

7 Transportation Financing

7.1 Introduction

Alaska has historically relied heavily on Federal funds to meet the capital transportation needs of the State. The State's general funds have been used primarily to fund required matches for Federal funding and for maintenance on highways and rural airports. Some Federal funding has also been used for preventative maintenance projects.

In the study area, the overall trend of the annual allocation of transportation funding has seen great fluctuations with an overall slight increase. However, there has been a rapid and dramatic increase of construction costs as well as an escalating cost of maintaining and preserving aging infrastructure. Given these factors, it is unlikely that the current funding will meet the growing transportation needs in the study area. This chapter explores ways to alleviate this concern.

The following sections provide additional details about the historical funding, the expected funding, and other funding potentials to meet the shortfall for each of the transportation modes in the study area.

1.1 Highway System Financing

7.2.1 Historical Funding

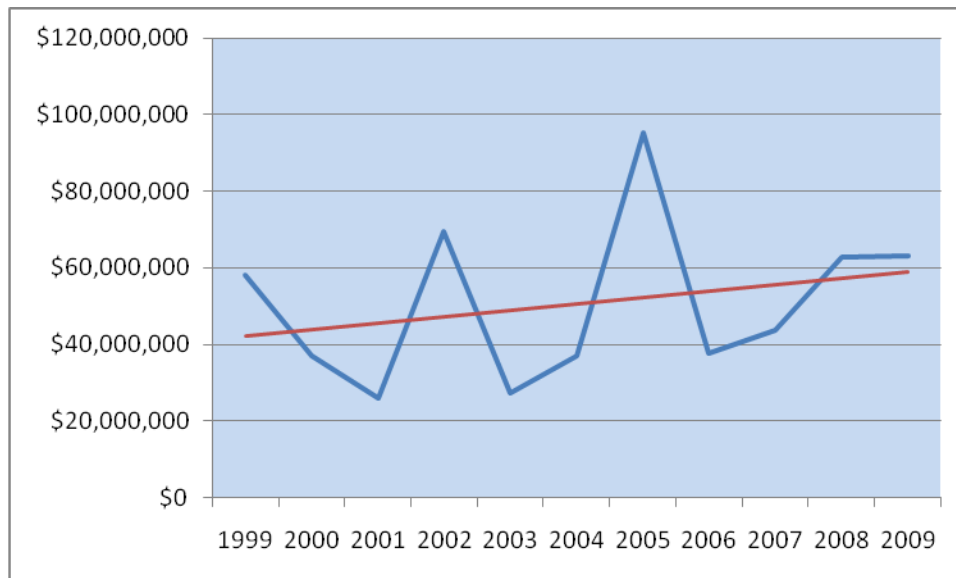
Funding available to the state for capital improvement projects on the National and Alaska State Highway System come primarily from the Federal Highway Administration. The state receives several categories of FHWA funding with distinctive rules for project eligibility, match ratios, and other programming factors. The match ratio varies depending on the category of funding, or apportionment, but is generally about 90.97 percent. The proportion not paid by Federal funds comes from state, local or third party match.

The STIP is a federally mandated (required by Federal law, 23 USC 135), financially constrained program of surface transportation projects. The STIP provides a four-year schedule of capital projects including preliminary engineering, design, environmental, and construction. The 2010-2013 STIP also contains several additional projects that could proceed if sufficient funding

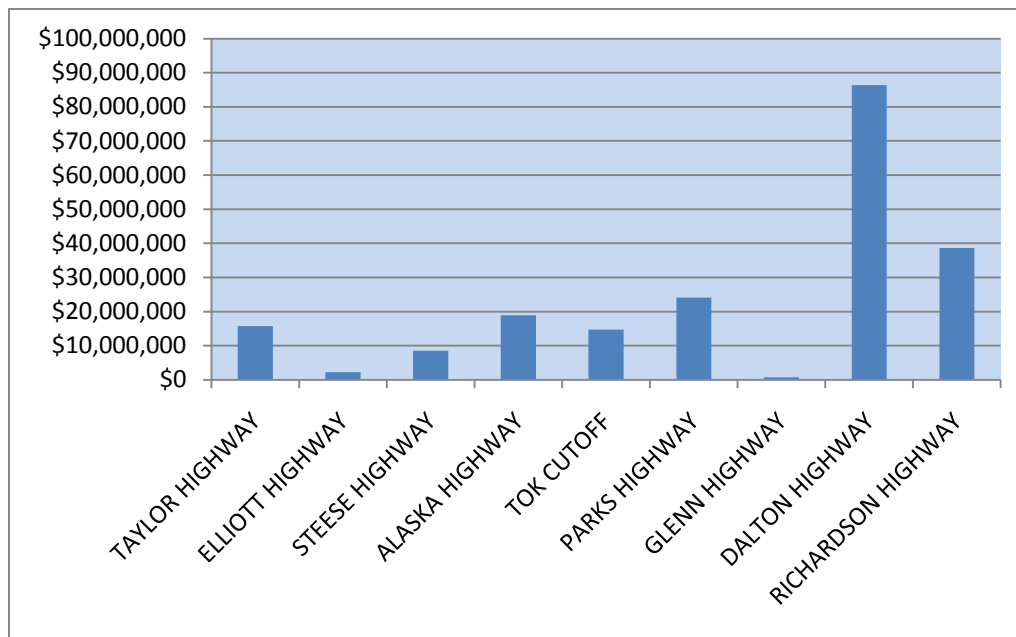
becomes available. The additional projects constitute the “illustrative” list of projects allowed under Federal regulation 23 CFR 450.216(l).

