Master Plan Update

The 2004 Master Plan Update explored both short-term and long-term alternatives to rectify the Airport's deviations from FAA design standards. The FMAA opted to initiate required short-term improvements, but due to the combination of high cost, negative community reaction to required land acquisition, and lack of resolution for long-term airport growth requirements, the FMAA also approved a study for investigating alternative airport locations and selection of a new airport site.

1.2.2. 2006 Wood River Region Airport Site Selection and Feasibility Study

This 2006 Study was conducted as a result of the findings and conclusions reached by the *2004 Master Plan Update*. The goal of the study was to identify alternate airport locations, select a preferred site from these locations, and conduct a conceptual level financial feasibility analysis for the new airport. This study confirmed that the current airport site was no longer a viable option to pursue when considering how to correct deficiencies with FAA standards for current and future airport operations. The Study evaluated 16 potential sites for a replacement airport in Blaine County. The study involved 25 stakeholder groups, ranging from local and state officials, to business and community leaders. At the conclusion of this Study, the FMAA Board selected a preferred site in southern Blaine County, south of U.S. Highway 20 and east of State Highway 75. Since the publication of the 2006 study, this preferred site has been referred to as Site 10A.

1.2.3. Replacement Airport Environmental Impact Statement (EIS)

The purpose of the EIS was to consider the siting and construction of a replacement airport. The EIS provided detailed analysis of 17 potential sites for a replacement airport. The intent of the EIS process was to determine and identify all impacts to the environment associated with each of the three options, such as, but not limited to, noise, air quality, water quality, wetlands, fish, wildlife, plants, farmlands, floodplains, historic/tribal resources, hazardous wastes, socioeconomics, and economic factors. In August 2011, the FAA announced the indefinite suspension of the EIS, as a result of increased anticipated costs of the project and potential impacts to wildlife. On March 13, 2013, the FMAA Board requested that the FAA formally terminate the replacement airport EIS.

1.2.4. 2013 Airport Alternatives Technical Analysis

The purpose of this technical analysis was to investigate alternatives that could provide an increased level of safety at the Airport for the type and size of aircraft that utilize the facility. In January 2013, the FMAA Board was briefed on a document entitled "Talking Points for Moving Forward," developed by Airport staff and the FAA. This document stated that Technical Analysis Alternative 6 would be pursued as "the basis for improving the existing Airport to meet C-III airport design standards." The talking points also stated that the FMAA would "complete a planning effort in the near future to consider elements of Alternative 7 in order to determine land acquisition and other requirements related to lost capacity at the Airport." Alternatives 6 and 7 are briefly described in the following paragraphs.

Alternative 6 or *Less Than Full Compliance – No Land Acquisition,* was implemented in 2015 and resulted in a reconfiguration of Taxiway B on the west of Runway 13/31. Alternative 6 involved no land acquisition, nor runway extension or runway shift, and leaves State Highway 75 in its current location. To accommodate the relocated Taxiway B Object Free Area (TOFA), the commercial terminal aircraft apron was shifted from the east side of the building to the north side of the building. Also, the existing taxilane that provides access to the general aviation hangar complex was relocated. This resulted in the removal/relocation of four existing general aviation hangars, and a building owned by the United States Forest Service. MOS are necessary for Alternative 6, including for the Runway Object Free Area (ROFA) Clearing, Runway Safety Area (RSA) Grading, Runway to Parallel Taxiway Separation, Taxiway OFA, and Runway Centerline to Aircraft Parking Separation.

Alternative 7, *Less Than Full Compliance – Modest Land Acquisition*, included the provisions of Alternative 6 and two additional considerations:

1) Proposed land acquisition adjacent to the Airport, south and west of the existing fixed base operator (FBO) to provide a replacement area for aircraft parking and structures displaced due to the shift of Taxiway B.
2) Relocation of Highway 75 to the east, but within the existing right-of-way. Alternative 7 will be re-evaluated in subsequent chapters of this Master Plan.

1.3. Airport Role

SUN is a publicly-owned airport, jointly owned by the City of Hailey and Blaine County. The Airport is operated by the FMAA Board. The Board is comprised of three representatives appointed by the City of Hailey, three appointed by Blaine County, and a seventh member unanimously agreed upon by the six appointed members. The Airport Manager provides the primary staff support to the FMAA, managing and supervising airport personnel, and maintaining a safe, legal, efficient, and profitable operation.

The Airport encompasses 209 acres and is located 5,320 feet above mean sea level. The FAA categorizes the Airport as a non-hub commercial service airport (FAA Site Number 04206). The Airport Reference Point (ARP) is Latitude 43° 30’ 13.6”N and Longitude 114° 17’ 44.0”W.

As of 2015, the Airport was served by three airlines on a daily basis during the peak tourist season: Delta Airlines, Alaska Airlines, and United Airlines. These three airlines provide non-stop flights to Denver, Los Angeles, Seattle, San Francisco, and Salt Lake City (see Chapter 2, *Aviation Activity Forecasts*, for additional information regarding commercial service).

The Airport is part of the National Plan of Integrated Airport Systems (NPIAS), a national airport system plan developed by the FAA, which identifies nearly 3,400 existing and proposed airports that are significant to national air transportation and thus eligible to receive Federal grants under the Airport Improvement Program (AIP). The NPIAS also includes estimates of the amount of AIP money needed to fund infrastructure development projects.

The current NPIAS report, *National Plan of Integrated Airport Systems (NPIAS) 2015-2019*, lists SUN as a nonhub primary airport. Commercial service airports that enplane less than 0.05 percent of all commercial passenger enplanements but have more than 10,000 annual enplanements are categorized as nonhub primary airports. There are 251 nonhub primary airports nationwide that together account for three percent of total national enplanements. These airports are also heavily used by general aviation aircraft, with an average of 88 based aircraft per airport.

The Airport is also part of and classified by the Idaho Airport System Plan (IASP). The latest IASP was published in 2010, and defined SUN as a Commercial Service Airport. According to the plan a commercial service airport accommodates scheduled major/national or regional/commuter commercial air carrier service in addition to air cargo, business aviation, and all types of general aviation. SUN is one of seven airports that are classified as commercial service airports within the State of Idaho.

As part of the latest IASP, the Idaho Transportation Department Division of Aeronautics commissioned an Economic Impact Analysis report for each of Idaho's 75 public-use airports. The IASP estimated that 1,550 local jobs and $120 million in annual economic output were attributable to the Airport in 2007, making it the second-largest airport in the State in terms of economic impact. According to Sun Valley Economic Development, a 501(c)6 non-profit public-private partnership focused on Blaine County economic issues (formerly known as Sustain Blaine), this represented nearly 20 percent of the total Blaine County economy in 2007.

In 2011, Sustain Blaine reviewed the findings of the IASP Economic Impact Analysis and found that the analysis was based on key financial assumptions that were overly conservative when considering the Wood River Valley economy compared to other Idaho communities. By modifying a few of these assumptions to reflect unique local circumstances, Sustain Blaine found that the IASP may have underestimated economic impacts related to visitor spending, general aviation spending, and average payroll per employee, and estimated that $143 million in annual economic output in 2010 was attributable to the airport when using the IASP methodology and modifying these key assumptions. This was substantially higher than the IASP estimate, even though the Sustain Blaine analysis accounted for the severe economic recession that occurred between 2007 and 2010.

Sustain Blaine has also promoted an alternate methodology for estimating the Airport's economic impact based on a sector-by-sector gross domestic product (GDP) allocation analysis of the Blaine County economy. This methodology accounts for the local economy's focus on sectors such as real estate and tourism that are "heavily reliant" on air service provided by the Airport. This alternate methodology found that the Airport's economic impact may have been as high as $345 million in economic output in 2010, representing almost half of Blaine County GDP.

2. Airport Facilities Inventory

The arrangement and interaction of airfield components (runway, taxiways, and ramp entrances) refers to the layout or "design" of the airfield. SUN is served by one runway, Runway 13/31, which has a full-length parallel taxiway with seven exit taxiways. The majority of the Airport's existing landside facilities are located west of Runway 13/31, and include the commercial passenger terminal, the FBO, the general aviation hangars and apron, and other services. **Figure A3** provides a graphic representation of the existing airport facilities. The following narrative is a description of Alternative 6 from the 2013 *Airport Alternatives Technical Analysis*, as at the time of the writing of this chapter improvements identified by Alternative 6 were under construction and later completed by the end of 2015.

The Airport is surrounded by rising terrain to the north, east, and west. As a result, a majority of operations are conducted in a "head-to-head" fashion, meaning that most departures are southbound on Runway 13, while most arrivals are northbound on Runway 31. Not all operations are conducted in this fashion, as occasionally aircraft land from and depart to the north. All operations are coordinated by Air Traffic Control Tower (ATCT) personnel while the tower is open.

SOURCE: AERIAL: Google Maps, 2014, AERIAL: Toothman-Orton Engineers/Mead & Hunt.

FIGURE A3 **Existing Airport Layout**

2.1. Environmental Conditions

Climatological conditions specific to the location of an airport not only influence the layout of the airfield, but also affect the use of the runway system. Surface wind conditions have a direct effect on operations at an airport; runways not oriented to take fullest advantage of prevailing winds will restrict the capacity of an airport to varying degrees. When landing and taking off, aircraft are able to operate properly on a runway as long as the wind component perpendicular to the direction of travel (defined as a crosswind) is not excessive.

Wind Coverage. Surface wind conditions (i.e., direction and speed) generally determine the desired runway system alignment and configuration. Wind conditions affect all airplanes to varying degrees; however, the ability to land and takeoff in crosswind conditions varies according to pilot proficiency and aircraft type. Generally, the smaller the aircraft, the more it is affected by crosswinds.

The allowable crosswind component is dependent upon the Runway Design Code (RDC) for the type of aircraft that utilize the Airport on a regular basis. The current RDC for Runway 13/31 is C-III, resulting in a 16-knot allowable crosswind component. Runway 13/31 is not only utilized by C-III aircraft, but by aircraft in larger and smaller RDC classifications, therefore all crosswind components are displayed in **Table A1** per RDC classification.

Table A1 **CROSSWIND COMPONENT PER RDC**

RDC	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, E-I through E-VI	20-Knots

SOURCE: **FAA AC 150/5300-13A, *Airport Design*, Change 1. Table 3-1**

To determine wind velocity and direction at the Airport, wind data was obtained for the years 2007-2016 from observations taken at the Airport. There were 150,994 periodic observations recorded during this time period. **Figure A4** illustrates the all-weather wind coverage provided at SUN. The desirable wind coverage for an airport is 95 percent, based on the total number of weather observations during the recorded period. This means that the runway orientation and configuration should be such that the maximum crosswind component is not exceeded more than five percent of the time.

