Executive Summary

AIRPORTS FOR NUNAVUMMIUT AND THEIR ECONOMY: An Airport Investment Strategy for Nunavut presents a Vision for Airports in Nunavut, and a plan-of-action to achieve this Vision.

Our Vision includes:

- Implementation of the Iqaluit Master Plan including new Air Terminal Building
- Cambridge Bay Runway paving and rehabilitation of graded areas
- Relocation and construction of new Pangnirtung Airport
- Apron expansion and improved Instrument Landing System (ILS) at Rankin Inlet Airport
- Planning/engineering studies for other airport improvements

The improvements to airports as envisaged in **AIRPORTS FOR NUNAVUMMIUT AND THEIR ECONOMY: An Airport Investment Strategy for Nunavut** are estimated to cost $97.6 million over a 4 year period beginning in 2005/06 (Table 1 next page). These improvements will provide Nunavummiut with a safer, more efficient and effective air transportation system. These improvements will also support Nunavummiut efforts to build a healthy and prosperous society and play their part in the day-to-day social and economic life of Canada.

The proposed improvements to Nunavut airports will also enable many more Canadians to see and realize the potential of this vast land and its people. These improvements will also bring some demonstrable proof of Canada's sovereignty and interest in Canada's north.

Table 1 Investment Needs (million $)

Project	2005/06	2006/07	2007/08	2008/09	Total
Iqaluit Airport Master Plan	10	10	10	10	**40**
Cambridge Bay Runway & Graded Areas	4	6	6	2	**18**
New Pangnirtung Airport	4.6	10	10	10	**34.6**
Rankin Inlet ILS and Apron Expansion	0	0	1.5	1.5	**3**
Other	0.5	0.5	0.5	0.5	**2**
TOTAL	**19.1**	**26.5**	**28**	**24**	**97.6**

The Vision

Our Vision for Airports in Nunavut is based upon providing good air system access to all communities to support the growth of healthy communities. Healthy communities require safe transportation services. Our Vision also recognizes that the state of infrastructure at certain airports (hubs) impacts on how the entire system can operate while at other airports the impact is more localized.

Our Vision includes:

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- Cambridge Bay Runway paving and rehabilitation of graded areas
- Relocation and construction of new Pangnirtung Airport
- Apron expansion and improved Instrument Landing System (ILS) at Rankin Inlet Airport
- Planning/engineering studies for airport improvements

This Vision will:

- Provide reliable, safe and cost effective airports
- Create opportunities for economic development
- Make our air transportation system more integrated and efficient
- Further the objectives of the Bathurst Mandate

Our guiding principles in implementing this Vision are:

- Compliance with International (ICAO) and National (Transport Canada) standards
- Full observance of NNI - Nunavut's Contracting/Business Incentive Policy
- Ensure every project has a training budget for Nunavummiut
- Environment impacts will be considered and minimized
- Full consultations with affected communities and stakeholders

The Potential

Nunavut is a beautiful and largely unspoiled land. The benefits of a negotiated land claim settlement and a new political system have poised this culturally and naturally rich territory ready to build a healthy and prosperous society.

The establishment of Nunavut as the newest member of the Canadian Confederation has created new possibilities and new expectations – both for Nunavummiut and for all Canadians. Nunavummiut are anxious to play their part in the day-to-day social and economic life of Canada. Entry into the Canadian socio-economic mainstream will require the air transportation system and supporting airports to evolve and overcome many and varying factors, which currently limit this system's efficiency and effectiveness. Overcoming these factors offer great potential to make the lives of Nunavummiut better now and in the future for their children.

Lowering the Cost of Living

Nunavummiut are generally dependent on air cargo during significant portions of the year and exclusively for their perishable goods year round. All "food mail" for communities is brought in via air cargo. The reliability and cost of this supply chain link is dependent on airports that can accommodate the aircraft used by Nunavut air carriers without penalty/weight restrictions due to runway length, surface type or navaids.

The absence of any weight penalties due to airport infrastructure also ensures that passenger airfares to and from a community are developed on the basis of full carrying capacity of the airplane versus a reduced or penalized capacity. Full loads may also reduce the chances of passengers being stranded due to restricted loads.