A review of obligated funds (not including emergency earthquake related repair funds) for highways in the Northern Region for the past ten years indicates that funding has fluctuated from a low of \$26 million in 2001 to a high of \$95 million in 2005. The average funding per year for the Interior Region routes is about \$50 million annually.

Exhibit 7.1 Obligated Highway Funds - FFY 1999-2009



The amount per year for each highway is shown in Exhibit 7.2.

Exhibit 7.2 Obligated Highway Funds by Highway- FFY 1999-2009

In 2008, the Highway Trust Fund became insolvent and, although Congress provided one year of stop gap funding, major changes will have to occur to make the program solvent again. Changes may include reductions in the amount of funding that Alaska receives. In addition, the Federal Highway legislation, SAFETEA-LU, passed in 2005 expired at the end of the Federal fiscal year 2009. It is likely that there will be continuing resolutions to fund the transportation program until the new Federal highway bill is passed.

7.2.2 Expected Capital Funding

The current 2010-2013 STIP indicates that within the study area, funding for the National Highway System routes continues to fluctuate year by year but averages about \$45 million per year. The Alaska Highway System average is \$6 million a year.

A temporary boost in capital funding for highways has come from the 2009 American Recovery and Reinvestment Act (ARRA). This included an increase in statewide highway funds of about \$170,000,000. In the study area, the ARRA funding included one project– the Alaska Hwy: MP 1308 Tok Weigh Station Inspection Facilities. This project includes constructing new inspection facilities at the Tok Weigh Station to accommodate increased truck traffic associated with the construction of a natural gas pipeline. The estimated cost of this project is \$3.75 million.

7.2.3 Highway Maintenance and Operation Funding

Routine highway maintenance is funded through state general funds. In 1992, the Northern Region maintained about 8,900 lane miles and in 2009 this had grown to over 10,000 lane miles, including both runways and aprons. In this same period, maintenance positions to accommodate this growth, increased from 293 to 343 positions (includes both full time and part time positions). While the amount of annual funding has increased to try and keep up with maintenance of the additional lane miles, the funding levels fall short of meeting the highway system's maintenance needs. In fact, not only does this funding gap continue to grow as additional lane miles are added to the system, it is also more expensive to maintain and preserve aging infrastructure compared to rehabilitated or reconstructed roads.

In the past ten years, Northern Region has programmed about \$9 million dollars a year in Preventative Maintenance projects with funds from the STIP to help supplement the general funded maintenance program. This is significantly more than the Central or Southeast regions use for preventative maintenance work. In fact, preventative maintenance projects now make up almost one-seventh of the current total highway maintenance expenditures in Northern Region and the department has come to rely heavily on these funds to supplement the general funded maintenance program. Should new highway legislation eliminate this program, or department priorities result in a shift away from using the STIP to fund preventative maintenance projects, the condition of the highways would likely decline significantly.

7.2.4 Other Funding Potential

Alaska does not have a state funded, dedicated source for transportation funding. Motor fuel taxes and vehicle fees go into the General Fund. There have been, particularly in recent years, attempts to use alternative funding mechanisms for surface transportation projects. Most of these have met with limited success.

State General Obligation Bonds. A State General Obligation (GO) Bond is a bond secured by the taxing and borrowing power of the State government issuing it. Both the principal and interest are secured by the full faith and credit of the issuer. In addition, GO Bonds must be approved by the voters. Alaska GO Bonds have not traditionally been a part of the transportation infrastructure funding strategy; however, a bill was passed in the 2008 legislative session to fund some transportation projects with GO Bonds. Within the study area, GO bonds have also

historically been used as a funding method specifically on the Dalton and the Glenn Highway. Currently there are no projects proposed using GO Bonds in the Interior.

Endowment. A proposal was made, but not adopted, during the 2008 legislative session to create the Alaska Transportation Fund (ATF). This would be capitalized with \$1 billion from oil taxes. It is estimated that the ATF could yield over \$50 million in the first year with increasing amounts in successive years. The proposal was not formally brought back to the table during the 2009 legislative session. The proposal is dependent on oil revenue. The price of oil peaked in July 2008 at \$144 per barrel. The proposed 2011 budget is based on \$76.35 per barrel. Oil prices must rise substantially before the endowment concept will again be considered in a positive light.

Private Public Partnerships. Private public partnerships work best if a single developer with a specific goal in mind proposes to share the costs of infrastructure with the public entity. Sharing costs of projects has a downside for the private developer in process and timeline. Any amount of FHWA or FAA funding in a project requires the entire project be developed within their respective Federal guidelines. A typical reconstruction project or new section of road often takes 5-7 years to get to construction. That schedule may not be acceptable to private industry. Public-private partnerships have generally not been used in Alaska.

One example of where private industry and the public have worked together is the 50 Mile Pogo Mine Road near Delta Junction. This road was completely privately financed and is a private road permitted across public land, (though there is a process for the public to gain limited access to this road). The first portion of the road will not be reclaimed after the life of the mine and after the mine ceases operation, this portion of the road will be managed by the DOT&PF, and open to public use.