Table A2 quantifies the wind coverage offered by the Airport's existing runway system, including the coverage for each runway end individually. Based on the all-weather wind analysis for SUN, utilizing the Wind Rose File Generator and Wind Analysis Tool on the FAA Airports GIS Program website, the existing runway configuration provides the following all-weather wind coverage: 99.98 percent for the 20-knot crosswind component, 99.91 percent for the 16-knot crosswind component, 99.58 percent for the 13-knot crosswind component, and 99.16 percent of the 10.5-knot crosswind component.

Table A3 and **Table A4** quantify the wind coverage under Visual Flight Rules (VFR) conditions and Instrument Flight Rules (IFR) conditions, respectively. VFR conditions occur whenever the cloud ceiling is at least 1,000 feet above the ground level and the visibility is at least three statute miles. IFR conditions occur when the reported cloud ceiling is less than 1,000 feet and visibility is less than three miles. As illustrated in the following tables, local wind conditions at SUN favor the utilization of Runway 31 during all-weather and VFR conditions, while local wind

conditions favor Runway 13 during IFR conditions. Further analysis of wind coverage and impacts on the Airport's capacity and operations will be developed in the *Capacity Analysis & Facility Requirements* Chapter.

Table A2 **ALL-WEATHER WIND COVERAGE SUMMARY**

Wind Coverage Provided Under All-Weather Conditions				
	10.5-Knot	13-Knot	16-Knot	20-Knot
Runway 13/31	99.16%	99.58%	99.91%	99.98%
Runway 13	51.22%	51.52%	51.80%	51.85%
Runway 31	90.28%	90.55%	90.80%	90.85%

SOURCE: National Oceanic and Atmospheric Administration, National Climatic Data Center, Station 725865, Friedman Memorial Airport, Hailey, ID. Period of Reporting 2007-2016; 150,994 Total Observations, and tailwind component of five knots for unidirectional runways and sixty knots for bidirectional runways.

Table A3 **VFR-WEATHER WIND COVERAGE SUMMARY**

Wind Coverage Provided Under VFR-Weather Conditions				
	10.5-Knot	13-Knot	16-Knot	20-Knot
Runway 13/31	99.14%	99.57%	99.90%	99.98%
Runway 13	49.80%	50.11%	50.39%	50.45%
Runway 31	90.57%	90.85%	91.10%	91.16%

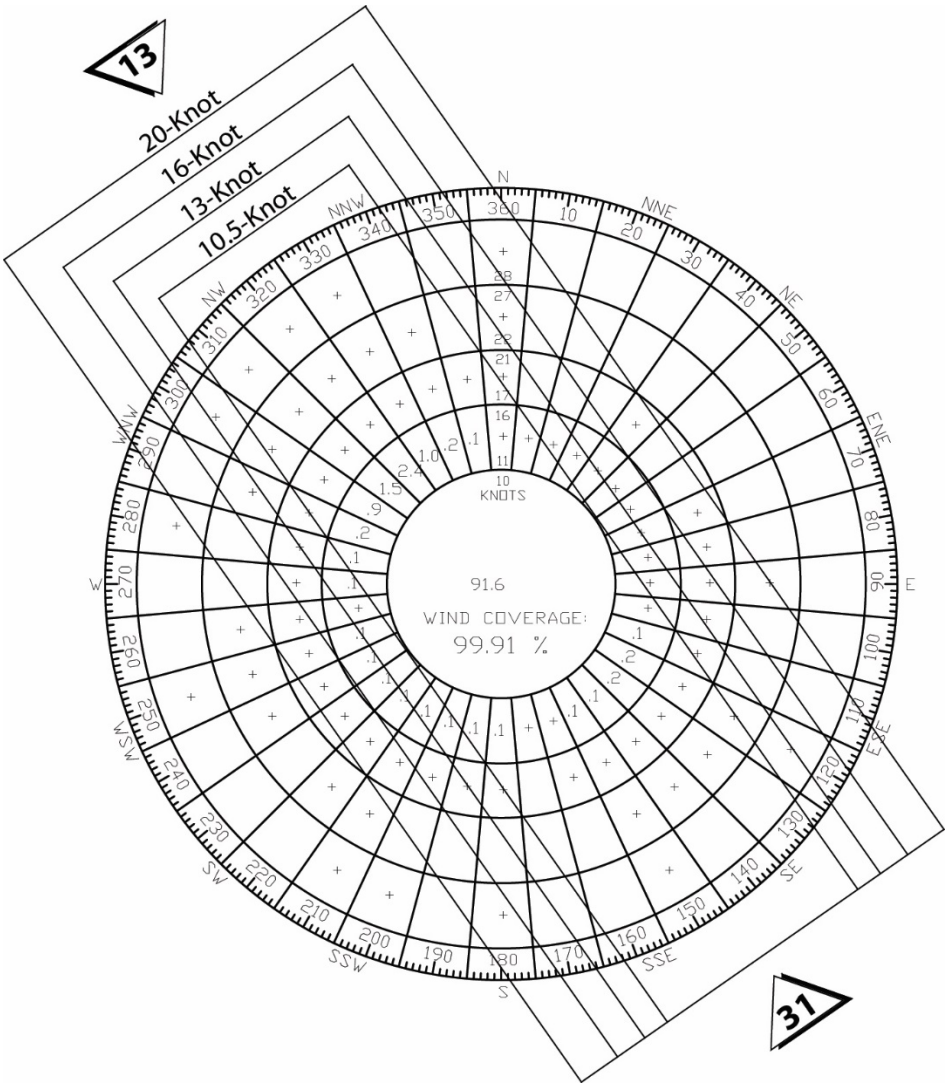
SOURCE: National Oceanic and Atmospheric Administration, National Climatic Data Center, Station 725865, Friedman Memorial Airport, Hailey, ID. Period of Reporting 2007-2016; 144,293 Total Observations, and tailwind component of five knots for unidirectional runways and sixty knots for bidirectional runways.

Table A4 **IFR-WEATHER WIND COVERAGE SUMMARY**

Wind Coverage Provided Under IFR-Weather Conditions				
	10.5-Knot	13-Knot	16-Knot	20-Knot
Runway 13/31	99.69%	99.85%	99.98%	100.00%
Runway 13	84.76%	84.88%	84.99%	85.01%
Runway 31	83.34%	83.44%	83.54%	83.56%

SOURCE: National Oceanic and Atmospheric Administration, National Climatic Data Center, Station 725865, Friedman Memorial Airport, Hailey, ID. Period of Reporting 2007-2016; 6,563 Total Observations, and tailwind component of five knots for unidirectional runways and sixty knots for bidirectional runways.

Figure A4
All-Weather Wind Rose



2.2. Airside Facilities

Runway. Runway 13/31 is 7,550 feet long and 100 feet wide. The runway is constructed of grooved asphalt, in good condition, and has a gross weight bearing capacity of 65,000 pounds single wheel, 95,000 pounds double wheel, and 150,000 pounds double tandem wheel landing gear. The runway is equipped with High Intensity Runway Lights (HIRL), and a four-light Precision Approach Path Indicator (PAPI) on Runway 31.

Runway 13 is marked with non-precision instrument approach markings, in good condition, while Runway 31 is marked with precision instrument approach markings, in fair condition. Runway 31 is served by RNAV GPS and RNP approaches, and Runway 13/31 is served by a circling NDB/DME instrument approach. Due to the topography of the Wood River Valley, availability of instrument approach and departure procedures, and access to the en-route navigational system, nearly 95 percent of operations land on Runway 31 and depart on Runway 13.

The Airport currently has declared distances in place for Runway 13/31. Declared distances are distances the Airport declares and the FAA approves as available for an airplane's takeoff run, takeoff distance, accelerate-stop distance, and landing distance requirements. These distances are defined as follows:

- **Takeoff run available (TORA) –** the runway length declared available and suitable for the ground run of an airplane taking off;
- **Takeoff distance available (TODA) –** the TORA plus the length of any remaining runway or clearway beyond the far end of the TORA;
- **Accelerate-stop distance available (ASDA) –** the runway plus stopway (area beyond the takeoff runway end capable of supporting aircraft during an aborted takeoff) length declared available and suitable for the acceleration and deceleration of an airplane aborting a takeoff; and
- **Landing distance available (LDA) –** the runway length declared available and suitable for a landing airplane.

According to FAA Advisory Circular 150/5300-13A, *Airport Design*, Change 1, "declared distances may be used to obtain additional RSA and/or runway object free area (ROFA) prior to the runway's threshold (the start of the LDA) and/or beyond the stop end of the LDA and ASDA, to mitigate unacceptable incompatible land uses in the runway protection zone (RPZ), to meet runway approach and/or departure surface clearance requirements, in accordance with airport design standards, or to mitigate environmental impacts. Declared distances may also be used as an incremental improvement technique when it is not practical to fully meet these requirements. However, declared distances may only be used for these purposes where it is impracticable to meet the airport design standards or to mitigate the environmental impacts by other means, and the use of declared distances is practical."

Table A5 summarizes the declared distances in use at SUN. These distances are depicted in **Figure A5**.

Table A5 **RUNWAY 13/31 DECLARED DISTANCES**

Runway	Take Off Run Available (TORA)	Take Off Distance Available (TODA)	Accelerate Stop Distance Available (ASDA)	Landing Distance Available (LDA)
Runway 31	5,850 Feet	7,550 Feet	6,631 Feet	6,631 Feet
Runway 13	7,150 Feet	7,550 Feet	7,150 Feet	5,450 Feet

SOURCE: **FAA, Airport/Facility Directory, 2014.**

Taxiways. In addition to the runway, the Airport has several taxiways that provide access to the terminal area and other aviation facilities. Taxiway B is a 50-foot-wide full parallel taxiway serving the west side and both ends of Runway 13/31, and is connected to Runway 13/31 by connector taxiways B1, B2, B3, B4, B5, B6, and B7. Taxiway edge lights at SUN are Medium Intensity Taxiway Lights (MITL).

Central Bypass Taxiway. The relocation of connector B4 to the south in 2015 impacted the existing central bypass taxiway. The central bypass taxiway is critical to operations at the airport as it allows simultaneous operation of opposite flow traffic on Taxiway B. To mitigate this conflict, the central bypass taxiway was moved approximately 250 feet to the north. To mitigate direct access to the runway from the apron adjacent to the connector B4, a surface painted "No Taxi" island reduces runway incursions.

