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LEGISLATIVE ASSEMBLY OF THE NORTHWEST TERRITORIES

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REMOTE AIRSTRIPS, WEATHER AND COMMUNICATION FACILITIES IN THE NORTHWEST TERRITORIES

At the 35th and 36th sessions, Council requested information on the construction of airstrips in remote areas and on various aspects of weather and communication facilities in the Northwest Territories. The Department of Transport has prepared a paper on these subjects for Council's consideration.

1. Construction of Remote Airstrips

A proposed program for the construction of twenty-five remote airports was initiated by the Department of Indian Affairs and Northern Development in December, 1965. At that time, DIAND requested the Department of Transport to provide funds over a period of ten years for the development of airports at northern locations on a basis of priorities determined by the former Department. Coppermine has been assigned first, and Eskimo Point second priority by DIAND; Chesterfield Inlet, Fort McPherson and Aklavik share third.

The justification for the development of these airports, based on recommendations made in the Hall Royal Commission on Health Services, has been subscribed by DIAND. The airports would be primarily in what this Department classifies as the "remote" category, would be utilized to bring health services to communities, and would enable much more efficient transportation of local populations to and from base hospitals and schools.

The Department of Transport now has a policy which provides for grants to remote communities or higher government organizations such as provinces, territorial councils or DIAND, for the development of remote airports, provided that the contribution for any one airport shall not exceed $100,000. The total airport contribution vote for these and other purposes is limited by Treasury Board to $1,000,000 per annum throughout Canada and is already committed in advance until 1970. It was therefore considered essential to increase this ceiling before embarking on a northern airports program; financial stringencies have hitherto prevented this.

In the meantime, it has tentatively been agreed by DIAND that all costs per site above $100,000 would be borne by that Department. Also, DIAND, would be responsible for the construction of access roads and for the purchase and shipment of both construction and maintenance equipment at each site.

At the present time, D.O.T.'s engineers are engaged in site investigations and in the preparation of detailed engineering reports for the construction of the twenty-five sites included in this program. A number of sites have already been costed, and it is expected that the remainder will be available later this year. However, it has become apparent that the total cost of capital works for the twenty-five sites will probably exceed $10,000,000 of which, under the existing policy, D.O.T. would underwrite only $2,500,000. After the completion of the airports, either DIAND or the Territorial Council would be faced with recurring maintenance charges not yet calculated, but probably in the neighbourhood of at least $400,000 per annum.

In the meantime, Treasury Board has authorized DIAND to purchase and deliver construction equipment for use in the development of a 2,900 foot runway at Coppermine. The Department of Transport intends to seek approval of the Board to allocate $100,000 toward construction of the airport in 1969-70.

It should be noted that the types of airports proposed would not be built initially to a standard of sufficient sophistication to permit regular commercial air services, and if commercial air carriers applied to provide such services and the Air Transport Committee were otherwise prepared to grant licences for this purpose, heavy additional expenditures would have to be made by this Department to provide airport lighting, aids to navigation and

possibly runway lengthening or strengthening. In fact, on the basis of information already available, the lengthening of certain of the proposed runways for airline use would be, to all intents and purposes, impossible.

2. Development of Weather Facilities in the Northwest Territories

The following is a list of those items included in the Meteorological Branch Program covering facilities in the Northwest Territories.

1968-1974 Five-Year Plan Sheet

Item Description	
Bathurst - New Surface Weather Station	1972-73
Cambridge Bay - New Upper Air Station (transferred from Coppermine)	1968-69, 1969-70
Holman Island - New Surface Weather Station	1973-74
Port Radium - New Surface Weather Station	1971-72
Tuktoyaktuk - New Surface Weather Station	1971-72
Tundra Mine - New Surface Weather Station	1973-74
Rankin Inlet - New Surface Weather Station	1970-71

Existing Services

The Meteorological Branch forecasting system is so organized that it could be expanded to provide increased service in the Northwest Territories to meet the expanding needs of exploration and development.

The Ice Observing and Ice Forecasting Service now covers the navigable waters in the Arctic, Hudson Bay and Hudson Strait to provide information on ice conditions. These services will be expanded to meet increasing needs.

3. Improvement of Communication Facilities in the Northwest Territories

The following is an outline of responsibilities, a report on activities in 1967 and a forecast of plans for 1968.