Economic Development

The contribution of airports to the general economy of a city or region is well documented. Typically airport activity and related employment and investment opportunities are derived from the air carriers themselves and their related passenger and cargo operations, general aviation operators, aircraft maintenance, flight catering, air navigation services and airport commercial activities among others.

A recent study conducted by LPS Aviation for a new Iqaluit Air Terminal Building found that air transportation is one of the largest private sector employers in Iqaluit and in Nunavut. It also established that the private sector could proceed with $10 million of additional investment if the Iqaluit Master Plan was to proceed.


Alert
Eureka
Grise Fiord
Resolute
Arctic Bay
Nanisivik
Pond Inlet
Clyde River
Qikiqtarjuaq
Igloolik
Hall Beach
Pangnirtung
Cambridge Bay
Taloyoak
Kugluktuk
Umingmaktok
Gjoa Haven
Pelly Bay
Bathurst Inlet
Repulse Bay
Iqaluit
Cape Dorset
Coral Harbour
Baker Lake
Kimmirut
Chesterfield Inlet
Rankin Inlet
Whale Cove
Arviat
Sanikiluaq

Sovereignty

Sovereignty over an area is generally provided by the presence of a governance structure for people within the area, support infrastructure and typically some form of military presence or capability. Where one or more of these elements are missing, sovereignty over an area may be compromised.

In Canada's North, the issue of sovereignty has been and will be an important issue for both federal and territorial governments. In the past, World War II and the Cold War provided the impetus for the funding and establishment of new communities, airports and other facilities. Iqaluit Airport for instance has been used by Canadian and U.S. military operations since 1943. More recently the airport has served as a technical stop for Canadian and American military aircraft enroute to DEW line sites and military bases further north, such as Thule and Alert, as well as NATO aircraft operating on North Atlantic and polar routes.

The issue of sovereignty in the North in current times is largely focused on the possible greater use of the Northwest Passage by commercial shipping due to global warming and the availability of Search and Rescue services in the High Arctic that could be required for new polar flights. The increasing development of northern resources such as diamonds, oil and gas adds to the importance of this issue.

Although the federal government has been demonstrating Canada's sovereignty through continued scientific activities such as mapping, climate monitoring and archaeological exploration, additional key components of sovereignty offered by improved airport infrastructure have not been added.

Access and Equity

Airports provide access for Nunavummiut and communities to the rest of Nunavut and Canada. Where current airport infrastructure or situate places restrictions on the type of aircraft, payload or schedule reliability, this effectively means some Nunavummiut or communities do not enjoy the same access to or equity using the air transportation system as other Nunavummiut. Airport improvements that minimize access and equity issues will help realize the objectives of the Bathurst Mandate. The issue of access and equity is particularly important for (emergency) medevac and medical travel needs. With regards specifically to medevacs, Transport Canada estimates that in 1999 30,000 patients were moved by air ambulance in Canada. Of these, 10% or 3,000 trips were in Nunavut.

Polar and High Latitude Overflights

The recent introduction of new Polar Routes, the continued growth of traffic using high latitude routes over the North Atlantic, and the changing nature of world aircraft fleets, present immediate economic development opportunities for Nunavut through an expanded role for Iqaluit Airport.

Based on a 2001 Aeronautical Market Study done for the Government of Nunavut 3,220 flights per year could potentially use polar routes near Iqaluit and over 2,000 flights per day could potentially use high latitude and North Atlantic routes near Iqaluit.

Iqaluit Airport has traditionally served as a technical stop for aircraft crossing the North Atlantic. It continues this role today by receiving wide-body traffic every week for technical or emergency medical reasons. During 2001, a number of the world's largest international airlines expressed interest in potentially using Iqaluit as either a new alternate airport or as a technical stop due to its northerly geographic location and technical capability.

The impact of an expanded role for Iqaluit on local companies would be significant. Increased investment and employment would occur in most airport businesses and aviation related activities now servicing Iqaluit.