GARVEE Bond. The Grant Anticipation Revenue Vehicle (GARVEE) is an innovative financing tool that allows states to issue bonds to pay for Federal-aid transportation projects. These bonds are repaid through commitments of future Federal funds and State match. They can be used to get to construction on needed projects a little earlier if the total program funding is tight. Alaska participated in that innovative financing tool and no longer chooses to use it. Overall, it can reduce the amount of program funding in future years, leaving some projects short of cash when they would normally be ready to bid.

Advance Construction Funding. Advance Construction funding commits future funds to “pay back” projects that are bid with insufficient overall construction funds in the current year program. It’s similar to a revolving line of credit and is generally used to allow the DOT&PF to obligate a construction project with general funds when there is insufficient Federal authority. The general funds are paid back with Federal funds the next Federal fiscal year. It allows projects to be bid sooner, with the expectation that there will be little, if any, actual general funds actually spent before the general funds are replaced with Federal funds. As with the GARVEE bonds, the perception was that it constrained the future budgets and overall did not serve well as a financing tool.

State Taxes. The Alaska Municipal League commissioned the Alaska Transportation Finance Study (January 2009). This study looked at the transportation infrastructure from the perspective of “underinvestment, ” discussed the risk associated with the current Federal funding shortfalls and recommended options for closing the gap between revenue and needs. The report concluded that some combination of increased fuel tax and vehicle registration fees, a new vehicle sales tax and capitalizing the ATF was needed. However, Alaskans historically object to taxes in general as well as to increases in current taxes. Implementing the options and or pieces of the options, requires buy-in at the local, regional and State levels.

Pipeline Corridor Funding. The possibility exists that pipeline construction costs could include infrastructure improvements. It is common in urban areas for developers to fund road improvements if the improvement benefits the developer and would otherwise not be necessary. Some anticipated roadway needs to support pipeline development fit this scenario.

7.3 Community Transportation System Financing

7.3.1 Historic Funding

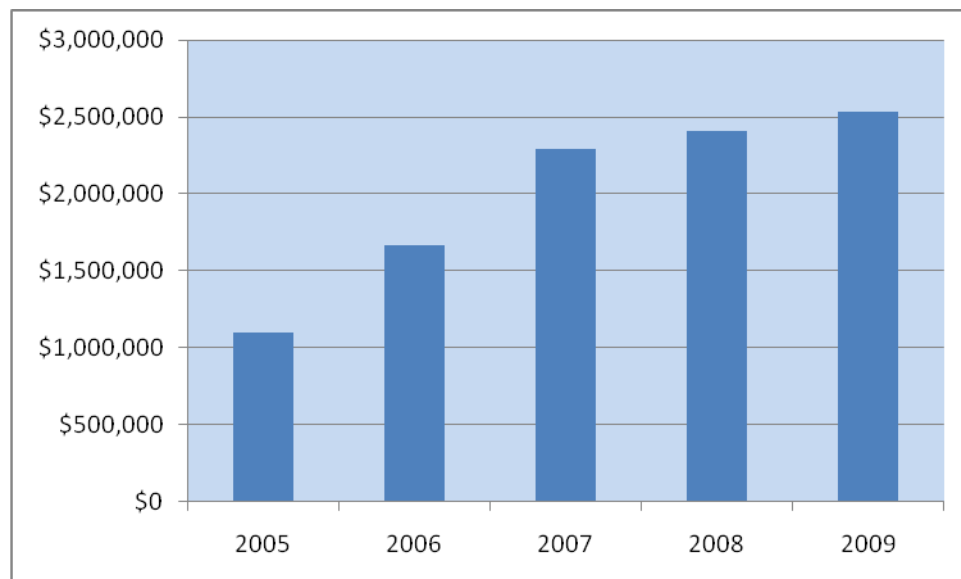
Community transportation projects in the study area have historically received funding primarily from the Bureau of Indian Affairs Reservation Roads program, Denali Commission Roads Program and the FHWA. In 2005, SAFETEA-LU contained provisions that enabled Tribal entities to apply for transit funding through the Federal Transit Authority. There is limited use of these funds in the study area, but the interest is growing.



Bureau of Indian Affairs Indian Reservation Roads Program. In 2005, the BIA Indian Reservation Roads (IRR) Tribal Share program began providing funds directly to Tribes for transportation projects. The amount of the allocation received per Tribe is dependent on the number of miles the Tribe has within the IRR inventory. Only those transportation facilities on the official BIA IRR inventory are allowed to receive funding. BIA IRR Tribal Shares can be used for planning, transit, design and construction activities and as a match to other agency funds, such as the DOT&PF. In addition to the BIA IRR Tribal Share funds, Tribes can apply for High Priority Projects which is set up in a special funding pool for projects up to a million dollars. The High Priority Projects funds are intended to be allocated to Tribes for their approved IRR projects and activities under 23 U.S.C. 202(d)(2). Stevens Village is receiving \$1,000,000 in this program for local community roads.

Within the study area, the amount the Tribes have received per year has fluctuated as the IRR inventories have grown. In 2005, the total amount of funding for the 27 Tribes in the study area was about \$1 million. In 2009, that amount had grown to over \$2.5 million as shown in Exhibit 7.3.

Exhibit 7.3 BIA Total IRR Tribal Share Funds in Study Area 2005-2009



In 2009, the amount received per Tribe varied drastically from a low of \$15,700 for the Native Village of Takotna to the high received by Venetie of \$538,420. In addition, Tribes were

eligible to receive ARRA funding. In the study area, there was approximately \$1.6 million of ARRA funds available to Tribes.