Telecommunications & Electronics Branch and Government Telecommunication Policy & Administration Bureau

RESPONSIBILITIES

To provide radio aids to air and marine navigation; to provide radio facilities for various scientific organizations and for meteorological observations; to provide other telecommunications facilities as required;

To foster and promote the development of economical and effective telecommunications facilities; to control and manage the use of the radio spectrum; to licence stations and enforce regulations under the Radio Act, Radio Provisions of the Canada Shipping Act, and Ship Station Radio Regulations.

LONG TERM PLANS

To expand operations as the need arises, for example, to establish a radio monitoring station in the Ungava/Labrador area possibly in 1969-70; to further develop telecommunications facilities for the transmission and reception of voice and record traffic to additional stations as required, which involves the administration

of services for government needs and may include public needs as well; and to encourage and support the development of communications by private industry.

Review of 1967 Operations

CHURCHILL

Ship-shore message and marine telephone, public correspondence service have been commissioned on VHF. Automatic morse keying equipment has been installed for radio telegraphy broadcasts of weather and ice conditions.

The Ionospheric Station provided measurements of the ionosphere every 15 minutes throughout the year and furnished support to the Churchill Rocket Range by supplying special data for numerous rocket experiments.

COPPERMINE

Additional air-ground VHF communications frequencies were installed to improve the service provided to aviation. The construction of a transmitter building was completed.

CORAL HARBOUR

Ship-shore telegraphy/telephony communications facilities were established for evaluation purposes during the 1967 navigation season. Installation of a communications control system has been completed.

FROBISHER BAY

Facsimile transmissions of ice charts were provided on a trial basis via low frequency during the 1967 Arctic re-supply operations.

Communications with Hudson's Bay Company out-stations have been converted from double to single side-band operation.

GJOA HAVEN

Work started on the installation of a non-directional beacon (NDB) as an aid to navigation.

INOUCDJOUAC

Communications with Hudson's Bay Company out-stations were converted from double to single side-band operation.

INUVIK

A radioteletype circuit to Sachs Harbour was commissioned. The installation of an approach non-directional beacon for an instrument landing system was completed.

MAYO

Air-ground VHF facilities were installed at the site and the construction of a transmitter building including a two-bay garage was completed.

NORMAN WELLS

The construction of a transmitter building and receiver building was completed.

PELLY BAY

Work started on the installation of a non-directional beacon as an aid to navigation.

RESOLUTE BAY

Installation of a diversity radio reception system for a weather facsimile facility was completed.

TESLIN

Construction of a radio control building was completed.

WATSON LAKE

Construction of a transmitter building was completed.

YELLOWKNIFE

Construction of a transmitter building was completed.

Development of Public Telecommunications Services

The Northern Electric Company supported by Hughes Aircraft Limited completed a major study on domestic satellite communications for the Department of Transport. The use of such a system to serve communities in Northern Canada forms a major part of the study.

Canadian National Telecommunications and the Bell Telephone Company of Canada on a joint basis have expanded the facilities of the military "Polevault" communications system owned by the United States Air Force to provide eleven additional voice channels for civilian use across the Strait of Belle Isle between St. Anthony, Newfoundland, and Goose Bay, Labrador.

The Bell Telephone Company of Canada has installed a large telephone exchange telephone service to Yellowknife and Hay River, N.W.T.

During 1967, the Keewatin Telephone System owned by the Bell Telephone Company of Canada has been in operation, centered on Churchill. Fanning out from Churchill are stations at Eskimo Point, Whale Cove, Chesterfield Inlet, Rankin Inlet, Coral Harbour, Baker Lake, and Resolute. The cost of these stations has been recovered from Departments using them based on the usage involved. In locations such as Cambridge Bay, Igloolik, and others, the need for additional communications is being reviewed. Canadian National Telecommunications was granted a licence to establish and operate a radio station to serve the public in the Lady Franklin, N.W.T., area.

Canadian National Telecommunications has established direct distance dialing telephone service to Yellowknife and Hay River, N.W.T.

General

The Air Traffic Control national interphone voice network was extended from Yellowknife to Lady Franklin Point for interconnection with the military-owned "Dew Line" communications system to provide service via the Cambridge Bay Aeradio Station direct to Anchorage and/or Sondrestrom, Greenland.

A Radio Regulations Office was established with a staff of two at Whitehorse, Y.T.

Plans for 1968

ALERT, EUREKA, ISACHSEN, MOULD BAY

Replacement of obsolete high frequency radio communications equipment.

