

## 8.0 FINANCIAL PLAN

This financial plan presents an analysis of the financial feasibility of improvements proposed for the Birchwood Airport under its Airport Master Plan. The plan describes historical revenues and expenses, presents the estimated cost of proposed development alternatives, and explores possible funding sources.

### 8.1 Inventory of Financial Information

#### 8.1.1 Airport Financial Structure

Birchwood Airport is owned and operated by the state of Alaska and managed through the DOT&PF. It collects revenue through lease and tie-down fees. The airport is financially sustainable, though the airport’s revenue goes into a state general aviation fund, which funds M&O for state-run airports in Alaska. Funding is prioritized for airports experiencing safety concerns in communities primarily reliant on air travel. See Financial Assessment in Section 2.5 for more information.

#### 8.1.2 Rates and Charges

At present, Birchwood Airport charges rates as shown in Table 33 and Table 34.

**Table 33: Lease Rates Charged at the Birchwood Airport, 2010-Present**

Effective Date	Lease Rate (\$ / square foot)	
	Aeronautical Use	Non-aeronautical use
1/1/2023	0.131	0.158
1/1/2020	0.119	0.144
1/1/2019	0.108	0.131
1/1/2017	0.098	0.119
1/1/2015	0.082	0.099
1/1/2013	0.082	0.094
1/1/2011	0.079	0.089
1/1/2010	0.076	0.082

Source: DOT&PF (2023c)

**Table 34: Tie-down, Transient, and Application Fees Charged at the Birchwood Airport, 2012-2023**

Effective Date	Years	
	2012–2017	2017–2023
Tiedown Rate (\$ per Month)	35	48
Application Fee (\$)	25	35
Transient Fee (\$ per Day)	4	5

Source: DOT&PF (2023c)

### 8.2 Financial Plan

This section summarizes the funding needs for the CIP, discusses funding sources, and concludes with the development of pro forma cash flow forecasts for the preferred alternative.

### 8.2.1 Capital Improvement Program Funding Needs

Table 35 summarizes the estimated cost by year for the preferred alternative, with a total cost of \$68.4 million from 2025 through 2039. The plan moving forward considers the payback of the sponsor’s share only (\$4.3 million, or 6.25%) and not the full project cost. The implementation plan in Section 7.0 shows the detailed estimates for the sponsor’s share of preferred alternative’s costs.

**Table 35: Engineer’s Cost Estimate and Schedule for the Preferred Alternative, 2025 - 2039**

Fiscal Year	Total Project Estimate (\$)	AIP Funding (\$)	Sponsor Share (\$)
2025	0	0	0
2026	0	0	0
2027	0	0	0
2028	13,958,500	13,086,094	872,406
2029	0	0	0
2030	0	0	0
2031	0	0	0
2032	0	0	0
2033	3,892,000	3,648,750	243,250
2034	0	0	0
2035	0	0	0
2036	0	0	0
2037	0	0	0
2038	50,546,800	47,387,625	3,159,175
2039	0	0	0
<b>Total</b>	<b>68,397,300</b>	<b>64,122,469</b>	<b>4,274,831</b>

Source: HDL (2024)

### 8.2.2 Capital Improvement Program Funding Sources

This section discusses five potential sources of funding for the preferred alternative: federal funding, internally generated funds (rates and charges), third party development, state appropriations, and bonds.

#### **8.2.2.1 Federal Funding**

The FAA, through its AIP, provides grants to public agencies for planning and development of public-use airports. Since 1987, Birchwood Airport has received almost \$11.5 million of AIP grant funding (DOT&PF, 2023a).

The ACIP estimates that all of the projects will be funded at 93.75%, with a local match of 6.25%. Plan estimates AIP funding will cover \$64.12 million of the estimated \$68.40 million cost, leaving \$4.27 million for DOT&PF to fund.

It is anticipated that most of the cost of the recommended improvements would be covered by AIP grants, though the total amount required for the preferred alternative exceeds what DOT&PF has received historically for projects at Birchwood Airport, and the identified need likely exceeds available funding. As a result, work may need to be completed with a phased approach.

The state of Alaska also received approximately \$392 million for airports from the Bipartisan Infrastructure Law (USDOT, 2022). It applied for and received infrastructure grants in the amounts of \$159,000 and \$145,000 in FY 2022 and 2023, respectively (FAA 2023). Future grant applications could be made for specific elements of the improvement plan.