Denali Commission. The Denali Commission's Transportation Program began in late 2005 as part of the SAFETEA-LU legislation and accompanying amendments to the Denali Commission Act of 1998 (amended). The program focuses on rural roads and waterfront development.

The road program targets basic road improvement needs. It also looks at opportunities to connect rural communities to one another and the State highway system, and opportunities to enhance rural economic development. The waterfront development program addresses port, harbor and other waterfront needs for rural communities. The emerging focus areas are improvements to regional ports, and construction of barge landings and docking facilities.

The Transportation Program has developed successful design and construction partnerships with the FHWA Western Federal Lands Highway Division, Alaska DOT&PF and the Corps of Engineers. The program also develops projects with regional, local and tribal governments, and regional tribal non-profits.

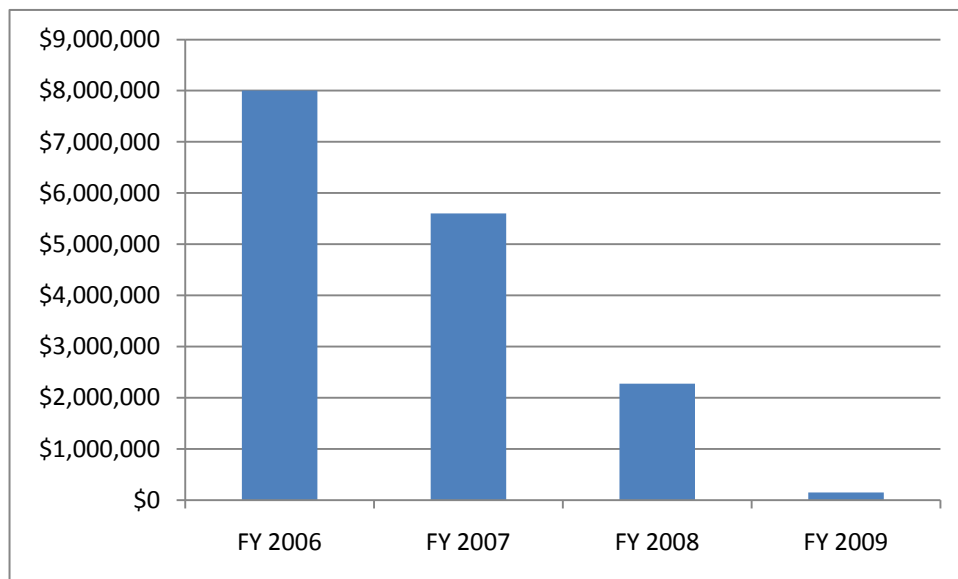
Types of projects Denali Commission has funded in the past include the following:

- **Local Roads and Boardwalks**
- **ATV Roads**
- **Community Connection and Economic Development Roads**
- **Regional Ports and Local Small Boat Harbors**
- **Barge Landings**

The Denali Commission program has brought in almost \$12.5 million in the study area for community transportation projects; however, in recent years, funding has been declining dramatically. Between 2006 and 2008, seven community transportation projects were funded in the study area for a total of \$5.9 million. In 2009, there was one project in the study area for \$150,000 as shown in Table 7-1 and Exhibit 7.4.

Table 7-1 Denali Commission Project List 2006-2009

Community/Project	FY 2006	FY 2007	FY 2008	FY 2009	*Status
Cantwell Community Roads	\$500,000				Complete
Circle/Circle City Community Roads	\$900,000				Construction
Eagle/Eagle Village Community Roads	\$1,300,000				Construction
Fort Yukon Community Roads	\$2,000,000				Design
Gakona Access Road Rehabilitation		\$900,000			Design
Galena Dock	\$1,400,000				Design
Gulkana Access Road Reconstruction	\$1,800,000				Design
Manley Hot Springs Community Streets				\$150,000	Design
Nenana 9th & K Street Repairs, K Street Ext.			\$800,000		Construction
Nenana Tug and Barge Port		\$850,000			Construction
Stevens Village Access Road		\$500,000			Complete
Stevens Village Community Roads		\$1,000,000			Design
Takotna Gold Creek Bridge Replacement			\$200,000		Award Documents
Tanana Community Roads Dust Control	\$50,000				Complete
Tanana Cross 4th Avenue			\$137,000		Close Out In Progress

Exhibit 7.4 Denali Commission Historical Transportation Funding in Study Area

STIP Funding. FHWA and State funds, through the STIP process, have also funded community transportation projects in the study area. Generally, the State focuses on community projects such as sanitation roads (access to landfills or sewage lagoons), dust control projects, and intermodal roads (such as airport access roads).

Between 1999 and 2008, approximately \$2.5 million was spent in the study area on rural road projects using STIP funding. Examples of STIP projects in the study area include trail staking, Beaver Landfill Road, Eagle Dust Control and the Stevens Village Landfill Road.