Tourism Opportunities

Tourism can provide residents of Nunavut with many benefits. However, if it is to be successful it must be carefull planned, resources must be developed and Nunavut must be promoted. In support of tourism in Nunavut basic infrastructure is essential. Studies indicate that visitors have certain expectations upon arrival of the availability of tourist support facilities and services that include lodges, fishing camps, easy air access, and visitor centers where clients can expect to be welcomed and provided with orientation and information. Networks of major attractions are important, as are visitor services such as interpretation centres and shops where local crafts and other products can be purchased. The state of transportation infrastructure is a key issue facing the industry.

Air travel is the main mode of entry into the territory by tourists at present. Airstrips, therefore, play an important role and airstrip facilities that do not accommodate larger aircraft place a limit on the options for tourism development. Many tourists have very specific expectations of the level of services that are acceptable to them at airports in Nunavut. All activities that may be undertaken on behalf of Nunavummiut to improve the airport infrastructure, to increase flight frequency and comfort and reduce costs will also impact positively on tourism. The spectacular Auyuittuq National Park adjacent to Pangnirtung is a perfect example of a major potential destination now limited by inadequate airport infrastructure.

The Environment

Airports, due to the large surface areas they occupy, generally interface with both land and water elements. Airports by their nature have a number of environmental liabilities that are usually related to fire training and re-fuelling areas (hydrocarbon contamination). Many of these liabilities were not addressed when airports were transferred from the federal government to the then Northwest Territories government. Improving existing airport facilities or removing obsolete airport infrastructure in combination with proper cleanup processes will improve the environment and mitigate against further environmental damage.

The Need

Deviations to Standards

Nunavut's airports possess some of the most severe physical constraints of any airports in Canada. A total of 24 airports are currently certified by Transport Canada for commercial operations. Of these, 10 airports are certified with known deviations from standards registered on their Airport Certificates. In the Eastern Arctic, 9 out of 12 airports (75%) have high ground or mountains in the immediate vicinity of the airport and 1 of these airports, Grise Fiord cannot be licensed due to extreme local topography. Airports in the Central Arctic do not face the same physical challenges, and only 2 airports in the Western Arctic have registered deviations.

Deviations are granted for reasons other than nearby high ground and many airports possess multiple reasons for deviations. The most common violations of airport standards include:

- high ground or mountains on or near the approaches to airports;
- aprons constructed too close to runways, usually due to topographic or cost restrictions;
- vehicular traffic crossings of runway or runway strip areas; and
- inadequate graded areas surrounding runways, sometimes due to new Government regulations.

In many cases permission to operate is based on local pilots and airport personnel being familiar with the conditions at each airport and special mitigative procedures being employed. Ideally the most serious deviations should be eliminated.

Aging Aircraft

The 200 Series B737 and B727 currently operated by two scheduled air carriers serving Nunavut may be phased out of service within the short to medium term planning horizon by some carriers. This will occur for various reasons including: high operating cost; changing market economics in north-south air services; aircraft operating life limits including total hours flown and / or total number of cycles; revised technical requirements for old aircraft; and compliance with new federal noise regulations. New Canadian Aviation Regulations (CAR) for contaminated runways may further restrict these aircraft in the future. Replacement jet and turboprop aircraft envisaged by Nunavut's air carriers will require upgrading of airport infrastructure.

Runway Characteristics

With the exception of Iqaluit and Rankin Inlet, all airport runways in Nunavut are constructed of gravel. This places a constraint on the types of aircraft which may operate and therefore the quality, cost and frequency of air service which are common complaints of Nunavummiut. Few large jet aircraft can operate on gravel runways and no new large jet of B727 size aircraft are expected to be certified for gravel operations in the future. Many turboprop and piston engine aircraft operate successfully on gravel runways, but some types are more susceptible to gravel damage than are others. Paving runways will expand the range of aircraft able to serve Nunavut communities to include higher performance and newer generation aircraft. Militating against runway paving is the fact that gravel runways cost significantly less to maintain in the north, and acceptable runway friction factors can be more easily achieved on gravel runways under winter conditions.

Despite the benefits of gravel runways, an opportunity to facilitate air service improvement exists if a greater number of runways were paved, especially at larger airports such as Cambridge Bay. Selective paving of smaller airport runways may be required to accommodate newer types of aircraft, depending on airline operating strategies, and the Government's financial ability to acquire and operate more expensive maintenance equipment at these airports.

