

Chapter Five Development Program



Methow Valley State Airport
Airport Layout Plan Update

CHAPTER FIVE FINANCIAL AND DEVELOPMENT PROGRAM

Introduction

The purpose of this chapter is to present the projects identified in the Airport Capital Improvement Program (ACIP) that have been formulated based on the analyses conducted in the Facility Requirements and Development Alternatives chapters (Chapters Three and Four). The ACIP projects are summarized in **Table 5-1**.

As noted in the previous chapter, the preferred development alternative selected for Methow Valley State Airport is based on conforming to FAA design standards for large airplanes (Airplane Design Group II) that are associated with general aviation users, medevac operators, and the USFS North Cascades Smokejumper Base. The preferred alternative includes airside elements (runway reconfiguration and partial length parallel taxiway construction) and landside elements (west apron reconfiguration/expansion, helicopter parking, hangar sites, additional access roads, etc.). In addition to specific construction-related activities, most projects will require formal environmental study.

Table 5-1 lists all major projects included in the twenty-year planning period addressed in the ALP Report. Individual projects for the first six years of the planning period are listed in order of priority by year. Projects for the second phase of the planning period (years 7-20) are listed in order of priority but have not been assigned a year. Each project's eligibility for FAA funding is noted, based on current federal legislation and funding formulas.

A primary source of potential funding identified in this plan is the FAA's Airport Improvement Program (AIP). As proposed, approximately 95 percent of the airport's 20-year CIP will be eligible for federal funding. Funds from this program are derived from the Aviation Trust Fund, which is the depository for all federal aviation taxes collected on such items as airline tickets, aviation fuel, lubricants, tires, aircraft registrations, and other aviation-related fees. These funds are distributed by FAA under appropriations set by Congress to all airports in the United States that have certified eligibility.

AIRPORT DEVELOPMENT SCHEDULE AND COST ESTIMATES

Cost estimates for each individual project were developed in 2009 dollars based on typical construction costs associated for the specific type of project. The project costs listed in the ACIP represent order-of-magnitude estimates that include design engineering, environmental, and other contingencies. The estimates are intended only for preliminary planning and programming purposes. Specific project analysis and detailed engineering design will be required at the time of project implementation to provide more refined and detailed estimates the development costs.

In future years, as the plan is carried out, these cost estimates can continue to assist management by adjusting the 2009-based figures for subsequent inflation. This may be accomplished by converting the interim change in the United States Consumer Price Index (USCPI) into a multiplier ratio through the following formula:

$$\frac{X}{I} = Y$$

Where:

X = USCPI in any given future year

Y = Change Ratio

I = Current Index (USCPI)

USCPI
213.86
(1982-1984 = 100)
May 2009

Multiplying the change ratio (Y) times any 2009-based cost figures presented in this study will yield the adjusted dollar amounts appropriate in any future year evaluation.

The following sections outline the recommended development program and funding assumptions. The scheduling has been prepared according to the facility requirements determined earlier. The projected staging of development projects is based upon anticipated needs and investment priorities. Actual activity levels may vary from projected levels; therefore, the staging of development in this section should be viewed as a general guide. When activity does vary from projected levels, implementation of development projects should occur when demand warrants, rather than according to the estimated staging presented in this chapter. In addition to major projects, the airport will require regular facility maintenance, which is not typically eligible for FAA funding.

The first phase of the capital improvement program includes the highest priority projects recommended during the first five years. Long-term projects are anticipated to occur in the 6 to 20-year period, although changes in demand or other conditions could accelerate or slow demand for some improvements. The availability of FAA and WSDOT funding and the ability of the WSDOT to provide matching funds for FAA grants can also affect the timing of individual projects.

Short Term Projects

The short-term program contains work items of the highest priority. Priority items include improvements related to safety. Because of their priority, these items will need to be incorporated into FAA Seattle Airports District Office capital improvement programming. To assist with this process, the short-term projects are scheduled in specific calendar years for the first six years of the planning period (2009-2014).

Short Term Projects:

- Obstruction Survey and Evaluation (Runway Approaches, RSA, PAPI installation);
- Install PAPI (Rwy 13 & 31);
- Replace Runway Edge Lighting and Threshold Lights;
- Replace Airport Beacon (install new beacon pole);
- Reconfigure Runway Thresholds, Modify Signage and Lighting, Repaint Runway Markings, (per defined declared distances);
- Install Traffic Safety Signal on Evans Road (near runway end);
- Relocate Airport Segmented Circle;
- Runway Safety Area Grading and Stormwater Improvements;
- West Apron Reconfiguration/Expansion;
- Expand Aircraft Turnaround (Rwy 31);
- Reconfigure SE Hangar Taxiway (non standard runway clearance);
- Overlay Runway; repaint markings;
- Construct Snow Removal Equipment Storage Building;
- Slurry Seal West Apron and Access Taxiway; and
- Construct 3 Helicopter Parking Pads (west side of Rwy).