MOS. Currently the Airport has six MOS's, including:

- **MOS 1 – Runway Centerline to Parallel Taxiway Centerline**
  - This MOS allows a Runway Centerline to Parallel Taxiway Centerline of 320 feet, while the standard is 400 feet, for a proposed full-length parallel taxiway, due to man-made constraints including hangars, the Terminal Building, and airplane parking.
- **MOS 2 – Parallel TOFA Width**
  - This MOS allows a TOFA width of 160 feet, while the standard is 186 feet, due to man-made constraints including hangars, the Terminal Building, and airplane parking.
- **MOS 3 – ROFA Width**
  - This MOS allows the following structures to remain in the ROFA: State Highway 75, Perimeter Fence, and Off Airport Buildings.
  - Existing objects in the ROFA that are planned to be removed include: Aircraft Parking, Hangars, portions of the Airport Perimeter Fence, the ATCT, and Facilities.
- **MOS 4 – RSA Grading**
  - This MOS allows the existing RSA transverse grades of zero to one percent, while the standard is 1.5 to 3.0 percent.
- **MOS 5 – Runway Centerline to Aircraft Parking Area**
  - This MOS allows a Runway Centerline to Aircraft Parking Area separation of 400 feet, while the standard is 500 feet.
- **MOS 8 – Taxiway Width**
  - This MOS allows a parallel taxiway width of 50 feet plus 10-foot paved shoulders, while the standard is 75 feet with a taxiway edge safety margin of 15 feet.

The MOS's will be re-evaluated by the FAA a minimum of every five years, and are depicted in **Figure A5**.

SOURCE: AERIAL: Google Maps, 2014, CAD: Toothman-Orton Engineers/Mead & Hunt.

FIGURE A5 **MOS and Declared Distances**

2.3. Landside Facilities

Landside development at the Airport includes commercial passenger terminal facilities, general aviation facilities, aircraft storage facilities, aircraft parking aprons, FBO facilities, fuel storage facilities, and access roadways.

Commercial Passenger Terminal Facilities. During development of Alternative 6, it was determined that the Commercial Terminal aircraft parking apron would need to be relocated to the north side of the building to remove the parked aircraft from the Taxiway B TOFA. This relocation from the east side to the north side of the building required a new means for the travelling public to get to and from the aircraft, and resulted in a non-compliance issue with the Transportation Security Administration's (TSA) passenger handling requirements. Therefore, reconfiguration and expansion of the Terminal Building was completed in 2015 as well.

The Commercial Passenger Terminal Building is designed to accommodate one Dash-8 Q400 and two CRJ-700 departures during the peak hour. At 76 seats for the Q400 and 70 seats for the CRJ-700, this amounts to a capacity of 216 departing seats during the peak hour. At a 90 percent load factor during the peak travel season, the terminal was designed to accommodate a peak hour enplanement demand of 194 departing passengers.

The Terminal was designed to meet this peak hour demand while accommodating the traveling public's needs. The security checkpoint, secured holdroom, baggage claim, ticketing counter, and public restrooms were sized to accommodate peak hour departing passengers. **Figure A6** depicts the layout of the reconfigured Commercial Passenger Terminal Building.

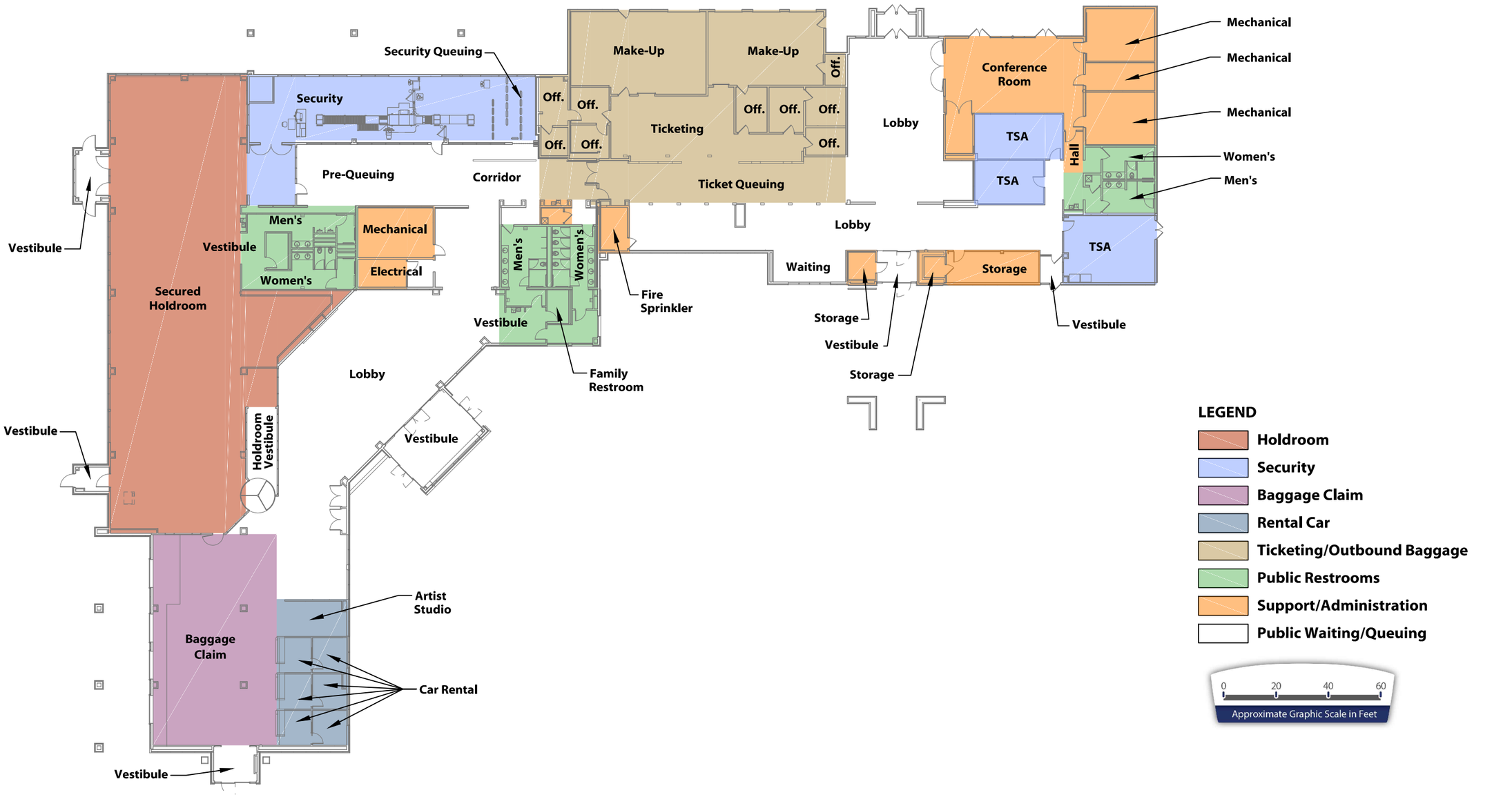


FIGURE A6 **Commercial Terminal Building**

FBO Facilities. The Airport has one full-service FBO, Atlantic Aviation, which offers aircraft maintenance, fuel service, aircraft rental, and hangar and tie-down storage. Additional services offered through the FBO include flight instruction, aircraft sales, and aviation charter service.

Aprons. There are four primary apron areas at the Airport. The apron areas include the air carrier, the general aviation, cargo, and the FBO aprons. The FBO apron located at the southern end of the Airport is approximately 272,000 square feet and accommodates many different general aviation aircraft. The general aviation apron located north of the FBO and south of the general aviation hangars is approximately 327,000 square feet and has tie-down locations for 81 aircraft. The commercial service apron is located north of the commercial terminal building, is approximately 124,000 square feet, and can accommodate three commercial aircraft. The commercial apron was relocated from the east side to the north side of the terminal building in 2014, and the number of available commercial aircraft parking positions was reduced from four to three due to improvements to the airfield that were completed at the same time. The new cargo apron located on the north side of the field near Taxiway B2, is intended to accommodate freight aircraft operations and overflow parking for GA aircraft.

ATCT. The FAA ATCT is located on the east side of and approximately midway along Runway 13/31, across the Airport from the Commercial Passenger Terminal Facilities. The ATCT is operated under the FAA Contract Tower Program and is open daily from 7:00 a.m. until 11:00 p.m. The ATCT is a three-story building with an interior gross area of 840 square feet, not including the catwalk area. An ATCT Concept and Budget Report completed in 2004 found that the tower has several deficiencies, including its location within the ROFA, and its dated, worn, and cramped facilities. The 2004 study recommended relocating and upgrading the ATCT, and identified eight alternative sites throughout the Airport property, three of which were studied in detail. The findings and recommendations of the 2004 study will be re-evaluated as part of this Master Plan.

Hangar Facilities. There are multiple hangar facilities at SUN, all located on the west side of Runway 13/31. Currently there are eight t-hangar and multi-unit hangar structures in the general aviation area. Located near the Commercial Passenger Terminal Building are an additional seven hangar structures. Hangar structures can be leased either through the FBO or through the *FMAA Hangar Lease Renewal Policy*. The lease policy provides opportunities for existing lessees to remain as tenants in the future; maintains a diversity of aircraft on the Airport; takes the speculative/investment float out of the future hangar leases; and improves Airport revenues as recommended by the FAA.

Fuel Storage Facilities. The fuel farm at the Airport is located near the north end of the general aviation hangers west of Taxiway B. According to the most recent Stormwater Pollution Prevention Plan (SWPPP), the fuel farm consists of four aboveground 20,000-gallon fuel storage tanks, all containing Jet-A fuel, and one underground 12,000-gallon fuel storage tank containing 100LL Avgas. There are also three 500-gallon tanks located at the fuel farm that store unleaded gasoline, diesel fuel, and fuel additive for winter operations, respectively. The FBO handles the majority of the fuel service at SUN, via five mobile tanker trucks, four with 5,000-gallon capacities for Jet-A fuel and one with a 1,250-gallon capacity for 100LL Avgas. Aircraft are refueled on aircraft ramps and parking aprons.