Specific types of aircraft require minimum lengths of runway for landing and take-off depending on the weight and payload of each aircraft. Longer runways permit operations by higher performance aircraft, by larger aircraft and by more heavily loaded aircraft. In designing a service pattern and routes to serve Nunavut, air carriers must first and foremost consider the available runway length at each point in a network in addition to numerous other operational, technical and economic factors.

Opportunities to improve Nunavut's air services will be facilitated if runways could be increased in length where necessary to accommodate the aircraft types preferred by Nunavut air carriers. Air carriers have stated that they cannot introduce new aircraft and improve service in the Baffin Region until the Pangnirtung runway is lengthened.

All Weather Accessibility

A vast majority of Nunavut's airports are certified as "non-instrument" runway airports requiring that aircraft land with visual aids only. This means that most communities do not have all weather access to the outside world by air. Constraints to improving this situation include a combination of local topographical obstacles, a lack of sophisticated electronic systems and a lack of aircraft equipped with the necessary equipment interface.

The lack of instrument runways throughout much of Nunavut constrains the accessibility and mobility of Nunavummiut both now and in the future.

Decentralization

The decentralization plan of the Nunavut Government was implemented on May 3, 2000. This plan brings government services and employment opportunities to ten communities, other than Iqaluit throughout Nunavut's three regions. This plan is structured by seven auxiliary offices and three regional centres that report back to the central government.

Currently government employees travelling from auxiliary offices, particularly in the Kitikmeot region, must take inconvenient routes, or in some cases add an extra day or overnight stop enroute to their itineraries, to reach the central offices in Iqaluit. Most other provinces and territories in Canada enjoy the convenience of being able to reach their capital in one day and return in one day. Currently the three regional centres have no direct non-stop connections to each other.

Improvements to the three hub airports in Nunavut (Rankin Inlet, Cambridge Bay and Iqaluit) along with other system airports will help make travel to and from the Capital or regional centres more convenient and reliable.

Capacity

The ability of a facility to accommodate user numbers within a reasonable level of service ensures that related operations are carried out in a generally comfortable, organized and safe manner. This expectation can and should be applied to most airport components including terminal buildings, runways and aprons among others. Where a reasonable level of service is not met, this results in congestion which can delay such activity as passenger processing, apron maneuvers among others that potentially could lead to uncomfortable/unsafe conditions for both passengers and air carriers.

The Benefits

Nunavut's large geographic reach and the absence of any road connections between communities makes air travel the only year round means to access neighbouring communities, other regions and southern Canada. The captive nature of air transportation means that most Nunavummiut will use air transportation at least once in a year and typically use one or more of the regional hubs (Iqaluit, Rankin Inlet or Cambridge Bay). This means that the benefits realized from making improvements to Nunavut airports will benefit all Nunavummiut. These improvements will also benefit many Canadians that fly into the north for business or pleasure or fly via the northern air system as an alternate to busier southern east/west air travel corridors.

Improvements to Nunavut's airports will require significant investment. This investment will also yield significant benefits for all Nunavummiut and the economy. The expected benefits include the following:

Improved Safety

Safety benefits are among the main payoffs from investments in transportation infrastructure. Safety enhancements to airports reduce the risk of accidents, and the resulting injuries, fatalities and property damage. For example, increasing the length of a graded areas or a runway, relieving apron congestion through expansion could result in the avoidance or the reduction in the number and severity of accidents that might occur.

Transportation Efficiency & Reliability

Both air carrier operators and the users (i.e. passengers, shippers) of the Nunavut airports will benefit from improvements in the efficiency of airports. For air carriers improved airport infrastructure may mean the ability to introduce more efficient aircraft thereby reducing operating costs. Improvements that mitigate the effects of weather provide benefits by avoiding the costs of disruptions to air service.

Runway length has a direct bearing on the size and payload of an aircraft. Where runway lengths are sufficiently long, the air carrier can go into that airport with a full load of passengers or freight. Full payloads means that expected freight shipments arrive complete and earlier.

Economic

Transportation throughout the history of Canada has been a key factor in the development and viability of all the provinces' and territories' economy. This recognition in the past was responsible for substantial investment by the federal government in various transportation infrastructure such as roads, railways and ports.