#### **8.2.2.2 Internally Generated Funds (Rates and Charges)**

Birchwood Airport has historically operated with a profit, as discussed in Section 2.5.1. In 2022 dollars, the airport averaged \$150,000 of operating revenue during FY 2015–2022. Development of access to a new hangar lease lot area and new electrified tie-downs will contribute to increased revenue. Using Birchwood Airport’s operating profits appears to offer a feasible option for repayment of the remaining cost of improvements, provided federal funding covers 93.75% of the cost.

Birchwood Airport does not charge a Passenger Facility Charge or landing fee. Neither of these additional charges would be applicable or practical, given its user base. As noted in the Aviation Activity Forecast, training operations far outnumber flight operations, and in 2019, there were only six enplanements.

If improvements were funded by the state’s general aviation fund and repaid from operating profits, that would result in a maximum cumulative draw of \$1.5–2.0 million, depending on the growth scenario.

#### **8.2.2.3 Third Party Development**

Past discussions have raised the possibility of private development or sponsorship of Birchwood Airport, as well as a transfer to the MOA. In the past, both Eklutna, Inc. and the MOA have expressed interest. However, the *Public Private Partnership Summary* (Agnew:Beck, 2022, Appendix G) looked at this potential and concluded that a public-private partnership may not make sense from an airport management perspective for Birchwood Airport, due to its characteristics and profitability, unless a specific need is identified. The summary also noted that while there could be benefits to having a more attentive manager, many users opposed private operation of the airport for fears that it would result in higher fees and a shift to more commercial operations of the airport.

#### **8.2.2.4 State Appropriations**

The Legislature could appropriate funds to cover the state’s share of improvement costs. The current fiscal environment and monetary constraints could make it challenging to secure sufficient support, though, with AIP grant funding and potentially some of the funds from the Bipartisan Infrastructure Law, the additional burden on the state could be greatly reduced.

#### **8.2.2.5 Bonds**

Another approach the state could take, as an alternative to an appropriation, would be to issue general obligation or revenue bonds to fund improvements. A revenue bond could be issued on Birchwood Airport’s operating profits, given its history of profitability. However, it is not clear how much of the required funding could be secured, which would depend on the bond’s interest rate. A general obligation bond could be issued for the remaining need. Due to the high interest rate environment in late 2023, bonding could be prohibitively costly.

### 8.2.3 Financial Implementation Analysis

This section provides a pro forma cash flow forecast for the preferred alternative using the three growth scenarios described in the Aviation Activity Forecast.

#### 8.2.3.1 Preferred Alternative – Maintain Existing Gravel Runway

The preferred alternative maintains current runway operational procedures, prioritizes removing portions of aligned Taxiway A, resurfaces the gravel/ski Runway 03G/21G in its current location, and includes property acquisition to meet the need for additional hangar lease area and aircraft tie-downs. It would add new parking spaces, 73 tie-downs (8 of which would be for summer use only), and 16 acres of lease area (HDL, 2024). The estimated capital cost is \$68.40 million, as shown in the implementation plan. It is anticipated that all of the projects would be eligible for AIP grants. After the 93.75% federal share (FAA, 2019d), \$4.27 million would need to be covered with Birchwood Airport’s internally generated funds and other sources.

The preferred alternative is anticipated to have the same level of growth as Alternative 1 (0.20% to 0.86% annually, with proportional increases in revenues and expenses) and would see additional revenue and expense increases associated with expanded parking, tie-down, and lease areas. Specifically, tie-down and lease area revenue is expected to increase over time as additional spaces are added. Likewise, maintenance costs are expected to increase as the airport’s maintainable area (grows, and electricity costs are expected to increase with the addition of electrified tie-downs.