Transit funds - As authorized by SAFETEA-LU, the Federal Transit Authority Administration (FTAA) supports locally planned and operated

public mass transit systems throughout the United States. On October 16, 2008, Governor Sarah Palin established, by Administrative Order 243, the Coordinated Transportation Task Force. It was charged with helping to coordinate and integrate community-based public transportation services to benefit persons with special needs. The Task Force delivered its



Photo: Jessica DeBartolo,
DOT&PF

March 18-19, 2009 Coordinated Transportation Task Force Meeting

report to the Governor on February 11, 2010, concluding its tasking under Administrative Orders 243 and 252. Information on the Task Force and its recommendations, as well as a pdf of the report are available on the DOT website, <http://www.dot.state.ak.us/stwdplng/cttf/>.

SAFETEA-LU also created a Tribal Transit Program. Federally-recognized Indian and Alaska Native Tribes are eligible, direct recipients of Tribal Transit grants. These grants are awarded by FTA based on an annual national competitive selection process. There are no matching requirements. Recipients of Tribal Transit Program may use these funds for any purpose that is eligible under Section 5311.¹ Eligible purposes under Section 5311 include planning, capital and operating assistance for rural public transit services, and support for rural intercity bus service.

The goals of the Tribal Transit Program are:

1. to enhance the access of public transportation on and around Indian reservations in non-urbanized areas to health care, shopping, education, employment, public services, and recreation;
2. to assist in the maintenance, development, improvement, and use of public transportation systems in rural and small urban areas;

¹ Code of Federal Regulations, 49USC5311(c).

3. to encourage and facilitate the most efficient use of all Federal funds used to provide passenger transportation in non-urbanized areas through the coordination of programs and services; and
4. to provide for the participation of private transportation providers in non-urbanized transportation to the maximum extent feasible.

In the study area, Gulkana and Copper River Native Association have been recipients of FTA grants.

7.3.2 Expected Capital Funding

The BIA IRR program may change its Tribal Transportation Allocation Methodology in the future. Also, the overall allocation for the IRR program may change with the passage of the next highway bill. However, if the IRR funding amount and Tribal Transportation Allocation Methodology does remain similar, it is expected that the BIA IRR program will continue to grow as tribes increase their IRR inventory. Over time, unless the overall program increases, the annual allocation per tribe will level off and then begin to decline. Also, the High Priority Project program will likely help to support transportation projects in the future.

Denali Commission funding remains uncertain. Given the history of the declining dollars available through this program, it is likely that it will be a diminishing resource for rural community transportation projects. Likewise, the competing and growing needs of the highway system will likely make the STIP a limited source of funding for community transportation.

7.3.3 Community Transportation Maintenance and Operations Funding

There is limited funding available for maintaining community roads and trails. One exception is that in 2005, SAFETEA-LU allowed tribes to spend up to 25 percent of their IRR allocation on maintenance activities. For 2009, the maximum amount of maintenance funds available through the IRR program in the study area was about \$600,000. It is likely that tribes will take advantage of this program and use these funds to purchase equipment, apply dust palliatives, repair drainage and resurface local roads.

Tribe's IRR maintenance program funds can be used to rehabilitate, remanufacture, and overhaul a transit vehicle and preventive maintenance. Bus stops maintenance also are an eligible item under the IRR program. Operating costs must come from service fees or general funds.

7.3.4 Other Funding

Beyond the funding sources mentioned previously, there are limited sources for community transportation projects. In the past, there was a program funded with State general funds, the Local Streets, Roads and Trails (LSR&T) program. This program funneled money into capital community transportation projects. While the LSR&T program is recommended in the state's 2030 Long Range Transportation Plan as one means of ensuring funds for rural transportation needs, it requires a legislative appropriation, and that does not seem to have any possibility at this time². In the past, revenue sharing was also used to fund rural community transportation projects. These funds were also General Fund money and could be used for transportation projects by local governments and Homeowner's Associations. There also does not appear to be support for funding this program at this time.

7.4 Aviation System Financing

This section describes funding for airport capital improvements, maintenance, and operation, which has consistently been less than the amount needed. The section ends describing optional ways to meet the challenges of funding Interior airport needs.

The Federal Airport Improvement Program (AIP) is the main source of funding airport improvements in the US, except at large commercial service airports that finance capital projects primarily through bond issuance. The AIP is the primary funding source for Interior Alaska airports. Airports that are included in the NPIAS are eligible for AIP funding. The Interior has 37 airports in the NPIAS.

The AIP was established in 1982 and has been amended several times. The legislation authorizing the AIP expired September 30, 2007, but it is assumed a similar program will be in place in the future. The AIP is funded by the Airport and Airway Trust Fund, which is supported by taxes on air passenger tickets, air cargo, and aviation fuel. The Trust Fund concept guarantees a stable funding source whereby users pay for the services they receive.

Primary airports, those with more than 10,000 annual passenger enplanements, receive AIP entitlement funding based upon the number of passengers. Fairbanks International is currently the only primary airport in the Interior. Non-primary and general aviation airports receive AIP

² Personal communication, DOT&PF, September 25, 2009.

entitlement funding of up to \$150,000 per year. As the single sponsor of many airports, the DOT&PF can pool its airports' entitlements. The AIP also allocates funds by State and sets aside funding for some specific purposes. AIP discretionary grants are made when discretionary funding is available and the project is a type that ranks high enough in the FAA's funding priorities.

AIP funds are distributed through grants that the FAA administers. The AIP program uses a 95-5 matching formula, which means that the FAA pays up to 95 percent of an AIP-funded project's cost. The State pays the remaining 5 percent for its airports and pays half of the remaining 5 percent (2.5 percent) for municipal and tribal sponsors. Projects eligible for grant funding are those that relate to enhancing airport safety, capacity, security, and environmental concerns.