Improvements to Nunavut's airports will offer significant direct employment opportunities through construction and other indirect ones caused by related economic development. Improved airports will help in the diversification of the Nunavut economy and improve the availability or transfer of goods and services required by both government and private sector.

> **" Canada needs effective and viable air transport services to strengthen investment and jobs. Canadian businesses must have access to a modern, competitive, effective and efficient air transport network to meet the needs of the 21st century."**
>
> **..Excerpt from final statement made at the 41st Annual Premiers Conference in Winnipeg 2000.**

Bathurst Mandate

The Bathurst Mandate is a Cabinet strategy document that reflects the Territory's needs and values and sets the tone for all Government of Nunavut policy development, The Bathurst Mandate has four basic principles:

- Healthy Communities;
- Simplicity and Unity;
- Self-Reliance; and
- Continuing Learning.

The impact of improved airport infrastructure can seem "invisible" but in effect can be profound. Airport improvements that lend themselves to lower operating costs for airlines (and therefore cheaper airfares) or improved schedule reliability may mean that family absences for work, education, medical or social visits are minimized through improved travel reliability and opportunities. Where periods of absence are kept shorter it makes it possible for the family to be together longer periods. When families are strong, communities are healthy. Improvements to airports will see improvements to the quality of life of all Nunavummiut, who will gain better access to essential services, increased mobility and lower cost of living, which are benefits that further reflect the principles of the Bathurst Mandate.

What Has Been Done

Since the creation of Nunavut in 1999, the Department of Community Government & Transportation has worked hard to maintain and improve all of its 28 air facilities despite needs much greater than available resources. Many of the currently identified needs for airport improvements were inherited from the federal government when these airports were devolved to the territorial government of the time in the early to mid – 90's.

Improvements over the past 5 years have been and continue to be made to both air and groundside infrastructure. Funding for these improvements have come from the Department's own capital budget, the Airport Capital Assistance Program (ACAP) and most recently the Strategic Highway Improvement Program (SHIP), which was modified to allow Nunavut to construct priority transportation infrastructure for all modes.

While funding from these programs has and will greatly improve airport infrastructure; the identified needs for airports in Nunavut are much greater than these sources can facilitate or sustain. The requirement for the GN to contribute partial or matching funding (33%) for example in the case of SHIP also limits funding for other high priority airport infrastructure not covered under these programs. The sustainability of these programs is also an issue. For example, in 2003 the apparent over-subscription of the ACAP resulted in Nunavut not receiving any funding from this program despite a number of submissions totalling some $12 million.

Despite these funding issues the Department has been able to facilitate the following airport improvement projects totalling over $28.7 million in the 5-year period 1999 to 2003:

- Construction of new air terminal buildings in Resolute Bay, Clyde River, Cambridge Bay and Sanikiluaq at a cost of $8.2 million
- Airfield electrical projects in Whale Cove, Qikiqtarjuaq, Igloolik, Gjoa Haven, Pond Inlet, Pangnirtung and Sanikiluaq at a cost of almost $4.2 million
- Runway surface projects for Whale Cove, Baker Lake, Igloolik, Taloyoak, Resolute Bay and Qikiqtarjuaq airports at a cost of $9.1 million
- Mobile Equipment (snow blowers, graders, plow trucks) at a cost of almost $6.6 million
- Construction of Coral Harbour maintenance garage at a cost of $1.6 million
- Planning and design studies for Pangnirtung, Arctic Bay, Resolute Bay and Cambridge Bay airports at a cost of $520,000.
- Completion of Iqaluit Airport Master Plan, Air Terminal Feasibility Study and Overflight Opportunities Study at a cost of $345,000.

In addition to these projects, in 2004 new air terminal buildings will be constructed in Coral Harbour, Gjoa Haven and Pond Inlet at an estimated cost of $4.6 million.

The Plan

AIRPORTS FOR NUNAVUMMIUT AND THEIR ECONOMY: An Airport Investment Strategy for Nunavut calls for a total investment of $97.6 million over 4 years beginning in 2005/06.

This investment amount will allow 4 strategic airport improvements and other planning/engineering studies to proceed realizing many benefits to Nunavummiut and their economy and ensuring air carriers serving Nunavut have airport facilities that allow them to operate efficiently and effectively. The respective investment needs and timing for these improvements are detailed in Table 1 next page.