Intermediate & Long Term Projects

Several intermediate or long term projects are considered to be current needs. However, based on the limited funding resources available, it was necessary to shift some projects to the longer term timeline. However, projects may be completed sooner in the event that additional funding can be generated.

Intermediate Term Projects

- Install Frangible (break-away) Fence at Rwy 31 end (remove concrete barriers);
- Install Automated Weather Observation System (AWOS) equipment;
- Extend West Airport Access Road to AWOS and Hangar Sites;
- Install Wind Cones at Runway Ends;
- Overlay West Apron and Access Taxiway (original sections); and
- Complete pavement maintenance projects: Crack filling and fog seal or slurry seal runway, taxiway and apron.

Long Term Projects

- Complete periodic pavement maintenance projects: Annual vegetation removal and crack filling; fog seal or slurry seal tiedown runway, apron, taxiways, and taxilanes on 5 to 7 year cycles; repaint markings;
- Construct Northeast Parallel Taxiway;
- Construct West Apron Hangar Taxilane;
- Install Runway End Identifier Lights (REIL) (Rwy 13 & 31);
- Runway safety area fill and Evans Road Improvements (@ Rwy 31 end); and
- Install Airport Perimeter Fencing.

Methow Valley State Airport
WSDOT Aviation Division
2009-2029

20-YEAR CAPITAL IMPROVEMENT PROGRAM

Short Term	Yr	Project	Project Category	Unit	Quantity	Unit Cost	Subtotal Cost	35% Engineering / Environmental / Contingency	Total Cost	FAA Eligible	Airport Sponsor	Accumulated NPES (including FY09)
												\$833,817
2009-2010	0, 1	Install PAPI (Rwy 13 & 31)	Lighting	ea	2	\$100,000	\$200,000	\$70,000	\$270,000	\$256,500	\$13,500	\$150,000
		Obstruction Survey (Runway Approaches & RSA)	Other	LS	1	\$30,000	\$30,000	\$10,500	\$40,500	\$38,475	\$2,025	
		Threshold Location & Declared Distance Evaluation; ALP Update	Other	LS	1	\$24,000	\$24,000	\$8,400	\$32,400	\$30,780	\$1,620	
		MIRL (Replace existing lighting system)	Lighting	LF	5,049	\$55	\$277,695	\$97,193	\$374,888	\$356,144	\$18,744	
		Replace Airport Beacon & Pole	Lighting	ea	1	\$80,000	\$80,000	\$28,000	\$108,000	\$102,600	\$5,400	
		Relocate Displaced Thresholds; Install Runway Distance Remaining Signs and Lighting; Modify Threshold Lights	Safety	LS	1	\$150,000	\$150,000	\$52,500	\$202,500	\$192,375	\$10,125	
		Install Traffic Safety Signals (on Evans Road)	Safety	LS	1	\$15,000	\$15,000	\$5,250	\$20,250	\$19,238	\$1,013	
		Relocate Segmented Circle	Other	LS	1	\$60,000	\$60,000	\$21,000	\$81,000	\$76,950	\$4,050	
Subtotal - Year 1 & 2							\$836,695	\$292,843	\$1,129,538	\$1,073,061	\$56,477	
2011	2	RSA grading and stormwater management project	Safety/Environmental	LS	1	\$100,000	\$112,000	\$39,200	\$151,200	\$143,640	\$7,560	\$150,000
		West Apron Expansion & Reconfiguration	Pavement Construction	SY	9,260	\$75.00	\$724,500	\$253,575	\$978,075	\$929,171	\$48,904	
		East Hangar Taxiway Reconfiguration	Pavement Construction	SY	290	\$75.00	\$22,250	\$7,788	\$30,038	\$0	\$30,038	
		Expand Aircraft Turnaround (Rwy 31 end)	Pavement Construction	SY	1,575	\$75.00	\$118,625	\$41,519	\$160,144	\$152,137	\$8,007	
Subtotal - Year 2							\$977,375	\$342,081	\$1,319,456	\$1,224,948	\$94,508	
2012	3	Overlay Runway; repaint markings;	Pavement Maintenance	SY	45,140	\$40.00	\$1,817,600	\$636,160	\$2,453,760	\$2,331,072	\$122,688	\$150,000
		RSA grading, R/W underdrains, and stormwater management project	Safety/Environmental	LS	1	\$500,000	\$512,000	\$179,200	\$691,200	\$656,640	\$34,560	
Subtotal - Year 3							\$2,329,600	\$815,360	\$3,144,960	\$2,987,712	\$157,248	
2013	4	Snow Removal Building; Snow Removal Equipment	Other	LS	1	\$900,000	\$900,000	\$315,000	\$1,215,000	\$1,154,250	\$60,750	\$150,000
		Slurry Seal West Apron & Taxiway; repaint markings & tie-downs	Pavement Maintenance	SY	10,392	\$5.00	\$51,960	\$18,186	\$70,146	\$66,639	\$3,507	
Subtotal - Year 4							\$951,960	\$333,186	\$1,285,146	\$1,220,889	\$64,257	
2014	5	Construct 3 Helicopter Parking Pads (50 x50' PCC)	Pavement Construction	SY	834	\$100	\$93,400	\$32,690	\$126,090	\$119,786	\$6,305	\$150,000
Subtotal - Year 5							\$93,400	\$32,690	\$126,090	\$119,786	\$6,305	
Yr 0-5 Total							\$5,189,030	\$1,816,161	\$7,005,191	\$6,626,395	\$378,795	\$1,583,817