Airport projects are programmed in the AIP in a similar way to surface transportation projects in the STIP. DOT&PF solicits project nominations. The regional offices score the projects and an Aviation Project Evaluation Board (APEB) finishes the ranking. The AIP project list is then developed by DOT&PF, incorporating the financial constraints of the program.

7.4.1 Historic Funding

Over the past five years, Alaska's AIP funding has averaged 6.2 percent of the national total. As shown in Table 7-2, the average annual amount of grant funding in Alaska was \$212 million in that five-year period, ranging from a low of \$194 million in FFY 2005 to a high of \$226 million in FFY 2008. From this five-year sample, the trend in US AIP funding shows about 0.4 percent annual growth, and for AIP funding in Alaska, the trend shows about 0.8 percent annual growth.

Table 7-2 Historic AIP Funding (in \$ millions)

Federal Fiscal Year	2004	2005	2006	2007	2008
United States	\$3,375	\$3,409	\$3,411	\$3,341	\$3,471
Alaska	\$219	\$194	\$221	\$199	\$226
<i>State % of Nation</i>	6.5%	5.7%	6.5%	6.0%	6.5%
Northern Region	\$87	\$59	\$54	\$59	\$88
<i>Region % of State</i>	40%	30%	24%	30%	39%
Study Area*	\$13	\$8	\$1	\$15	\$1
<i>Study Area % of Region</i>	14%	13%	2%	25%	1%

*Study area funding excludes Fairbanks International Airport.

Source for US and Alaska: http://www.faa.gov/airports/aip/grant_histories/

Source for Northern Region and Study Area: AIP Spending Plan spreadsheets

The Northern Region has received an average of \$69 million per year in AIP funding over the last five years, ranging from a high of \$88 million in FFY 2008 to a low of \$54 million in FFY 2006. Trend analysis shows that the Northern Region AIP funding is growing at about the same rate as national funding. This means the Northern Region's share of Alaska's AIP funds may be declining, since Alaskan funding appears to be growing at a higher rate than the Northern Region funding. While Northern Region has 39 percent of the airports in the State eligible to receive AIP funding, it has received 33 percent of the state's total AIP funding over the last five years.

Table 7.2 shows that AIP funding for airports within the study area appears to be declining, although the amounts have varied widely from year to year. The dramatic fluctuation in funding for study area airports is because relatively few airports receive AIP funding in any one year. For rural airports, construction mobilization is so expensive that a single airport's grant covers many improvements and totals several million dollars; it could be 20 years before the airport receives another grant.

One reason for a decline in the Northern Region's share of State AIP funds and for the decline in study area funding is likely that the APEB has given projects in the Central Region higher funding priority. APEB criteria generally give lower scores to airports that are on the road system than to airports serving communities without road access. In addition, more of the Northern Region airports' severe safety deficiencies have been fixed, and the Central Region projects are getting high scores because APEB scoring favors funding projects needed for safety. The APEB scoring criteria will undergo scrutiny soon as part of the ongoing Alaska Aviation System Plan. One complaint about the APEB from several sources is that projects for busy, road-accessible airports are scored too low. Raising APEB scores for road-accessible airports could increase AIP funding for Interior airports. However, safety will surely continue to be a high priority in ranking projects for funding, consistent with the FAA's priorities for funding.

7.4.2 Expected Capital Improvement Funding

The FAA has been operating on six-month extensions since September 30, 2007. Congress is considering a new bill, the FAA Reauthorization Act of 2009, which may not greatly affect the amount or method of funding capital projects. In fact, recent versions have included raising the annual authorization from about \$3.4 billion to \$4 billion. However, the bill may change before it becomes law.

While AIP funding has not declined in recent years, the future may not be as bright, particularly for rural airports. The revenue that funds the AIP, which comes from the Airport and Airway Trust Fund, has been declining. The GAO's March 2009 report, *Challenges Facing the Department of Transportation and Congress*, noted that the excise taxes that go into the Trust Fund have declined because of a decline in airline passenger travel, fares, and fuel consumption. Moreover, the uncommitted balance in the Trust Fund has decreased from over \$7 billion in FY 2001 to under \$2 billion in FY 2008. Shrinking funds are particularly challenging at this time, since the FAA needs extra funding to launch NextGen. NextGen is a major transformation and modernization of the National Airspace System (NAS) based on the Capstone Program that was pioneered in Alaska.

One reason for the FAA reauthorization delay is the debate about how to increase funding. In 2007, the FAA decided that the airlines are paying more than their share of the NAS and general aviation is paying less than its share. The FAA recommended the reauthorization law impose user fees on general aviation. General aviation organizations contended fuel taxes are the best way for general aviation to pay its way and supported an increase in fuel taxes, but strongly opposed user fees. At the time this plan was written, user fees had been dropped from the bill. The FAA also unsuccessfully proposed to change annual AIP entitlement funding for airports with fewer than 10,000 annual passenger boardings. The change would be from \$150,000 to a variable amount from \$0 to \$150,000 depending on the number of aircraft based at the airport. The FAA's 2007 based aircraft survey, mentioned in Chapter 3, was performed to support this proposal. Many busy rural airports in Alaska have no based aircraft, so their entitlement funds would disappear. Linking based aircraft to entitlements is not in the pending legislation, but it reflects the direction the FAA would like to take in the future. That does not bode well for Alaska.