Table 1 Investment Needs (million $)

PROJECT	2005/06	2006/07	2007/08	2008/09	TOTAL
Iqaluit Airport Master Plan	10	10	10	10	**40**
Cambridge Bay Runway & Graded Areas	4	6	6	2	**18**
New Pangnirtung Airport	4.6	10	10	10	**34.6**
Rankin Inlet ILS and Apron Expansion	0	0	1.5	1.5	**3**
Other	0.5	0.5	0.5	0.5	**2**
TOTAL	**19.1**	**26.5**	**28**	**24**	**97.6**

1. Implement Iqaluit Airport Master Plan

Project Description

- Implement Iqaluit Airport Master Plan including:
  - -Reopen Taxiway A and Apron 1
  - -New Air Terminal Building
  - -Airside Rehabilitation
  - -New Fire Hall and Maintenance Building

Background

- Iqaluit Capital Airport is a major Canadian air transportation centre, serving social, political, commercial and military needs
- While Nunavut has 25 public airports, Iqaluit Airport is the single largest and most important transportation asset in Nunavut
- Connecting services are provided to 11 Nunavut communities (direct) and 15 other communities via connections
- 50% of all Nunavummiut rely on Iqaluit Airport for their perishable food and other cargo
- 80,000 passengers annually use this airport
- 40% of all Nunavut travelers enplane or deplane at Iqaluit Airport.
- The airport has operated below acceptable standards for many years and levels of service continue to deteriorate as passenger and air traffic continue to increase.

Benefits

- Improved capacity for airside movements and inside passenger handling for scheduled carriers and polar over-flights diverted for technical or medical reasons
- Allows for implementation of new Canadian Air Transportation Security Administration changes without impacting air terminal passenger and taxiway capacities.
- Industry stands poised to make major facilities investments in Iqaluit Airport, contingent on the government proceeding with new ATB construction.

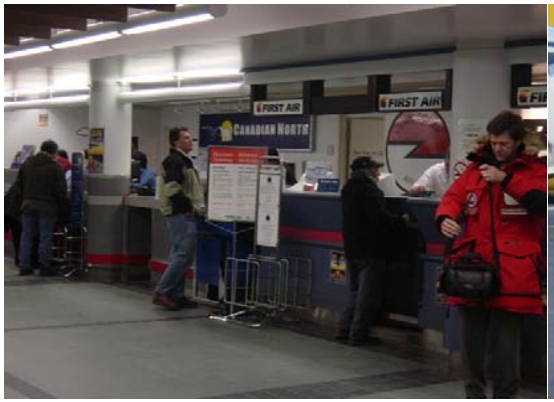
Investment Plan

- Implementation of the Iqaluit Master Plan is estimated to cost $ 40 million and would occur over a four-year period beginning in 2004/05.

Investment Timing ($ Million)

Implement Iqaluit Airport Master Plan

2005/06	2006/07	2007/08	2008/09	TOTAL
10	10	10	10	40




2. Rehabilitation of Graded Areas and Paving of Runway Cambridge Bay

Project Description

- Widening and reconstruction of existing graded areas
- Runway reconstruction and paving

Background

- Transport Canada is currently enforcing strictly the requirement for a 60m graded area before each runway threshold.
- This requirement means the useable length of the runway is now 1404 m
- The present runway structure which was built on top of organic rich soil does not meet the strength requirements of this airport's critical aircraft, the B737
- The understrength condition causes problems with rutting and raveling of the surface
- Air carriers using B737 can't operate into this airport at full payload weights
- Approximately 12,000 passengers a year use Cambridge Bay Airport
- Additional space is available for graded area expansion without moving the existing threshold and runway end lighting systems
- Anticipated air carrier upgrades to newer generation jet aircraft will require a paved runway

Benefits

- Carriers using B737 would be able to put larger payloads into the airport
- New jets that are not gravel certified would be able to use this airport

Investment Plan

- Implementation of the Cambridge Bay Graded Areas and Runway Paving project is estimated to cost $18 million and would occur over a four-year period beginning in 2005/06

Investment Timing ($ Million)