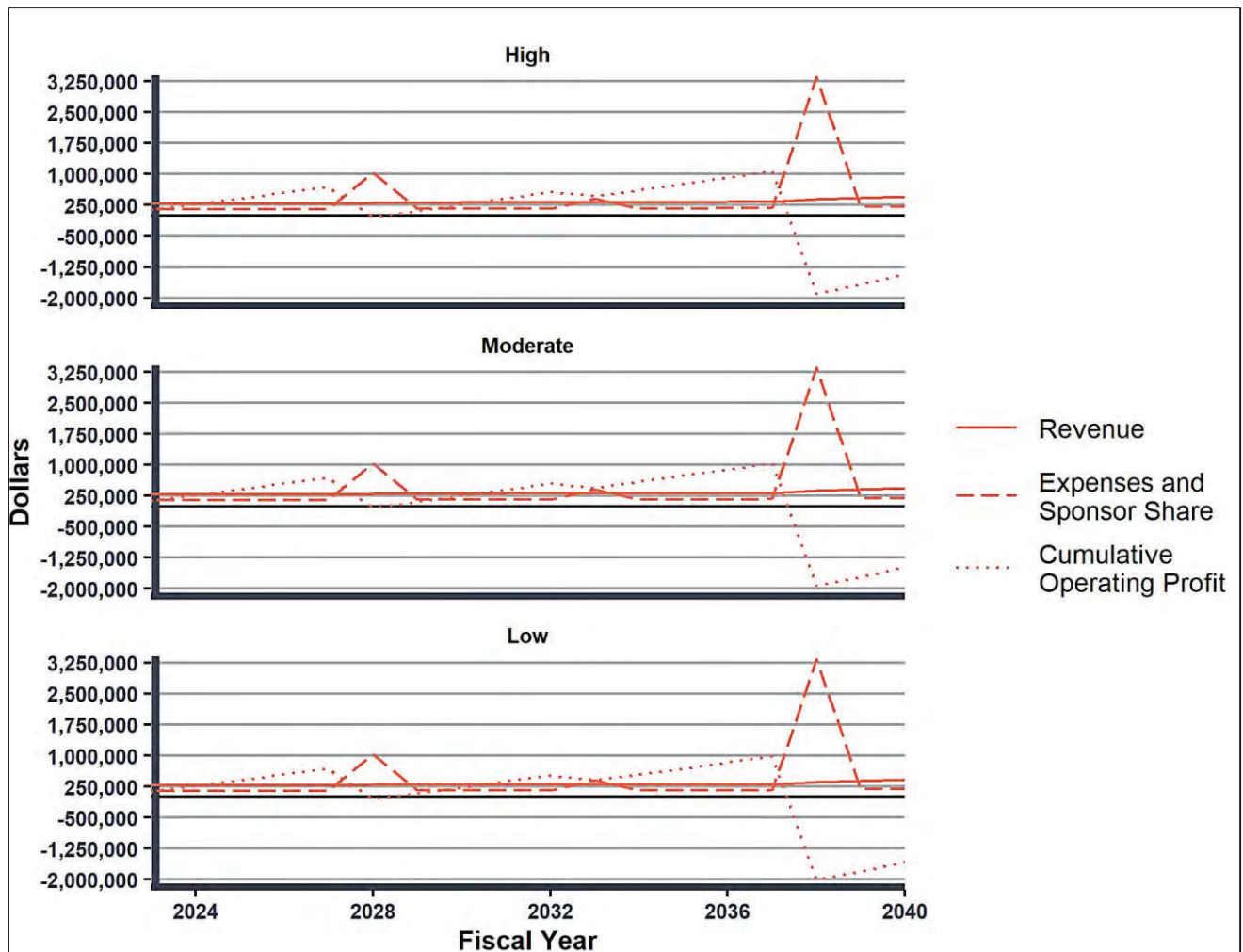
Table 36 presents assumptions about additional revenues and expenses resulting from the improvements.

**Table 36: Revenue and Expense Assumptions for Alternative 2**

Assumption		Value (All Dollar Amounts in 2022\$)	Notes
<b>Tie-downs</b>	Number added	13 year-round and 8 summer-only (assumed to be available 75% of year) in 2028 and 52 in 2038	From <i>Implementation Plan</i>
	Occupancy rate	81.4%	Calculated based on existing number of tie-downs, financial data for 2022, and current tie-down rate
<b>Lease Lots</b>	Area added	16 acres in 2038	From <i>Implementation Plan</i>
	Occupancy rate of new lease area	Increasing by 33% per year, from 33% in 2038 to 67% in 2039 to 100% in 2040	Assumed
<b>Expenses</b>	Maintenance cost increase	Increases in 2022 Services, Commodities, and Facilities expenses over time as maintainable areas are added in 2028 (5% increase), 2033 (2.5%), and 2038 (17.5%), resulting in a total increase of 25% by 2038	Assumed
	Electricity cost increase from tie-downs	0.8A draw from 12V/8A or 24V/4A charger 85% conversion efficiency for AC/DC 75% run time for battery chargers	Battery charge amperage draw from VDC Electronics (2023) and incremental electrical rates from Matanuska Electric Association (2023). AC/DC conversion efficiency and run time assumed.