7.4.3 Maintenance and Operation Funding

Airport maintenance and operation costs are not eligible for AIP funding, with few exceptions.³ The FAA encourages airports to charge reasonable fees to airport users to cover maintenance and

³ FAA Order 5100.38C, *Airport Improvement Program Handbook*, states that the reconstruction, rehabilitation, pavement overlays, or major repairs of facilities and equipment are defined as eligible capital costs generally considered permanent with a 20-year life expectancy. Maintenance activities needed on a continuing basis are

operating expenses, but such financial self-sufficiency is an unmet goal for many non-primary and general aviation airports in the US.

Chapter 3 showed that the annual cost of maintaining 33 DOT&PF airports in the study area (excluding Fairbanks International) is about \$725,000, and it has been rising approximately 3.2 percent annually. This number includes personnel, equipment, commodities, and maintenance contracts, but it does not include indirect costs for district and regional overhead.

Operating income at DOT&PF's rural airports falls far short of expenses. The income comes primarily from land leases, supplemented by tie-down fees at some airports. In recent years the DOT&PF has tried to increase their charges at rural airports to market rates. A proposed land lease increase was recently scaled back due to opposition from tenants who are already struggling financially from the economic recession. DOT&PF's aviation-use land leases will not increase until 2013, when they will go up 4 percent. Future increases will be limited to 4 percent.

The maintenance and operation of DOT&PF's rural airports is heavily subsidized by the State's General Fund, and the amount of subsidy has not kept pace with the need. Chapter 3's inventory of M&O costs at Interior airports documents the rise in M&O costs for DOT&PF; the Northern Region DOT&PF's average cost of maintaining one "lane mile" of airport, including overhead, recently increased 18 percent in one year.

When revenue does not keep pace with expenses, maintenance is deferred and the level of service declines.

The M&O Work Group of the ongoing *Alaska Aviation System Plan* recently examined the problem of growing deferred maintenance at rural airports. In 2008, statewide rural airport deferred maintenance needs totaled \$98.9 million. Airfield surfaces account for 71 percent of the total, which also includes buildings, lighting, navigational aids, electrical, fencing and gates, drainage, brush/tree cutting, wind cones, segmented circles, signage, and marking.

ineligible, except for routine, cost-effective pavement maintenance at non- hub and non-primary airports if the sponsors cannot fund maintenance from their own resources, including transfers from other sponsor accounts. Routine maintenance includes cleaning, filling, crack sealing, grading pavement edges, maintaining drainage systems, pavement patching, seal coats, and remarking paved areas.

The M&O Work Group studied the rapidly rising costs of commodities used in maintaining airports. Typically, these commodities cost more in the Northern Region than in other parts of the state. For example, in the Northern Region, the average cost per ton of urea, used for deicing airfield pavement, went up 43 percent between 2007 and 2008 and up 13 percent between 2008 and 2009. In 2009, a ton of urea cost 50 percent more in the Northern Region than in Southeast Region.

While State and Federal deferred maintenance funding for rural airports across the State has been growing, from \$4.23 million in FY 2005 to \$15.46 million in FY 2009, funding still falls far short of the need—resulting in the current \$98.9 million backlog of deferred maintenance. In addition, the rate of deterioration increases as infrastructure ages. Thus, the longer maintenance is delayed, the more it will cost to complete in the future.

The Alaska Aviation System Plan M&O Work Group also examined the rising cost of unfunded Federal mandates imposed by the TSA, FAA, and EPA. They estimated that the monthly cost of complying with these mandates is \$179,205 statewide. Many of these mandates do not apply to most Interior airports because, except for Fairbanks International and Prospect Creek, Interior airports do not have Part 139 operating certificates. Certification in accordance with Title 14 of the Code of Federal Regulations Part 139 is required if the airport has scheduled service in aircraft with 30 or more passenger seats. In other states, Part 139 certification is required if the scheduled service is in any size of turbojet aircraft or other aircraft types with at least 10 seats. In the past, Alaska has been successful at obtaining waivers or exceptions from some Federal regulations and national aviation laws. However, safety and security are always concerns when requirements are waived for financial reasons.

7.4.4 Other Potential Funding

Like highways, there has been a temporary boost in airport capital funding with the 2009 American Recovery and Reinvestment Act (ARRA), which included \$1.3 billion for capital assistance to airports for improvements and for FAA facilities and equipment. Within Alaska, \$72.7 million of ARRA grants have been released. Within the study area, Fort Yukon Airport has an ARRA grant for \$15 million to rehabilitate the runway and make other improvements. ARRA funding is 100 percent federal, requiring no local match. ARRA funded projects must be “ready-to-go” or “shovel ready,” which means environmental determinations, FAA approvals,

and project designs are completed. The Northern Region DOT&PF typically has some projects that are “shovel ready” and shown on the statewide AIP project list as “Contingency” for an earlier year than when project funding is expected. This practice paid off for Fort Yukon. However, the ARRA is a one-time program and the passing of a similar stimulus bill in the future is unlikely.

At Alaska’s largest commercial service airports, some improvements such as terminal buildings are financed by revenue bonds. This is not an option for study area airports, except Fairbanks, since the revenue from the improvement would be insufficient to repay the bond. General obligation bonds are another way to fund airport improvements, but are less popular than revenue bonds due to the reduction in bonding capacity for the seller.