There are also three fueling stations located throughout the Airport property. One is a self-service fuel station for aviation gasoline that has a 5,000-gallon 100LL Avgas underground tank, owned and operated by the FBO, and available for public use. This self-service station is located near the south end of the general aviation hangar area west of Taxiway B. The second fuel station is located at the FBO and is used for refueling the FBO vehicles. This station is not available for public use. The third fuel station is a 1,000-gallon diesel fuel tank located at the airport maintenance facility. This station is for re-fueling of airport maintenance vehicles and is not available for public use.

Aircraft Rescue and Fire Fighting (ARFF) Facility/Snow Removal Equipment (SRE). Relocating the central bypass taxiway required the relocation of the existing ARFF/SRE and administration buildings to meet separation standards associated with the central bypass taxiway safety area. The Airport currently has more than ten SRE vehicles, a primary ARFF vehicle, and one back-up ARFF vehicle. The ARFF, SRE, and administration buildings are now collocated in one facility to increase efficiency of the building and airport staff. This is illustrated in **Figure A7**.

The new ARFF/SRE/Administration building is approximately 15,000 square feet. There are four bays for SRE storage, along with an SRE Maintenance Office, a Welding Shop, a Flammable Liquid Storage room, a Maintenance Storage room, and a Maintenance Shop. The ARFF section of the building has two bays for vehicle storage, Locker Room, Laundry Facility, Exercise Room, and Changing Rooms. The Administration portion of the building houses an Airport Manager Office, a Watch Room, a Training Room, an Airport Security Coordinator Office, Conference Room, Other Offices, and various other amenities.

The Airport has signed on to the *Wood River Valley Mutual Assistance Agreement*, along with the Cities of Ketchum, Sun Valley, Bellevue, and Hailey, the Ketchum Rural Fire Protection District, Wood River Fire Protection District, Carey Fire Protection District, West Magic Fire Protection District, and Smiley Creek Fire Protection District. All that have signed the Mutual Assistance Agreement agree to maintain equipment and personnel who are trained to provide various levels of service in control of fire, fire prevention, emergency medical service, hazardous materials response and/or other emergency support. The purpose of the Agreement is for the members to provide assistance to each other in the event of a major fire, disaster or other emergency and to work cooperatively with each other to protect life and property.

The existing ARFF unit at SUN is classified as Index A. The ARFF index is determined by a combination of the length and average daily departures of air carrier aircraft. The longest aircraft with an average of five or more daily departures determines the Index required for the Airport. When there are fewer than five average daily departures of the longest air carrier aircraft serving the Airport, the Index required for the Airport will be the next lower Index group than the Index group prescribed for the longest aircraft. Currently the Airport is serviced by the Bombardier Dash 8 – Q400 at 107 feet long, and by the Bombardier CRJ 700 at 106 feet long. Because SUN has an average of five daily departures or more by aircraft that are classified as Index B, which includes aircraft at least 90 feet but less than 126 feet in length, it is classified as Index B.

Rental Car Support/Ground Transportation. Currently SUN offers car rental services on-site in the Commercial Terminal. Five rental car companies offer rental car services, including Avis, Budget, Hertz, Enterprise, and National.

A variety of ground transportation options are available at the Airport, connecting the Airport to the surrounding hotels, tourist attractions, businesses, and residences. These options include hotel courtesy shuttles, taxis, and other public transportation means. Public transportation for the Wood River Valley is provided by Mountain Rides, which provides free town bus, commuter bus, commuter vanpool and special needs transportation.

Weather Monitoring Equipment. The current weather monitoring equipment at the Airport is an Automated Weather Observing System (AWOS) III. The AWOS III is located on the south end of the airfield, adjacent to Taxiway B6 and the FBO apron. An AWOS measures meteorological parameters, reduces and analyzes the data via computer, and broadcasts weather reports, which can be received by aircraft operating up to 10,000 feet above the ground and within 25 nautical miles of the station when the tower is open. When the tower is closed this information is available from the Automatic Terminal Information Service (ATIS). An AWOS III system measures and reports wind data (including speed, direction, and gust), dew point, altimeter, density altitude, visibility, precipitation accumulation, and cloud height.

An AWOS II station was installed in the ATCT in 2014 for back-up weather monitoring in the event that the AWOS III is out of service. The AWOS II is capable of monitoring all of the same weather variables as an AWOS III, with the exception of sky condition, cloud ceiling height, and liquid precipitation accumulation.

Vehicular Access and Parking. Ground access to the Airport is provided from State Highway 75 via Airport Way, which is located on the west side of the Airport. The road provides access to the commercial terminal building, as well as access to the general aviation facilities.

Public parking is available on the west side of the Airport, adjacent to the commercial passenger terminal building. There are 218 Short-Term parking spots and 108 Long-Term parking spots.

The short-term parking lot is open at all hours of the day, every day of the year, and is located in the upper parking lot. The first half hour of parking is free to accommodate people dropping off passengers at the terminal. The short-term parking lot can accommodate vehicle parking needs from less than a half hour to a monthly rate.

The long-term parking lot is also open all hours of the day, and every day of the year. Long-term parking is in the lower parking lot further west of the terminal building, and also allows free parking the first half hour to accommodate the drop off of passengers. The long-term parking lot is intended to accommodate longer than 24 hour parking and has monthly rates available.

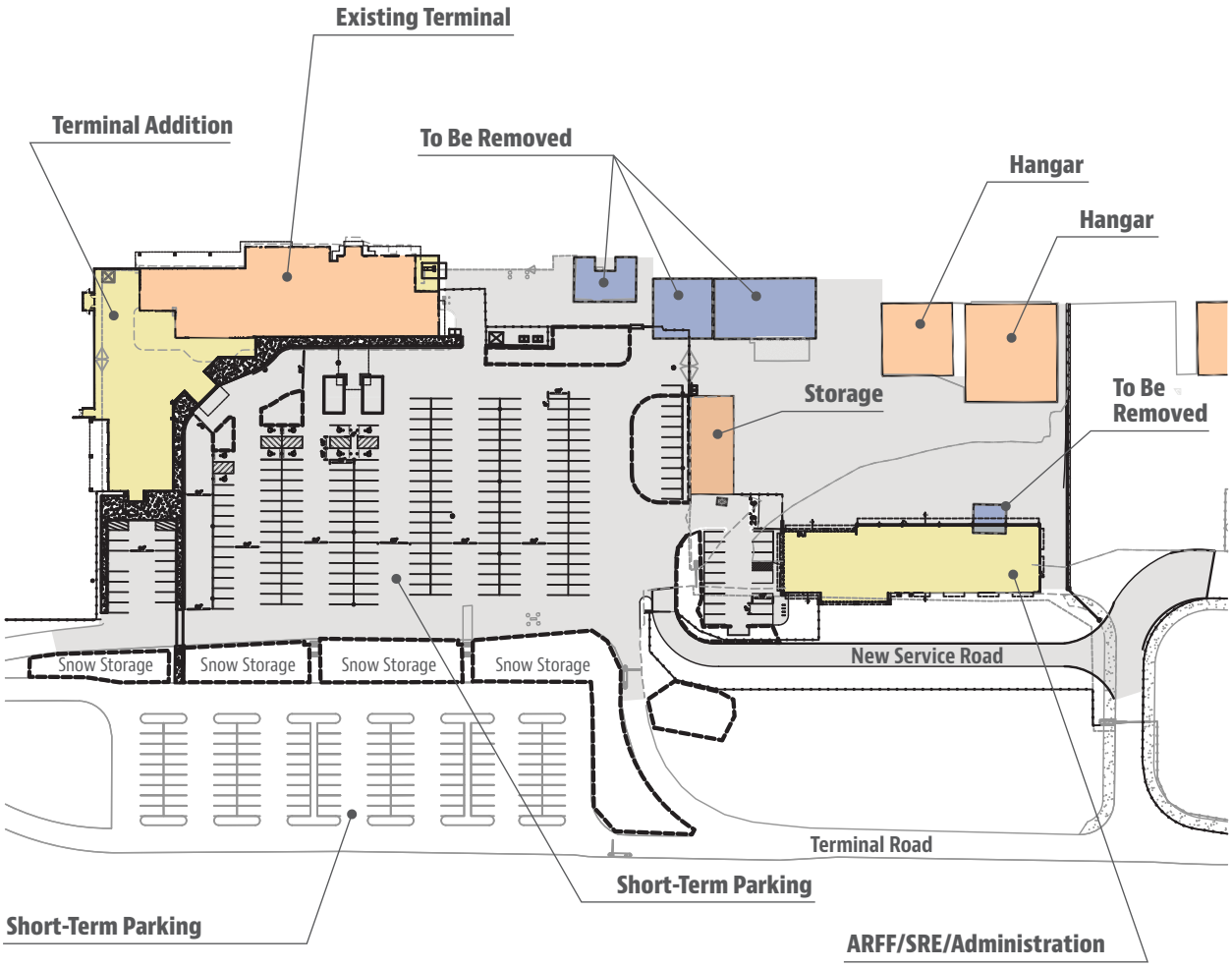


FIGURE A7 **Terminal Area Layout**

2.4. Airspace System and NAVAIDS

Friedman Memorial Airport, as with all airports, functions within the local, regional, and national systems of airports and airspace. **Figure A8** and the following narrative provide a brief description of the Airport's role as an element within these systems.

2.4.1. Air Traffic Service Areas and Aviation Communications

FAA air traffic controllers, stationed in Air Route Traffic Control Centers (ARTCC), provide positive air traffic control within defined geographic jurisdictions. There are twenty-two geographic ARTCC jurisdictions established throughout the continental United States. Airspace in the vicinity of the Airport is contained within the Salt Lake ARTCC jurisdiction. The Salt Lake ARTCC includes airspace in portions of Idaho, Montana, North Dakota, South Dakota, Wyoming, Utah, Nevada, and Oregon.

Aviation communication facilities associated with the Airport include the Airport Traffic Control Tower (frequencies: 125.6 common traffic advisory frequency [CTAF] and Tower, and 121.7 Ground), and the Aeronautical Advisory Station (UNICOM) on frequency 122.95. In addition, the Airport has an ATIS that can be accessed on frequency 128.225. Salt Lake Center is accessed on frequency 118.05, and the AWOS III can be accessed by phone at (208)-788-9213. The ATIS is also available via phone at (208)-788-2108.

2.4.2. Airspace

The immediate area surrounding the Airport is classified as Class D airspace. Class D airspace extends from the surface up to, and including, 7,800 feet MSL within a four nautical mile radius of the Airport, and within 1.8 miles each side of the 159° bearing from the airport, extending from the four nautical mile radius to six nautical miles northwest and southeast of the airport. The Class D airspace is effective during 1400-0600 Zulu, or while the ATCT is open, and reverts to Class E airspace when the tower is closed.