Cambridge Bay Runway Paving & Graded Areas

2005/06	2006/07	2007/08	2008/09	TOTAL
4	6	6	2	18

3. Construct New Pangnirtung Airport

Project Description

- New 1,200 – 1,500m runway, air terminal building on plateau above community
- Construct new 8 km. access road to airport; optional "tramway" system has also been evaluated

Background

- Runway length now imposes penalty/load restrictions on larger aircraft i.e. HS748
- Current 900 m runway is to short too accommodate modern aircraft such as the ATR42 which is proposed for introduction to other Baffin communities
- Air carriers have stated that they cannot introduce the ATR42 into service in this region (with 50% of the population) until the Pangnirtung runway is lengthened
- Current runway splits the community in half and developable land for community housing lots is in great demand
- Aircraft now using the airport are subject to prohibitive restrictions under instrument flight rules and special pilot operating procedures if operating under visual flight rules
- Approaches are subject to extreme turbulence that may not be detected by the airport observer/communicator

Benefits

- Improves services to fishery which currently moves more than 1 million pounds of fish by air
- Will facilitate crew changes of fishing boats and re-supply
- Will enhance the marketing of Auyuittuq National Park for which Pangnirtung is the major point of entry
- Improved schedule reliability due to less weather disruptions
- Increased payloads with more efficient aircraft for both cargo and passenger traffic
- Will allow for point-to-point service to communities further north with modern aircraft
- Will free up land for community housing needs