Unlike many other states, Alaska does not have its own airport improvement grant program. Many states use general funds and/or income from fuel taxes, aircraft registration, and similar sources for this purpose. The State grants usually can be awarded to any public-use airport owned by a public entity. An Alaskan grant program has been considered in the past in order to supplement the AIP. One advantage of such a program is that grant evaluation criteria could include factors that the FAA is prohibited from considering, such as the economic benefit of the project to the community. Also, State grants need not require the grant recipient to assure that the airport remains open to public use, year round, for 20 years, as most AIP grants do. Implementing a State grant or other dedicated State airport funding program would face many challenges, including the Alaska Constitution.

The following are ideas for dealing with the financial challenges at Alaska’s airports:

- Continue the practice of having “shovel ready” projects, in case more funding becomes available than anticipated.
- Piggyback on AIP grants. Since the interval between AIP grants at an individual rural airport is 10 years or more, the practice is to tackle all the eligible needs at the airport with a single grant project, which often is not funded until some of the needs have approached the critical stage. However, the runway and other airfield surfaces deteriorate over time. Snow removal equipment that can move earth is stationed at the airport, but no gravel is available to fill ruts or repair erosion. An AIP grant cannot fund the excavation or purchase of more gravel than is needed for the project. Material could be

stockpiled at the airport to use for periodic airfield maintenance if the DOT&PF paid for extra gravel when it is obtained for the grant project. This would reduce the life cycle cost of the airfield and enhance safety.

- Continue researching and implementing operating efficiencies.
 - Ideas for operational efficiency include using light-emitting diode (LED) airfield lighting instead of electrical powered fixtures.
 - DOT&PF could make more use of contract maintenance. To increase the pool of qualified contractors, the State might help train people in rural communities.
- Transferring DOT&PF airports to local governments is another possibility. However, if the local government cannot operate the airport more efficiently or cannot afford to subsidize the airport, this solution will not help. If the State could lower the local government's costs by providing insurance, personnel training, capital planning, etc., transfer might be feasible in some cases. Typically, employing local people is cheaper. Local ownership usually means better care of the airport and more motivation to generate revenue from the airport.
- Take a harder look at what is AIP grant-funded.
 - Since it will be several years before a rural airport will receive another AIP grant, some airports' grant projects may be "overbuild." Some air carriers have said they would prefer a short runway in good condition to using one in poor condition for years waiting the funding of a runway extension. It's understandable to include everything that may be needed in the future in the project, since it will be 10 to 20 years before the airport receives another grant. However, small communities with declining populations may not justify some of the facilities planned.
 - AIP grants should be analyzed with M&O in mind. Some AIP-eligible projects can reduce maintenance costs, and any grant project that results in higher maintenance costs should be scrutinized carefully.
 - Because of the requirement for airports to be open year round and for 20 years after receipt of an AIP grant, it may be prudent to use a different funding source for some improvements, as the DOT&PF plans for some airport improvements that will support the gas line.

7.5 Railroad System Financing

7.5.1 Historic Funding

The historical sources of funding for ARRC capital projects include Federal agency funding, ARRC funds and Revenue Bonds. Since 1996 these sources include:

- **Federal Agencies:** Approximately \$795 million in Federal grants have been received by the ARRC to date, including approximately \$105 million for 2009. Federal funding sources have historically varied substantially. In 1996, the Federal Railroad Administration provided \$10 million for the ARRC. This jumped to \$57.6 million in 1993 and was down to \$16 million in 2007.
- **Required Match:** Some federally-funded projects require a funding match of between nine percent and 25 percent from the Alaska Railroad. Since 1996, ARRC has provided \$42 million in matching contributions, including \$4.6 million in 2009.
- **ARRC Internal Fund Investments:** Besides matches to Federal funds, ARRC invests millions of internally-generated dollars each year on capital projects that are not federally funded. Since 1996, ARRC has spent an additional \$215 million of its own income on capital improvements, including \$21.6 million in 2009.
- **Revenue Bonds:** The Alaska Railroad sold \$76 million in revenue bonds in 2006 and \$89 million in 2007, primarily to accelerate track rehabilitation efforts. \$31 million of these funds will be spent in 2009. Bonds are repaid with Federal Transit Administration (FTA) formula funds.

7.5.2 Expected Funding

The ARRC intends to spend Federal agency funding, ARRC funds, Revenue Bonds and ARRA funds over the next four years to install Collision Avoidance Systems, repair bridges and tracks and purchase additional rail cars. They also have plans to upgrade terminals, extend railroad facilities and install remote control power switches outside the study area.

7.5.3 Maintenance and Operation Funding

Like most transportation modes, acquiring adequate maintenance funds continues to be a challenge. While there is no dedicated Federal program for maintaining or operating railroad

facilities, many of the capital projects scheduled for the ARRC are for major maintenance, overhaul and replacement of bridges and tracks needed to maintain Alaska Railroad integrity, safety and efficiency.

7.5.4 Other Funding

In addition to the usual Federal agency funding, ARRC funds and Revenue Bonds, the ARRC will receive in ARRA funds in 2009/2010. Additionally, they anticipate funds from the Department of Defense for assistance in developing new railroad facilities between Fairbanks and Fort Greely. Current estimates from this funding source are over \$50 million. Some of these funds are scheduled beyond 2012.