Controlled airspace is a generic term that covers the different classifications of airspace and defined dimensions within which air traffic control service is provided in accordance with the airspace classification. Controlled airspace consists of Class A, B, C, D, and E airspace. Class D airspace generally extends from the surface to 2,500 feet above the airport elevation surrounding those airports that have an operational control tower. The configuration of Class D airspace, such as that at SUN, is tailored to meet the operational needs of the area. Class E airspace is generally controlled airspace not designated A, B, C, or D, and, except for above 18,000 feet Mean Sea Level (MSL), Class E airspace has no defined vertical limit. Instead, it extends upward from either the surface or a designated altitude to the overlying or adjacent controlled airspace.

Required equipment for an aircraft entering Class D airspace is an operable two-way radio. Prior to entering Class D airspace the pilot of an aircraft must establish two-way radio communications with the air traffic control facility and maintain those communications while in the Class D airspace. Pilots of arriving aircraft should contact the control tower on the publicized frequency and give their position, altitude, destination, and any special request(s). Class E airspace has no specific equipment requirements and no specific entry requirements under VFR conditions.

2.4.3. FAR Part 77 Surfaces

The criteria contained in Federal Aviation Regulations (FAR) Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace*, apply to existing and proposed manmade objects and/or objects of natural growth and terrain (i.e., obstructions). These guidelines define the critical areas in the vicinity of airport that should be kept free of obstructions. Secondary areas may contain obstructions if they are determined to be non-hazardous by an aeronautical study and/or if they are marked and lighted as specified in the aeronautical study determination. Airfield navigational aids (NAVAIDs) as well as lighting and visual aids, by nature of their location, may constitute obstructions. However, these objects do not violate FAR Part 77 requirements, as they are essential to the operation of the Airport and are considered "fixed-by-function."

According to the 2012 Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for the Initiation of Turbojet Service at Friedman Memorial Airport, there are a number of FAR Part 77 penetrations in the vicinity of the Airport. These include segments of State Highway 75, various on-Airport buildings and equipment, and a number of off-airport trees. These penetrations have been addressed through use of a displaced threshold for Runway 13, installation of obstruction lights, and adjustments to the instrument approach minimums.

2.4.4. Navigational Aids

As illustrated in **Figure A8**, a variety of navigational facilities are available to pilots in the vicinity of the Airport, whether located at the field or at other locations in the region. Some of these NAVAIDs are available to en route air traffic as well. In addition, there is a complement of NAVAIDS that allow instrument approaches to the Airport. The NAVAIDS available for use by pilots in the vicinity of and on approach to the Airport include a Non-Directional radio Beacon (NDB) facility, Airport Beacon, PAPI, and wind cones.

NDBs are general purpose low- or medium- frequency radio beacons that an aircraft equipped with a loop antenna can home in on or determine its bearing relative to the sending facility. The Hailey NDB is located approximately 12 nautical miles southeast of the Airport and broadcast on a frequency of 220. Presently there are two straight-in instrument approach procedures and one circling only approach. The RNAV (GPS) X approach at SUN has two different approach criteria, one based on a Localizer Performance (LP) approach, and one based on a Lateral Navigation (LNAV) approach. The RNAV (GPS) Y approach has three different approach criteria, one based on an LP approach, one based on an LNAV approach, and one based on a circling approach. The instrument approaches for SUN are listed in **Table A6**.

Table A6 **INSTRUMENT APPROACH PROCEDURES**

Approach	Designated Runway(s)	Decision Height (AGL)	Visibility Minimums
RNAV (GPS) X	Runway 31	891' AGL	1 ¼ mile[1,2], 2 ½ miles[3]
RNAV (GPS) Y	Runway 31	1611' AGL	1 ¼ mile[1], 1 ½ mile[2], 3 miles[3]
RNAV (GPS) Y	Circling	2020' AGL	1 ¼ mile[1], 1 ½ mile[2], 3 miles[3]
NDB/DME-A	Circling	2720' AGL	5 miles[4]

SOURCE: U.S. Terminal Procedures January 5, 2017 through February 2, 2017.

NOTE: [1]Authorized for use by Category A aircraft
[2]Authorized for use by Category B aircraft
[3]Authorized for use by Category C aircraft
[4]Authorized for use by Category A, B, and C aircraft

Each of the approaches have additional restrictions that apply, as follows:

- **RNAV (GPS) X RWY 31**
  - GPS required
  - Missed approach requires minimum climb of 420 feet per NM to 9,500 feet
- **RNAV (GPS) Y RWY 31**
  - GPS required
  - Circling not available northeast of Runway 13/31
  - Procedure not available at night or when tower is closed
  - Missed approach requires minimum climb of 410 feet per NM to 7,600 feet
- **NDB/DME-A**
  - Circling not available northeast of Runway 13/31
  - Visibility reduction by helicopters not available
  - Procedure not available at night or when tower is closed

2.5.5. Voluntary Noise Abatement Program

The Airport currently maintains a voluntary noise abatement program to promote "Good Neighbor Flying." The goals of the Noise Abatement Program are to have Airport operations that are compatible with the surrounding communities; to educate, involve, and engage the community and flying public about addressing noise issues; to commit to being a good neighbor; to respond to each concern and take action as appropriate; and to strive for continued and increased success of the program.

SOURCE: Salt Lake City Sectional, 92nd Edition, April 2015.

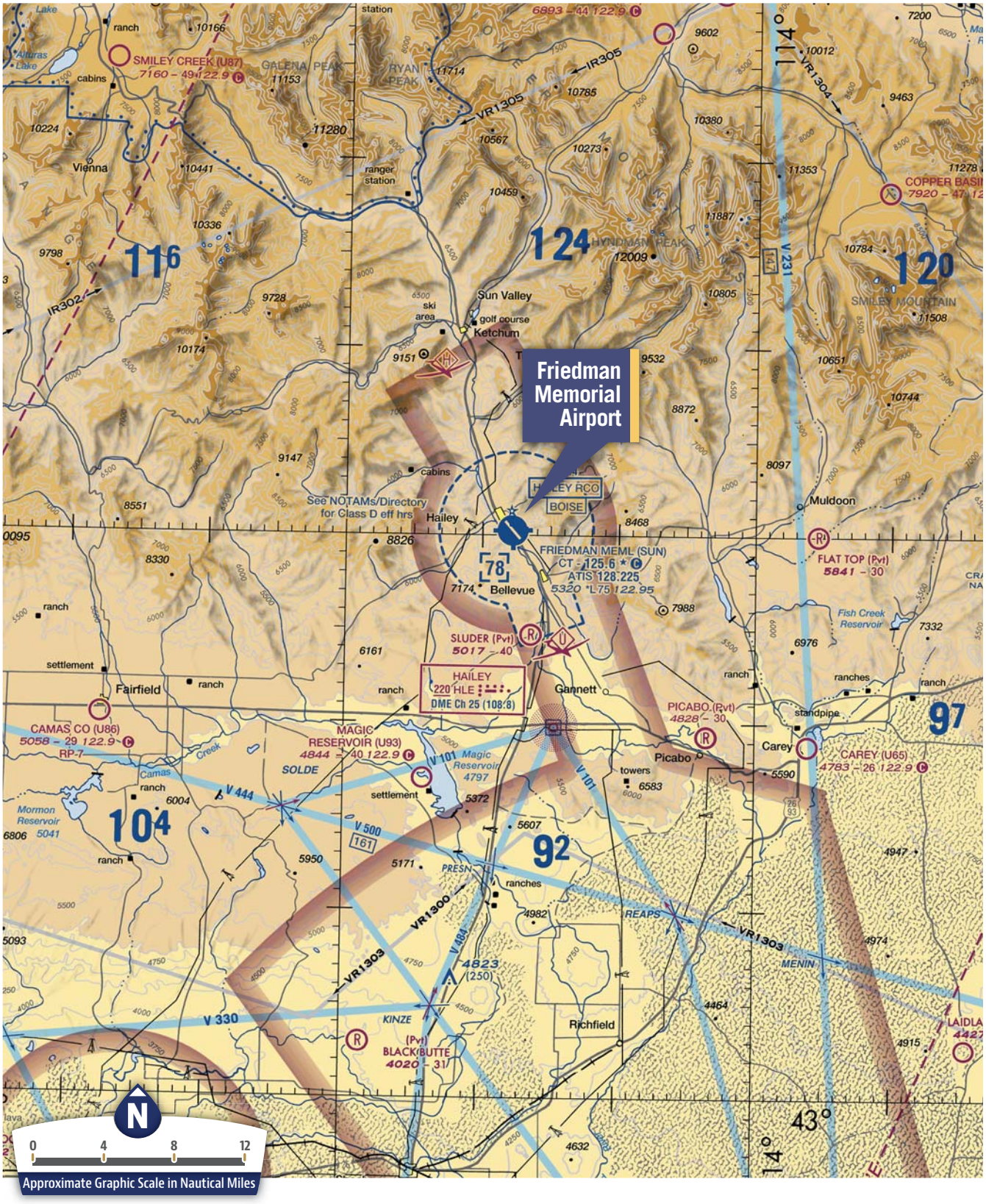


FIGURE A8 **Airspace/NAVAIDS Summary**

3. Airport Environs

An important step in the airport planning process is to identify land uses, zoning patterns, and the various planning and control measures used to guide development of property surrounding an airport. Planning for land use compatibility with airport development requires knowledge of what land uses are proposed and what, if any, changes need to be made.

The Airport is located within the city limits of the City of Hailey. The following paragraphs provide a generalized description of the zoning and existing land use patterns for the areas surrounding the Airport.

3.1. Existing Zoning and Comprehensive Plans

The City of Hailey and Blaine County both have zoning regulations that help guide development. The City's Zoning Ordinance pertains to the area within its corporate limits, while the County's Zoning Rules pertain to the unincorporated areas surrounding the city. Existing zoning is depicted in **Figure A9**.

Zoning in the City of Hailey is administered by the Community Development Department. The Community Development Department handles all application for land use development within the City of Hailey. Friedman Memorial Airport is within the Airport Zone District. The Airport Zone District is intended to provide an area that allows regularly scheduled commercial passenger aircraft service to be used by the general public. The Airport District is also intended to allow other general aviation services for private aircraft and charter operations in conjunction with regularly scheduled commercial passenger aircraft services.