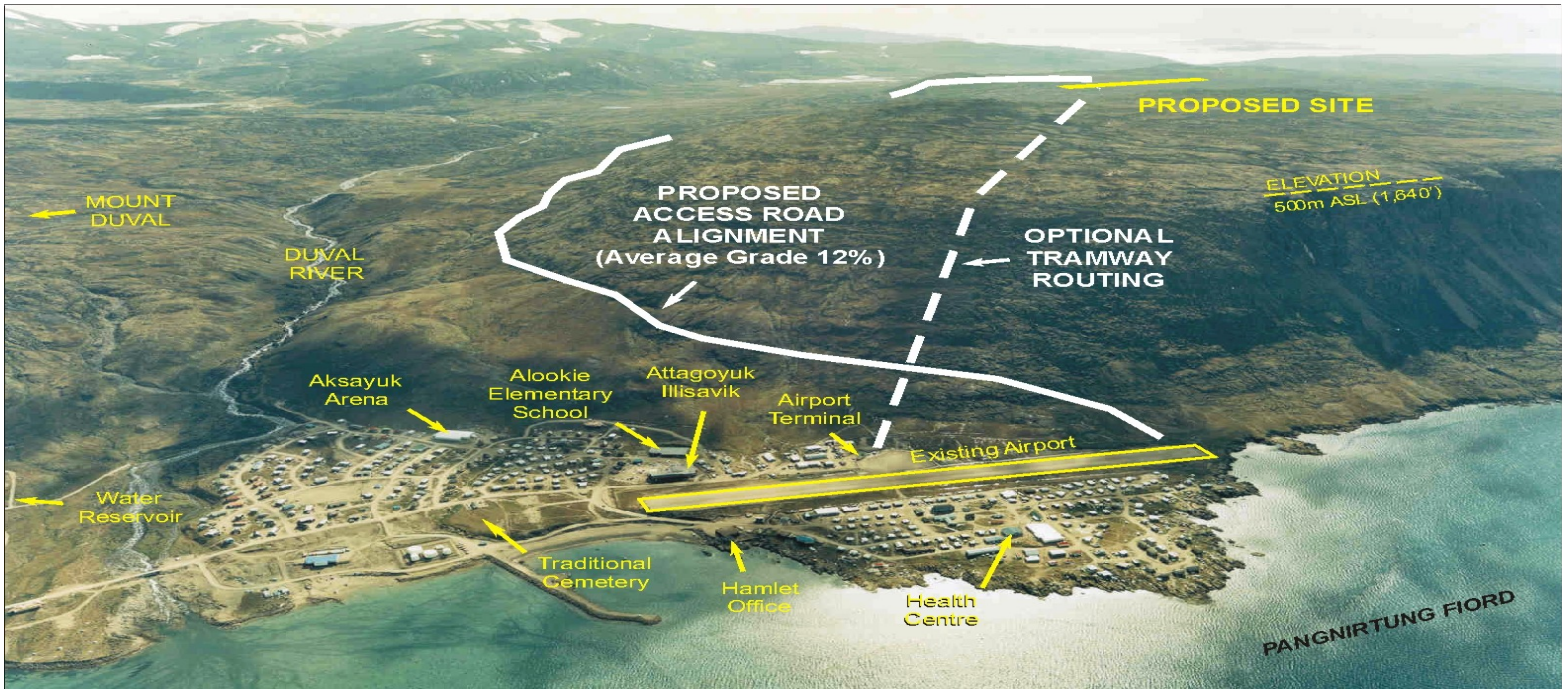
Investment Plan

- Implementation of the new Pangnirtung Airport is estimated to cost $34.6 million and would occur over a four-year period beginning in 2005/06
- Final design of access road to plateau will influence final cost estimates

Investment Timing ($ Million)

Construct New Pangnirtung Airport

2005/06	2006/07	2007/08	2008/09	TOTAL
4.6	10	10	10	34.6



4. Rankin Inlet Apron Expansion and Improved ILS

Project Description

- Expansion of apron area
- Installation of improved Instrument Landing System

Background

- During peak aircraft periods the safe parking and manoeuvring of jets and turboprops is challenged by limited size of parking apron
- In marginal weather due to the limitations of the existing instrument approach systems accessibility to the airport is reduced
- Flight cancellations and missed approaches are estimated to cost air carriers in excess of $1 million per year
- In 2002 an estimated 25,000 passengers moved through the airport on major, regional and local scheduled air carriers
- Rankin Inlet serves as the main MEDEVAC centre and aircraft refueling point for central Nunavut

Benefits

- Reduced potential for aircraft strikes while on the apron
- Improved reliability and access for air carriers/passengers using this airport
- Reduced fuel loads for alternate situations
- Accommodation of increased aircraft use anticipated with mineral development in the area

Investment Plan

- Implementation of the Rankin Inlet Apron Expansion and installation of an improved Instrument Landing System project is estimated to cost $3 million and would occur over a two-year period beginning in 2006/07.

Investment Timing ($ Million)

Rankin Inlet Apron Expansion & ILS

2005/06	2006/07	2007/08	2008/09	TOTAL
0	1.5	1.5	0	3

5. Other - Planning/Engineering Studies

Project Description

- Planning/engineering studies for airport improvements/strategies in other communities such as Repulse Bay, Kimmirut and Arctic Bay/Nanisivik

Background

- Planning/engineering studies are required to evaluate different airport concepts, related impacts and issues and provide cost estimates
- Example of studies required include airport relocation (pros and cons), runway lengthening among others

Benefits

- Completion of these studies ensures realistic budgets are developed, that all zoning requirements and regulations are met and any construction issues are mitigated
- These studies will also help determine alternate uses for existing airport facilities
- They may lead to more substantial proposals as detailed studies are completed and needs better identified

Investment Plan

- Additional planning and engineering studies for airport improvements in other communities is estimated to cost $2 million and would occur over a four year period starting in 2005/06

Investment Timing ($ Million)

Other—Planning/Engineering Studies

2005/06	2006/07	2007/08	2008/09	TOTAL
0.5	0.5	0.5	0.5	2

Conclusion

The Nunavut air transportation system and the airports that serve this system are essential for the health and well being of Nunavummiut and their economy.

The improvements to Nunavut airports as envisaged in **AIRPORTS FOR NUNAVUMMIUT AND THEIR ECONOMY: An Airport Investment Strategy for Nunavut** will provide Nunavummiut with a safer, more efficient and effective air transportation system. These improvements will also support Nunavummiut efforts to build a healthy and prosperous society and play their part in the day-to-day social and economic life of Canada.

The proposed improvements to Nunavut airports will also enable many more Canadians to see and realize the potential of this vast land and its people. These improvements will also bring some demonstrable proof of Canada's sovereignty and interest in Canada's north.

Full participation by the federal government in this $97.6 million plan is essential. This significant investment will ensure that the Canada's northern air transportation system is the best it can be.