Intermediate Term	Yr	Project	Project Category	Unit	Quantity	Unit Cost	Subtotal Cost	35% Engineering / Environmental / Contingency	Total Cost *	FAA Eligible	Airport Sponsor		
2015-2019		Install Frangible Fence @ Rwy 31 end (removed concrete barriers in RSA)	Safety	LF	1,900	\$24	\$45,600	\$15,960	\$61,560	\$58,482	\$3,078		
		AWOS	Other	ea	1	\$250,000	\$250,000	\$87,500	\$337,500	\$320,625	\$16,875		
		West Landside Area & AWOS Access Road & Parking (gravel)	Other	LF	1,000	\$45	\$45,000	\$15,750	\$60,750	\$57,713	\$3,038		
		Wind Sock (north & south ends of runway)	Other	ea	2	\$3,000	\$6,000	\$2,100	\$8,100	\$7,695	\$405		
		Overlay West Apron & Access Taxiway (existing) (2020)	Pavement Rehabilitation	SY	10,392	\$40.00	\$420,680	\$147,238	\$567,918	\$539,522	\$28,396		
		Slurry Seal Runway 13/31; repaint markings	Pavement Maintenance	SY	45,140	\$5.00	\$225,700	\$78,995	\$304,695	\$289,460	\$15,235		
		Slurry Seal West Apron & Taxiway (new sections); repaint markings & tie-downs (2020)	Pavement Maintenance	SY	9,260	\$5.00	\$46,300	\$16,205	\$62,505	\$59,380	\$3,125		
		ALP/Master Plan Update/Long Term Action Plan	Other	ea	1	\$100,000	\$100,000	\$35,000	\$135,000	\$128,250	\$6,750		
Subtotal - Year 6-10							Yr 6-10 Total	\$1,139,280	\$398,748	\$1,538,028	\$1,461,127	\$76,901	\$750,000

Long Term	Yr	Project	Project Category	Unit	Quantity	Unit Cost	Subtotal Cost	35% Engineering / Environmental / Contingency	Total Cost	FAA Eligible	Airport Sponsor		
2020-2029		Environmental Assessment (Northeast Parallel Taxiway)	Other	LS	1	\$75,000	\$75,000	\$26,250	\$101,250	\$96,188	\$5,063		
		Northeast Parallel Taxiway w/ Edge Reflectors	Pavement Construction	SY	8,200	\$75.00	\$618,000	\$216,300	\$834,300	\$792,585	\$41,715		
		Slurry Seal Runway 13/31; repaint markings (2028)	Pavement Maintenance	SY	45,140	\$5.00	\$225,700	\$78,995	\$304,695	\$289,460	\$15,235		
		Slurry Seal West Apron & Taxiway; repaint markings & tie-downs (2027)	Pavement Maintenance	SY	19,652	\$5.00	\$98,260	\$34,391	\$132,651	\$126,018	\$6,633		
		West Apron Stub Taxiway (Hangar Sites)	Pavement Construction	SY	1,350	\$75	\$101,250	\$35,438	\$136,688	\$129,853	\$6,834		
		REIL (Rwy 13 & 31)	Lighting	ea	2	\$20,000	\$40,000	\$14,000	\$54,000	\$51,300	\$2,700		
		Environmental Assessment (Evans Road/RSA improvements R/W end)	Other	LS	1	\$125,000	\$125,000	\$43,750	\$168,750	\$160,313	\$8,438		
		Evans Road/RSA Improvements (fill) (@ Rwy 31 end)	Safety	LF	1,400	\$250	\$352,500	\$123,375	\$475,875	\$452,081	\$23,794		
		Airport Fencing & Gates w/ 2 automated gates	Security	LF	12,000	\$18	\$246,000	\$86,100	\$332,100	\$315,495	\$16,605		
		Slurry Seal West Hangar Taxilane	Pavement Maintenance	SY	1350	\$5.00	\$6,750	\$2,363	\$9,113	\$8,657	\$456		
Subtotal - Year 11-20							Yr 11-20 Total	\$1,888,460	\$660,961	\$2,549,421	\$2,421,950	\$127,471	\$1,500,000
							20 Yr Total	\$8,216,770	\$2,875,870	\$11,092,640	\$10,509,472	\$583,168	\$3,833,817