City of Hailey Comprehensive Plan. The 2012 City Comprehensive Plan was prepared to guide land use changes over time. The Plan states that, "as a member of the Friedman Memorial Airport Authority, it is the intent of the City to relocate the airport operations out of the city limits due to the increasing safety hazards and noise and air pollution impacts on nearby neighborhoods, schools, businesses, and other public and private uses." One of the goals of the Plan is to, "continue cooperation with Blaine County and the Friedman Memorial Airport Authority in regional planning efforts to optimally relocate the airport and plan for the long term redevelopment of the site within the city limits to ensure that changes in land use are beneficial to the community of Hailey."

Blaine County Comprehensive Plan. The Blaine County Aviation System, adopted in 2009 as a section of the County Comprehensive Plan, states that Friedman Memorial Airport is the only airport in the County serving both general aviation and commercial air carriers. A general principle of the plan is to provide air facilities that are compatible with the surrounding communities, while maintaining a respectful balance between aviation needs and the requirements of residents, businesses, and other public and private uses in the neighboring areas and the community at large. The plan also states that, "a replacement airport should be sited in Blaine County, along the Highway 75 transportation corridor. It should be capable of accommodating existing and future aviation operational demand and demand for facilities, in terrain that allows for Category I instrument approach and missed approach capability, for both ends of the primary runway."

The Plan also states that the ordinances and measures to protect the air facility and aviation uses from incompatible neighboring development shall include an Airport Overlay District to regulate land use.

3.2. Airport Environs Overlay Zoning

In 2014, the Idaho State Legislature passed legislation, known as Senate Bill 1265, which removed the authority of the Idaho Transportation Department (ITD) to zone for airports as previously afforded under Title 21 of the State Statutes. The bill also added new planning responsibilities for local zoning jurisdictions related to airport planning. Under Title 67, Chapter 65 of the State Statutes, airports are now considered essential public facilities and political jurisdictions are required to have a separate Public Airport Facilities section within their comprehensive plans. The bill also establishes notification requirements for political subdivisions to implement regarding their local planning and zoning activities, and how these actions may affect an airport they own or are influenced by.

Blaine County Code, Title 9, Chapter 18, *Airport Vicinity Overlay District (AV)*, establishes a district to prevent encroachment on airspace, to prevent interference from light and electromagnetic sources on runway approaches, and to prevent intensive human use of runway approaches.

The Airport Vicinity Overlay District prescribes three geometrically defined areas. These are described below in relation to Friedman Memorial Airport:

- **Runway Proper:** A rectangle whose width is 500 feet and whose length (L) is the maximum planned or foreseeable length of the runway.
  - Width: 500 Feet
  - Length: 7,550 Feet
  - Permitted Uses: Only those uses necessary for the operation of the Airport
  - Accessory Uses: None
- **Primary Safety Zone**: That portion of the approach area to the runway measuring in 2/3 L, and a width flaring on both sides from 500 feet (immediately adjacent to the runway proper), at a rate of one lateral foot for every ten feet in length.
  - Width: 500 Feet Inner, 1,003 Feet Outer
  - Length: 5,033 Feet
  - Permitted Uses: Agricultural uses, recreational uses without structures, parks, golf course, cemeteries or water impoundments
  - Accessory Uses: Additional buildings or uses on the same premises which are clearly and customarily incidental to the principal permitted use
- **Secondary Safety Zone**: On both extremities of the Primary Safety Zone, measuring in 1/3 L, and flaring in width in the same manner.
  - Width: 1,003 Feet Inner, 1,254 Feet Outer
  - Length: 2,517 Feet
  - Permitted Uses: Agricultural uses, recreational uses, and residential uses
  - Accessory Uses: Additional buildings or uses on the same premises which are clearly and customarily incidental to the principal permitted use

3.3. Existing Land Use

The Airport is located within the City of Hailey and encompasses 209 acres of land. North and east of the Airport is a mixture of residential and commercial uses. McKercher City Park and Hailey Cemetery are located immediately north of the Airport. Non-residential development is located to the immediate northwest and includes a church located at the intersection of State Highway 75 and Airport Way, and other commercial/industrial development near Airport Way and Aviation Drive. Further to the northwest is the historical center of Hailey, which has a mixture of commercial and residential uses. To the west of the Airport, there is a mixture of light industrial and lower-density residential areas that currently have limited development. Residential land uses are located southeast of the Airport, and land uses are predominantly agricultural and open/undeveloped land with a few scattered residences along Broadford Road. A small residential area is located to the southwest along Broadford Highlands Way. The Big Wood River, which flows north to south through the valley, is located approximately 4,000 feet west of the Airport. The City of Bellevue is located approximately two miles to the southeast, with the Chantrelle subdivision being the closest residential land use within the jurisdiction. The land uses described above are depicted in **Figure A10**.

SOURCE: BASE: Google Maps, 2014. LAND USE: City of Hailey, Blaine County.

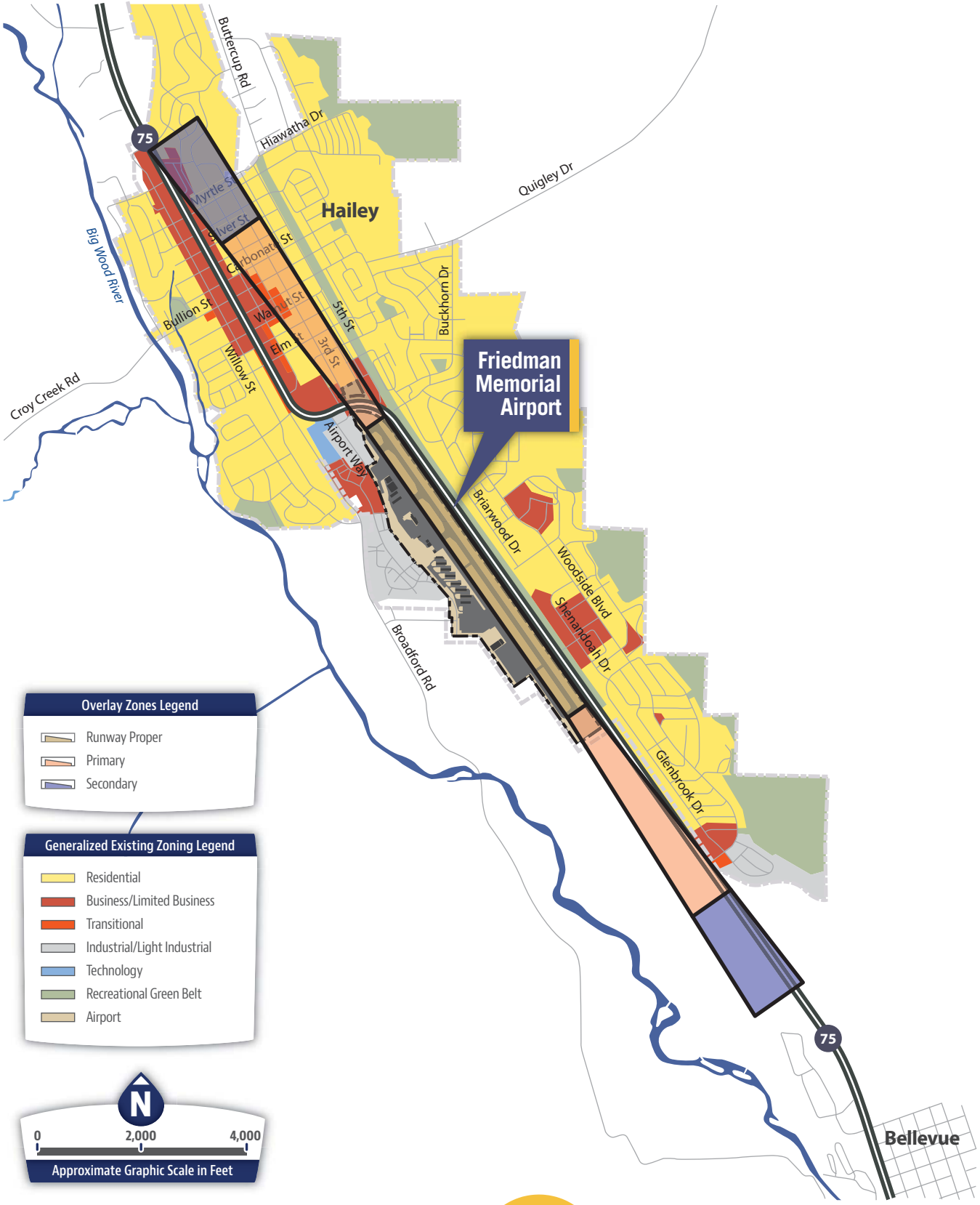


FIGURE A9 **Generalized Existing Zoning with Overlay Zones**

SOURCE: BASE: Google Maps, 2014. LAND USE: City of Hailey, City of Bellevue & Blaine County.