Graph 6 shows the pro forma cash flow forecast based on the low, moderate, and high rates of growth, respectively, for 2023 through 2040. The graph includes the sponsor share of improvement costs as part of the expenses and includes a cumulative operating profit starting in 2023 to show the overall draw on airport funds over time. Table 37 through Table 39 present a detailed look at the annual forecasts. As seen in the graph and tables, the maximum cumulative draw would be between \$1.9 million and \$2.1 million in all scenarios.

After the completion of capital improvements, the airport’s annual net operating profit is expected to be larger than under Alternative 1, which would make up for the cost of improvements over time. The payback period could take several decades, however, and it is not practical to estimate due to the likelihood that over that time there would be additional capital improvements.



**Graph 6: Projected Revenues and Expenses, Alternative 2, FY 2015 - 2040**

Source: DOT&PF (2023b), HDL (2021, 2024), and Northern Economics, Inc. analysis

**Table 37: Projected Revenues and Expenses, Alternative 2 Low Scenario, FY 2015–2040**

Fiscal Year	Revenue	Expenses	Sponsor Share of Project	Operating Profit	Cumulative Operating Profit, 2023-
	<b>Historical</b>				
2015	246,088	78,962		167,126	
2016	236,641	67,598		169,043	
2017	234,963	157,135		77,828	
2018	277,082	113,585		163,497	
2019	290,416	109,524		180,892	
2020	310,484	166,913		143,571	
2021	316,153	167,974		148,179	
2022	280,022	145,310		134,712	
	<b>Projected, Low Scenario</b>				
2023	280,582	145,600	0	134,982	134,982
2024	281,143	145,892	0	135,251	270,233
2025	281,705	146,183	0	135,522	405,755
2026	282,268	146,476	0	135,792	541,547
2027	282,833	146,769	0	136,064	677,611
2028	294,721	154,146	872,406	-731,831	-54,220
2029	295,288	154,451	0	140,837	86,617
2030	295,856	154,756	0	141,100	227,717
2031	296,425	155,062	0	141,363	369,080
2032	296,995	155,369	0	141,626	510,706
2033	297,566	158,408	243,250	-104,092	406,614
2034	298,139	158,721	0	139,418	546,032
2035	298,712	159,035	0	139,677	685,709
2036	299,287	159,350	0	139,937	825,646
2037	299,863	159,666	0	140,197	965,843
2038	358,222	183,878	3,159,175	-2,984,831	-2,018,988
2039	386,515	184,233	0	202,282	-1,816,706
2040	414,105	184,589	0	229,516	-1,587,190

Source: DOT&PF (2023b), HDL (2021, 2024), and Northern Economics, Inc. analysis

**Table 38: Projected Revenues and Expenses, Alternative 2 Moderate Scenario, FY 2015 - 2040**

Fiscal Year	Revenue	Expenses	Sponsor Share of Project	Operating Profit	Cumulative Operating Profit, 2023-
	<b>Historical</b>				
2015	246,088	78,962		167,126	
2016	236,641	67,598		169,043	
2017	234,963	157,135		77,828	
2018	277,082	113,585		163,497	
2019	290,416	109,524		180,892	
2020	310,484	166,913		143,571	
2021	316,153	167,974		148,179	
2022	280,022	145,310		134,712	
	<b>Projected, Moderate Scenario</b>				
2023	281,814	146,240	0	135,574	135,574
2024	283,617	147,176	0	136,441	272,015
2025	285,432	148,118	0	137,314	409,329
2026	287,259	149,066	0	138,193	547,522
2027	289,098	150,020	0	139,078	686,600
2028	302,270	158,207	872,406	-728,343	-41,743
2029	304,132	159,209	0	144,923	103,180
2030	306,006	160,217	0	145,789	248,969
2031	307,892	161,232	0	146,660	395,629
2032	309,790	162,253	0	147,537	543,166
2033	311,700	166,147	243,250	-97,697	445,469
2034	313,623	167,200	0	146,423	591,892
2035	315,557	168,259	0	147,298	739,190
2036	317,505	169,325	0	148,180	887,370
2037	319,464	170,398	0	149,066	1,036,436
2038	381,164	196,776	3,159,175	-2,974,787	-1,938,351
2039	413,133	197,996	0	215,137	-1,723,214
2040	444,616	199,223	0	245,393	-1,477,821