CHESTERFIELD, CORAL HARBOUR

Decommissioning of ship-shore communications services at Chesterfield and the establishment on a permanent basis of a full-time ship-shore communications service from Coral Harbour.

FORT FRANKLIN

Installation of a non-directional beacon (NDB) for the Department of Indian Affairs and Northern Development as an aid to navigation.

FROBISHER

Provision of high frequency radio telephone ship-shore service on 4 MHz (megahertz (megacycles)) to improve radio telephone coverage in Frobisher's service area.

Provision of automatic morse keying equipment to facilitate and improve telegraphy broadcasts of weather, ice and dangers to navigation.

INUVIK

Provision of high frequency radio telegraph ship-shore channel to improve long distance communications in the Western Arctic during re-supply operations.

Installation of an instrument landing system.

MAYO

Construction of a radio control building.

NOTTINGHAM ISLAND

Improvement of communication facilities.

RESOLUTE

Provision of low frequency radio telegraphy ship-shore facilities to improve communications with shipping in Lancaster Sound during Arctic re-supply operations. Satellite work will be extended to the first of the International Scientific Ionospheric satellites (ISIS-A).

WHALE COVE

Installation of a non-directional beacon as an aid to navigation.

WHITEHORSE

Construction of a non-directional radio beacon building.

YELLOWKNIFE

Installation of an instrument landing system.

RESOLUTION ISLAND AND CHURCHILL

Provision of high-frequency radio telephone ship-shore service on 4 MHz to improve radio telephone coverage of Hudson Bay and Strait.

Installation of an instrument landing system at Churchill.

Public Telecommunications Plans for 1968

The Bell Telephone Company of Canada is in the process of planning telephone exchange installations at Sugluk, Hopedale, and East Main. H.F. radio links are to be provided between Gander, Tub Harbour, Triangle, Indian Tickle, and Lodge Bay, as well as ten remote radio links to the Churchill Falls telephone exchange.

Canadian National Telecommunications proposes to establish direct distance telephone dialing to Fort Smith and Pine Point as well as to set up circuitry to permit the Inuvik operator to have direct indialing privileges to Hay River, Yellowknife, Fort Smith and Point Point.

Canadian National Telecommunications also plans to provide additional capacity between Yellowknife and Hay River and also at Coppermine to provide service for exploration development expected in the area. In addition, plans are underway to extend telephone and telegraph services into Vangarda Creek, Ross River area east of Whitehorse.

General

Record traffic originating from locations in the Keewatin Area is being studied, as well as the quality of the voice communications, with a view to providing a recommendation that will satisfy the general needs of the area. While these plans are devoted primarily to providing administrative telecommunications for the Government of Canada, the general public will benefit indirectly. Where operational needs can be economically provided as well, they will be included in the plan.

There are no additional plans for the improvement of community facilities in northern settlements, including Rankin Inlet. However, the Department of Transport is now studying all facets of the Rankin operation. Matters being studied include:

(a) A summation of available statistics on the present volume of air traffic at Rankin Inlet airport;

(b) An estimation of the existing and foreseeable needs for telecommunications services and also for airways facilities such as navigational or other aids; the possibility, from a long range point of view, of moving existing facilities from Chesterfield Inlet to Rankin Inlet;

(c) The need for and possibility of establishing a formal weather reporting program at Rankin Inlet. Because of the proximity to Chesterfield and the apparent need for a limited program, the minimum instrumentation required is being reviewed.

4. Increased Air Services in the Northwest Territories Especially Implementation of East-West Air Routes Taking in Central Arctic Settlements

The Air Transport Committee of the Canadian Transport Commission is arranging for hearings to be conducted at Yellowknife early in July relating to a number of applications by commercial air carriers for additional air services in the North. It is understood that the timing of the hearings has been arranged to follow closely the 37th session of the Council of the Northwest Territories.

5. Installation of NDB's at Whale Cove, Repulse Bay and Mid-Way between Yellowknife or Reliance and Baker Lake for Lateral Air Route Purposes

A program involving the installation of non-directional beacons on behalf of the Department of Indian Affairs and Northern Development has been under way for some time. It is planned to proceed with an NDB at Whale Cove and Repulse Bay in 1968-69.

Priorities for installation are established by the Department of Indian Affairs and Northern Development, and the Department of Transport endeavours to meet these targets, subject to regional workloads. Neither the Department of Transport nor the Department of Indian Affairs and Northern Development has made plans for the installation of an NDB mid-way between Yellowknife or Reliance and Baker Lake.