CAPITAL FUNDING SOURCES

Federal Grants

Federal funding is provided through the Federal Airport Improvement Program (AIP). The AIP is the current funding program that was originally authorized by Congress in 1946 as the Federal Aid to Airports Program (FAAP). The program provides grant funding for airports listed in the National Plan of Integrated Airport Systems (NPIAS). FAA AIP funds are generated through user fees that are assessed exclusively within the U.S. civil aviation system (i.e., commercial airline tickets, air cargo shipments, aviation fuels and lubricants, aircraft registration, and other related items). As a result, only individuals and businesses that use the national air transportation system contribute to the AIP program.

Under current legislation, eligible general aviation airports can receive up to \$150,000 per year in general aviation “non-primary entitlement” (NPE) grants through AIP. These grants currently require a 5 percent airport sponsor match. If a project is anticipated to cost in excess of \$150,000, the participating airport can roll over the funding allocations for up to four years, at which time the accumulated total of funds can be used for larger projects. Any unused funds that remain beyond the maximum allowable roll over period revert to the FAA for use at other airports. These funds may only be used for eligible capital improvement projects and may not support airport operation and maintenance costs.

The FAA also provides discretionary grants to airports. The dollar amounts of individual grants vary and can be significantly larger than the primary entitlements. Discretionary grants are awarded at the FAA's sole discretion. Discretionary funds are distributed after all entitlement funds have been allocated. For larger projects requiring substantially larger amounts of funding, NPE and discretionary grants are often combined. Other types of FAA funding include facilities & equipment (F&E) projects and Congressionally-appropriated dollars for specific projects.

FAA funding is limited to projects that have clearly defined need that has been identified through preparation of an FAA-approved airport layout plan (ALP). Periodic updates of the ALP are required when new or unanticipated project needs or opportunities exist that require use of FAA funds. The FAA will not generally participate in vehicle parking, utilities, building renovations or projects associated with non-aviation developments. Items such as building demolition to meet FAA design standards (i.e., hangar removal) are eligible for FAA funding.

Some changes in funding levels and project eligibility were included in recent AIP legislation. Projects such as hangar construction or fuel systems, which have not traditionally been eligible for funding, are currently eligible, although the FAA indicates that this category of project would be

considered to be a lower priority than other airfield needs. In addition, FAA funding levels were increased from 90 percent to 95 percent.

State Funding

The Washington State Department of Transportation-Aviation Division (WSDOT) maintains operating, maintenance and capital improvement program budgets for the group of state owned airports, which includes Methow Valley State Airport. Accurately predicting the potential level of state funding for the Methow Valley State Airport capital improvement program is not possible for the long term since funding is determined on a biennium basis reflecting variable revenue levels derived from aviation user fees.

The local match required for AIP-eligible projects is currently 5 percent of the total project development costs. Non-eligible capital improvements require 100 percent of the development costs with no federal participation.

As noted above, the local contribution associated with projected airport capital improvements is substantial and will require a reliable source of local funding support in order to maximize the use of available federal and state grants. Options for broadening the airport revenue base should be considered, including implementing user fees for on- and off-airport users. A periodic assessment of rates and fees ensures that the airport's revenues accurately reflect market conditions.

As currently defined, the WSDOT portion in the twenty year planning period is estimated to be just under \$583,000 (approximately 5 percent). All projects listed in the ACIP are eligible for FAA funding. Hangar construction costs have not been included in the CIP, as it is assumed that the past practice of private hangar construction at the airport will continue. However, in the event that WSDOT has an interest in constructing hangars, it is likely that state funds would be required based on the other priority facility needs defined that will require use of FAA funds.

The terms of airport land leases and "through-the-fence" access should be reviewed to ensure consistency with the grants and assurances associated with FAA Airport Improvement Program (AIP) funds. Maintaining consistent lease terms among common types of users, avoiding diversion of airport-generated revenue to non-airport activities, and charging fair market value are among the primary areas of concern for airport sponsors. The length (term) of airport land leases varies considerably, although it is generally recognized that a substantial investment in hangar construction and related site improvements requires a lease term (initial period and options) that is sufficient to recoup the expense. Common land lease terms for hangar construction are 20 years with one or more 10-year options. Many airport leases contain reversion clauses, in which ownership of hangars revert back to the airport at the end of a pre-determined useful life, usually 30 years or more (after the structure has been fully depreciated).