Source: DOT&PF (2023b), HDL (2021, 2024), and Northern Economics, Inc. analysis

**Table 39: Projected Revenues and Expenses, Alternative 2 High Scenario, FY 2015–2040**

Fiscal Year	Revenue	Expenses	Sponsor Share of Project	Operating Profit	Cumulative Operating Profit, 2023-
	<b>Historical</b>				
2015	246,088	78,962		167,126	
2016	236,641	67,598		169,043	
2017	234,963	157,135		77,828	
2018	277,082	113,585		163,497	
2019	290,416	109,524		180,892	
2020	310,484	166,913		143,571	
2021	316,153	167,974		148,179	
2022	280,022	145,310		134,712	
	<b>Projected, High Scenario</b>				
2023	282,430	146,559	0	135,871	135,870
2024	284,859	147,820	0	137,039	272,909
2025	287,308	149,091	0	138,217	411,126
2026	289,779	150,373	0	139,406	550,532
2027	292,271	151,666	0	140,605	691,137
2028	306,107	160,272	872,406	-726,571	-35,434
2029	308,642	161,636	0	147,006	111,572
2030	311,199	163,011	0	148,188	259,760
2031	313,778	164,399	0	149,379	409,139
2032	316,379	165,798	0	150,581	559,720
2033	319,003	170,145	243,250	-94,392	465,328
2034	321,649	171,594	0	150,055	615,383
2035	324,318	173,056	0	151,262	766,645
2036	327,009	174,530	0	152,479	919,124
2037	329,724	176,016	0	153,708	1,072,832
2038	393,212	203,550	3,159,175	-2,969,513	-1,896,681
2039	427,157	205,247	0	221,910	-1,674,771
2040	460,743	206,958	0	253,785	-1,420,986

Source: DOT&PF (2023b), HDL (2021, 2024), and Northern Economics, Inc. analysis

**8.2.4 Revenue Enhancement**

Revenue enhancements are additional sources of revenue outside of aeronautical activities. FAA (2015) notes that these revenues could include concession, airline, and non-aeronautical revenues.

As the level of activity at the airport grows and additional tie-downs and lease areas are available, access by adjacent landowners like Eklutna should become more attractive and could be a new source of income.

A high level of snow removal service has minimized impacts of snow on pilots’ operating days, with the greatest impacts felt by commercial users. The high level of service results in a higher cost for airport operations, however, and adjusting snow removal plans or investigating options for private maintenance could reduce this cost.



Birchwood Airport does not have an on-site manager, with some users seeing this as a positive and others as a negative. As the level of use grows, a part-time on-site airport manager might help to reduce communications issues and allow for faster resolution. Though no DOT&PF airports have a private manager, providing one would be an option for adding on-site management. A formal analysis could help to determine the trade-off between the additional cost of management and the benefit, potentially in the form of incrementally increased revenues, it would provide.

### **8.3 Conclusion**

This plan has evaluated the cost and funding of the recommended alternative, Alternative 2, with an estimated cost of \$68.40 million. The Implementation Plan anticipates FAA funding will cover 93.75% of the cost of improvements, resulting in a sponsor share of \$4.77 million the state will need to cover. While Bipartisan Infrastructure Law money may provide some additional federal support for the airport, the analysis finds that improvements could be funded by a draw from the state's general aviation fund that would not exceed \$2.0 million and would be repaid through additional revenues over time.

The No Build alternative would not incur additional capital expenses nor draw from the state's general aviation fund; it would continue to generate an operating profit that would flow into that fund. However, the alternative does not mitigate any compliance issues and could adversely impact future AIP funding eligibility, which could make needed improvements (to address, at a minimum, wear and tear) a greater burden on the airport and general aviation fund over time.