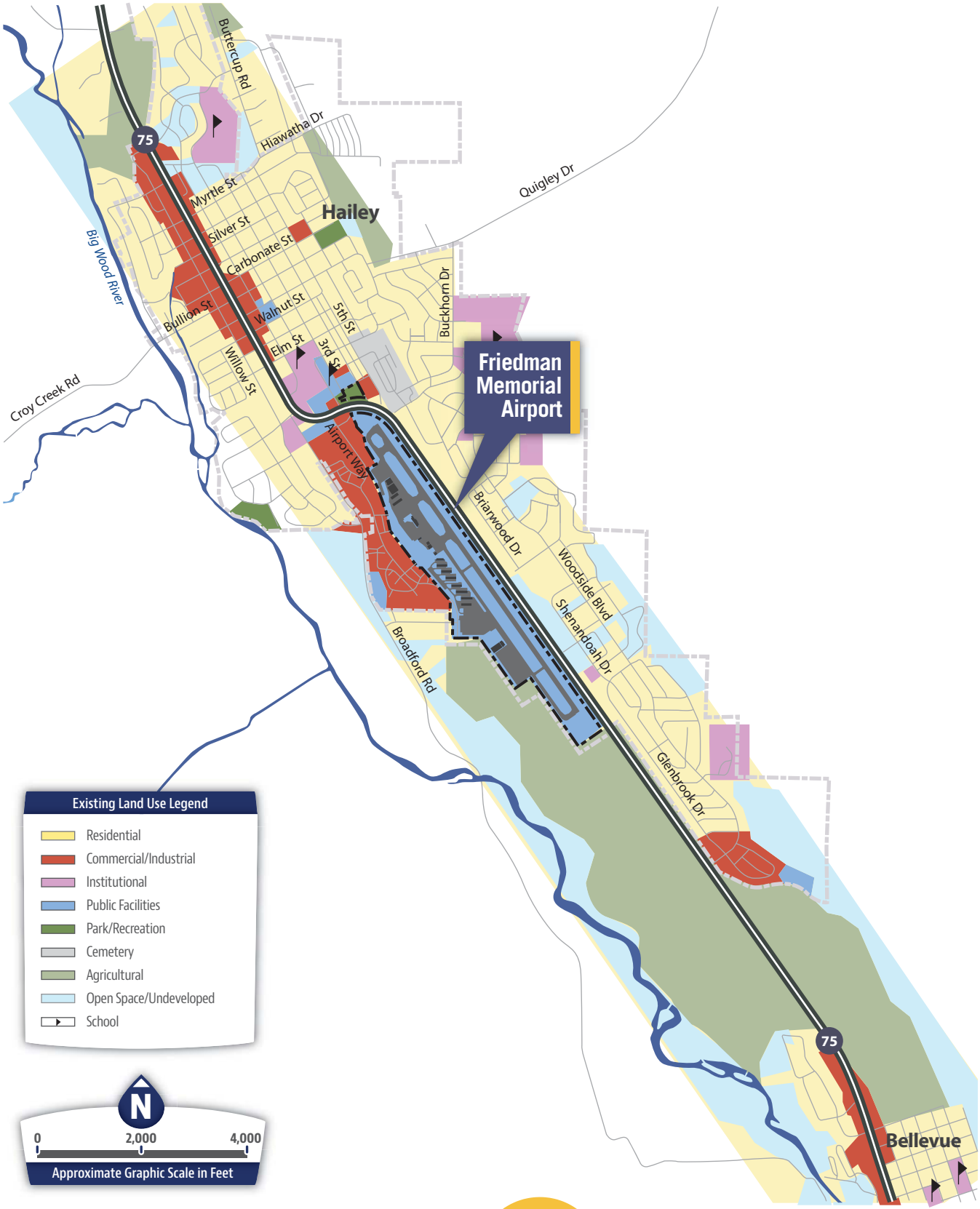


FIGURE A1O **Generalized Existing Land Use**

4. Environmental Review

Environmental considerations and factors are important to review during the airport planning process when analyzing development alternatives and identifying preferred alternatives. It is necessary to provide the airport sponsor with the information needed to expedite environmental processing that may be required in support of future airport development projects. The following sections provide brief descriptions of environmental impact categories that are pertinent to airport planning, as well as airport-specific environmental information.

4.1. Farmland

The Farmland Protection and Policy Act (FPPA) was enacted to minimize the loss of prime farmland and unique farmland as a result of a Federal action resulting in the converting of designated lands to nonagricultural use. Federal agencies that authorize actions that result in the conversion of prime farmland not already committed to urban development or water storage are responsible for compliance with FPPA. Compliance is to be coordinated with the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS).

According to the Blaine County Soils Map, prepared by the USDA, NRCS, the airport property contains four types of soil and two types of farmland. These are listed below in order of prevalence on airport property.

- **Gimlett very gravelly sandy loam, 0 to 2 percent slopes**
  - Prime farmland if irrigated
- **Little Wood very gravelly loam, 0 to 2 percent slopes**
  - Prime farmland if irrigated
- **Iskanat gravelly clay loam, 0 to 2 percent slopes**
  - Farmland of statewide importance, if irrigated
- **Balaam-Adamson complex, cool, 0 to 2 percent slopes**
  - Prime farmland if irrigated

Prime farmland is a classification defined by NRCS, National Soil Survey Handbook to mean "land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and that is available for these uses."

4.2. Floodplains

Executive Order 11988 directs federal agencies to take action to reduce the risk of flood loss, minimize the impacts of floods on human safety, health, and welfare, and restore and preserve the natural and beneficial values served by floodplains.

According to Federal Emergency Management Agency published floodplain maps, the Airport is not located within a surveyed floodplain. The 100-year and 500-year floodplains are adjacent to the Airport, on the east side of Highway 75, but do not directly impact Airport property. Floodplains in the vicinity of the Airport are illustrated in **Figure A11**.

4.3. Hazardous Material, Pollution Prevention, and Solid Waste

The handling and disposal of hazardous materials, chemicals, substances, and wastes are primarily governed by four laws: the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (as amended by the Superfund Amendments and Reauthorization Act of 1986 and the Community Environmental Response Facilitation Act of 1992); the Pollution Prevention Act of 1990; the Toxic Substances Control Act of 1976 (TSCA), as amended; and the Resource Conservation and Recovery Act of 1976 (RCRA) (as amended by the Solid Waste Disposal Act of 1980 [SWDA], the Hazardous and Solid Waste Amendment of 1984, and the Federal Facility Compliance Act of 1992 [FFCA]). The first and last statutes are of most importance to the FAA in proposing actions that could affect or be affected by hazardous materials, pollution, and solid waste.

Construction activates can generate hazardous waste and some construction materials constitute hazardous substances. These include fuel, oil, lubricants, paints, solvents, concrete-curing compounds, fertilizers, herbicides, and pesticides. Proper practices should be implemented to prevent or minimize the potential for these hazardous substances to be released into the environment. Chemicals, petroleum-based products, and waste materials, including solid and liquid waste, should be stored in areas specifically designed to prevent discharge into storm water runoff. Areas used for storage of toxic materials should be designed with full enclosure in mind, such as the establishment of a dike around the perimeter of the storage area. Construction equipment maintenance should be performed in a designated area and control measures, such as drip pans to contain petroleum products, should be implemented. Spills should be cleaned up immediately and disposed of properly.

4.4. Historical, Architectural, Archeological, and Cultural Inventories

Section 106 of the National Historic Preservation Act requires federal agencies, or their designated representatives, to take into account the effects of their undertaking on historic properties, which include archeological sites, buildings, structures, objects, and districts.

According to the National Park Service's National Register of Historic Places (NRHP), there are currently 21 historic properties listed in Blaine County. Of these, 11 are within the limits of the City of Hailey. The nearest NRHP property to the Airport that is not within the City of Hailey is the Bellevue Historic District in the City of Bellevue, approximately 2.5 miles southeast or the Airport. NRHP properties within the City of Hailey are clustered in an area northwest of the Airport, are summarized in **Table A7**, and are shown in **Figure A11**.

Table A7 **HISTORIC PROPERTIES LOCATED NEAR THE AIRPORT**

Historic Property Name	Address or Approximate Location	Approximate Distance and Direction from the Airport Boundary
St. Charles of the Valley Catholic Church and Rectory	Pine & 1st Streets	0.4 miles Northwest
Rialto Hotel	201 S. Main Street	0.5 miles Northwest
Emmanuel Episcopal Church	101 S. 2nd Avenue	0.6 miles Northwest
Werthheimer Building	101 S. Main Street	0.6 miles Northwest
Blaine County Courthouse	1st & Croy Streets	0.6 miles Northwest
Pound Homer House	314 2nd Ave., S.	0.5 miles Northwest
J.C. Fox Building	S. Main Street	0.6 miles Northwest
Hailey Masonic Lodge	100 S. 2nd Avenue	0.6 miles Northwest
Fox-Worswick House	119 E. Bullion Street	0.6 miles Northwest
Eben S. and Elizabeth S. Chase House	203 E. Bullion Street	0.6 miles Northwest
W.H. Watt Building	120 N. Main Street	0.7 miles Northwest

SOURCE: National Register of Historic Places – Western Region Spatial Data, accessed November 7, 2014 (http://nrhp.focus.nps.gov/natreg/docs/google_earth _layers.html**)**

The Native American Consultation Database (NACD), maintained by the National Park Service, indicates that the Shoshone Tribe of the Wind River Reservation, Wyoming, and the Shoshone-Bannock Tribes of the Fort Hall Reservation, Idaho, have historic ties and interests in Blaine County.

The 2012 EA to Initiate Turbojet Service assessed potential impacts to historical, cultural, archeological, and architectural resources. Sites were identified within the EA Study Area that were listed or eligible for inclusion in the NRHP. In addition to the sites listed on the NRHP in the table above, four other sites were identified as eligible: the Hiawatha Canal, located approximately 1.0 miles north of the Airport boundary; the Hailey Armory, approximately 0.5 miles to the west; the Galena Toll Road State Highway 75 site, located at the southeast edge of the Airport; and the Cove Canal, approximately 1.0 miles to the southeast.

4.5. Threatened and Endangered Species

The Endangered Species Act, as amended, requires each Federal agency to ensure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of habitat of such species. The U.S. Fish and Wildlife Service list for Blaine County currently includes the Yellow-billed Cuckoo as a Threatened Species, the Whitebark Pine as a Candidate Species, the Bull Trout as a Threatened Species, the Canada Lynx as a Threatened Species, and the North American Wolverine as a Proposed Threatened Species. There is no known habitat for these species at the Airport. These species are listed in **Table A8**.

Table A8 **BLAINE COUNTY ENDANGERED, THREATENED, AND CANDIDATE SPECIES**

Group	Common Name	Scientific Name	Status
Birds	Yellow-billed Cuckoo	Coccyzus americanus	Threatened
Conifers and Cycads	Whitebark Pine	Pinus albicaulis	Candidate
Fishes	Bull Trout	Salvelinus confluentus	Threatened
Mammals	North American Wolverine	Gulo gulo luscus	Proposed Threatened
Mammals	Canada Lynx	Lynx Canadensis	Threatened

SOURCE: U.S. Fish & Wildlife Service, Environmental Conservation Online System, Species by County Report, Species that are known or are believed to occur in this county, accessed January 31, 2017 (http://www.fws.gov/endangered).

4.6. Section 4(f) Properties

According to Section 4(f) of the Department of Transportation Act (recodified as 49 USC, Subtitle I, Section 303), no publicly-owned park, recreation area, wildlife or waterfowl refuge, or land of historic site that is of national, state, or local significance shall be used, acquired, or affected by programs or projects requiring federal assistance for implementation unless there is no feasible or prudent alternative.

There are a number of potential Section 4(f) resources in the Airport vicinity. Public parks in the vicinity include: Hailey Skate Park, Lawrence Heagle Park, Lions Park, Keefer Park, Balmoral Park, Old Cutters Park, Curtis Park, Deerfield Park, Foxmoor Park, Roberta McKercher Park, and Hop Porter Park. Toe of the Hill Trail is a non-motorized, diverse use trail that runs along the foothills east of the Woodside Subdivision south of the Airport. The Blaine County Recreation District manages the Wood River Trail, a multi-use trail running north-south through the City of Hailey along the east side of the Airport, as well as the Croy Nordic Ski Trails west of the City along Croy Creek Road. In addition, the Hailey Cemetery is located immediately north of the Airport. Area schools include Woodside Elementary School, Wood River Middle School, and Wood River High School. Historic sites listed or eligible for listing on the NRHP are discussed in the section of this chapter entitled *Historical, Architectural, Archeological, and Cultural Inventories*. There are no Idaho State Historical Society sites or wildlife or waterfowl refuges in the Airport vicinity. Potential Section 4(f) properties are illustrated in **Figure A11**.

4.7. Water Quality

Water quality considerations related to airport development often include increased surface runoff and erosion, and pollution from fuel, oil, solvents, and deicing fluids. Potential pollution could come from petroleum products spilled on the surface and carried through drainage channels off of airport property. During a storm, storm water can pick up these diluted concentrations of oil, grease, fuel, and de-icing chemicals from runways, taxiways, parking lots, fuel storage facilities, and access roads, which can then drain into the surface water or ground water systems, thereby polluting them. State and Federal laws and regulations have been established to safeguard these storage facilities and prevent extensive storm water pollution. Additionally, water pollution is regulated by the National Pollutant Discharge Elimination System (NPDES) permit program by controlling sources that discharge pollutants into waters of the United States.

The Airport is within the Big Wood watershed. The northern portion of the Airport is located within the Quigley Creek subwatershed, while the remaining portion of the property is within the Slaughterhouse-Big Wood River subwatershed. The closest named streams or rivers to the Airport are Justus Ditch, approximately 500 feet to the west, Cove Canal, approximately 400 feet to the west, and the Big Wood River, approximately 0.5 miles to the west.

The Airport maintains a Stormwater Pollution Prevention Plan (SWPPP), prepared in 2008, to comply with the requirements of the NPDES, Clean Water Act of 1987 and the Multi-Sector General Permit (MSGP)-2000 for industrial activity. The SWPPP authors performed a site assessment for runoff and erosion, detailed existing potential sources of pollutants, and recommended facilities, monitoring practices, and procedures to reduce the contribution of pollutants from the Airport to surface waters, as well as treatment measures to be employed when pollutants encounter surface runoff.

Aircraft fueling and de-icing services are performed on the aprons by Atlantic Aviation as well as the commercial air carriers using mobile equipment. Airport pavement surfaces are also de-iced by the airport. In 2007, approximately 1,248,155 gallons of Jet A and AVGAS was dispensed at the airport. In addition, during the 2007-2008 winter season, approximately 3,000-5,000 gallons of Propylene Glycol was dispensed by Skywest Airlines and approx. 2,172-3,000 by Horizon Airlines for aircraft de-icing activities. Approximately 2,500 gallons of Propylene Glycol was also dispensed for airport pavement deicing.

De-icing Activities. De-icing of aircraft takes place during the winter months typically between November and March. Aircraft de-icing agent is stored in above ground tanks, one 5,000-gallon and one 1,000-gallon, located north of the terminal building. Agent is also stored in the mobile equipment that performs de-icing operations. Runways and taxiways are also de-iced as necessary. The airport operates a 1,000-gallon trailer and a 325-gallon truck mounted tank. Both are stored indoors when not in use. Areas likely to be contaminated with de-icing fluid include the pavement of the runway and parallel taxiway and the aircraft parking aprons adjacent to the FBO and terminal buildings, where aircraft are typically de-iced. The majority of de-icing fluids evaporate rather than run off. Any run-off is captured in drywells with little or no stormwater contamination.

Maintenance Activities. Numerous lubricants for airport vehicle maintenance are stored in various quantities up to 55 gallons in the airport equipment maintenance facility. Because these materials are stored indoors, there is very little likelihood for contamination of stormwater. Aircraft maintenance also takes place primarily indoors; therefore, there is very little likelihood for contamination of stormwater from these activities. Selected solvents, paints, oils, etc. are used during aircraft maintenance activities. These are typically used indoors. Aircraft are occasionally serviced outdoors on the aprons. During these times, there is a slight potential for stormwater

contamination from dripped materials. Training for employees at the airport includes the requirement to use drip pans and like devices during outdoor maintenance activities.

Waste Disposal Practices. Wastes generated at the airport are limited to used oils and solvents, used engine and aircraft parts, and general refuse. The airport operates a used oil recovery tank of 600 gallon capacity for storage of waste oils prior to recycling. In addition, the FBO also operates a used oil recovery tank of 150 gallons. General refuse is disposed of in dumpsters that have lids to prevent any contamination of stormwater. Therefore, there is very little opportunity for contamination of stormwater.

Airport Maintenance. Herbicides are applied annually on Airport property and around light fixtures to prevent plant growth. Fertilizers, weed killers, soil sterilants, and pest control chemicals will be properly labeled and stored indoors or outdoors in a covered area to avoid stormwater contamination. Also, such chemicals are not applied within a 48-hour time period of forecasted precipitation.

4.8. Wetlands

Wetlands are defined as areas inundated by surface or groundwater, with a frequency sufficient to support vegetation or aquatic life requiring saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands and other Waters of the U.S. may be classified as "jurisdictional" or "non-jurisdictional." Jurisdictional wetlands and designated Waters of the U.S. are under the authority of and are regulated by the U.S. Army Corps of Engineers (ACOE). Section 404 of the *Clean Water Act* gives the ACOE the jurisdictional authority to regulate disposal of dredge or fill materials in Waters of the U.S., including coastal wetlands, tidelands and marine waters below the High Tide Line, as well as streams and freshwater wetlands above the OHW line of streams that are adjacent to waters of the U.S. The ACOE must be consulted whenever jurisdictional wetlands and other Waters of the U.S. are present.

According to the National Wetlands Inventory (NWI) maps maintained by the U.S. Fish and Wildlife Service, there are no wetlands on airport property, but there are wetlands within 300 feet of the airport boundary, west of the FBO complex. The location of wetlands near airport property are illustrated in **Figure A11**.

SOURCE: BASE: Google Maps, 2014.

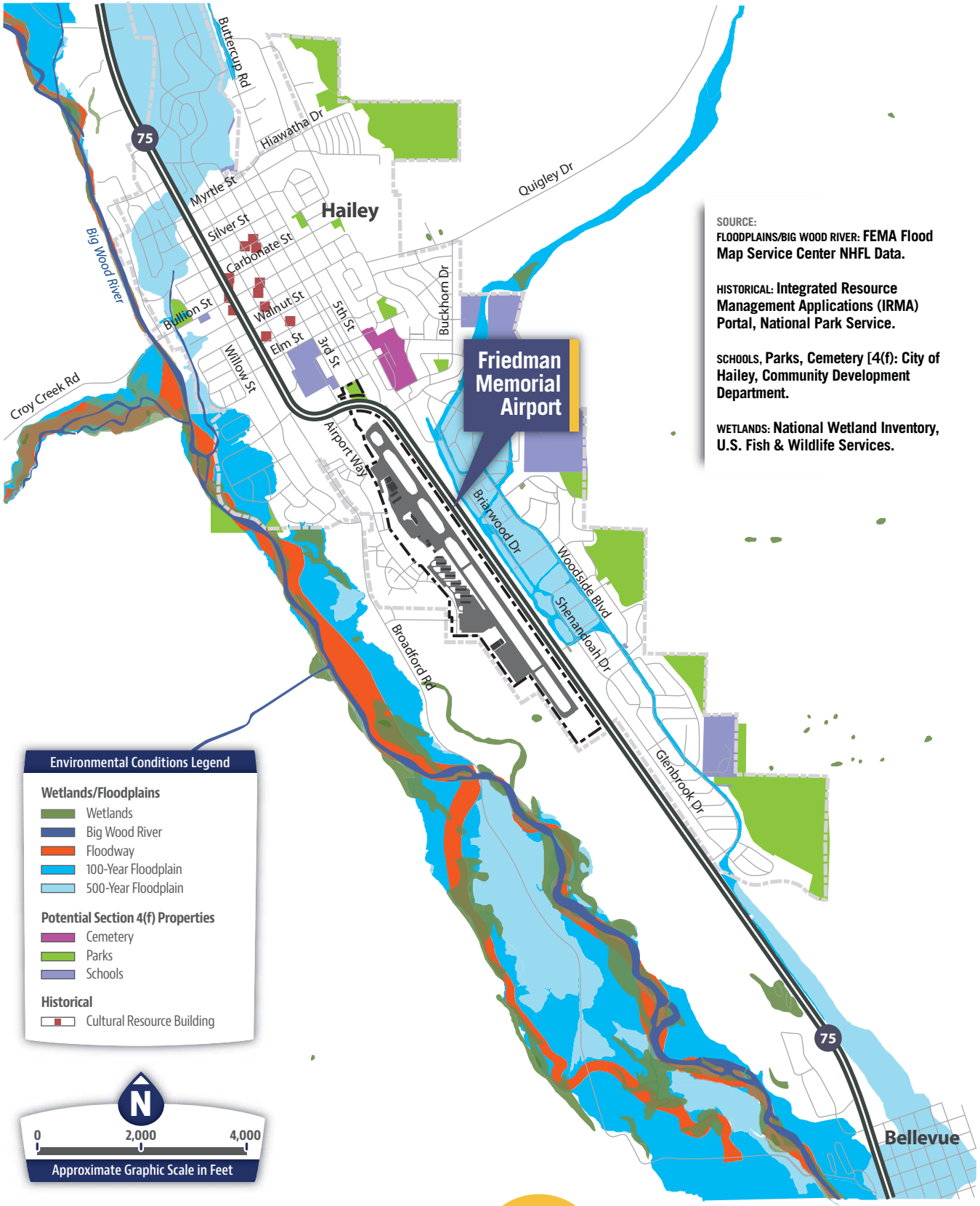


FIGURE A11 **Environmental Conditions Map**

5. Summary

The goal of this chapter is to provide general background information pertaining to Friedman Memorial Airport, its operating environment, and its physical surrounding. The *Inventory of Existing Conditions* chapter is vital from the standpoint that it will be used as a reference in the analysis and design process, which is required to prepare the airport's future development plan.

The next step in the planning process is to formulate forecasts for the quantity and type of future aviation activity expected to occur at the Airport during the next twenty years.