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MISSION ISLAND/ FORT IRESOLUTION

TOURISM DEVELOPMENT PLAN

Prepared for



INTERIM REPORT

February 1981

Prepared by

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1. INTRODUCTION AND SUMMARY

1.1 OBJECTIVES

The Community of Fort Resolution and the Government of the Northwest Territories (G.N.W.T.) through its Department of Economic Development and Tourism, and its Department of Public Works wish to construct a tourist and community park on Mission Island. The park is intended to be a new venture in Territorial Parks with a major role being played in its development and operations by the community of Fort Resolution. The project's attractiveness to visitors must not rest solely on the park's natural qualities, but it is intended that tours of the area and a variety of interpretive programs be initiated which will attract visitors and entice them to remain in the area, possibly for several days. In addition, it is required that the development and operation of the tourism project create substantial positive impacts on the local economy through new employment and concurrent spin-off benefits - all of which is to be achieved with minimum detrimental effects on the environmental quality of the island or the surrounding area. The natural charm of the area must be preserved and any man-made intrusions must be carefully blended into the setting.

Within these general objectives, a development concept, architectural motif and staging plan is required, based on mapping of the environmental capabilities and construction suitability of the site, market analyses, and an inventory of natural, archeological and cultural resources of the study

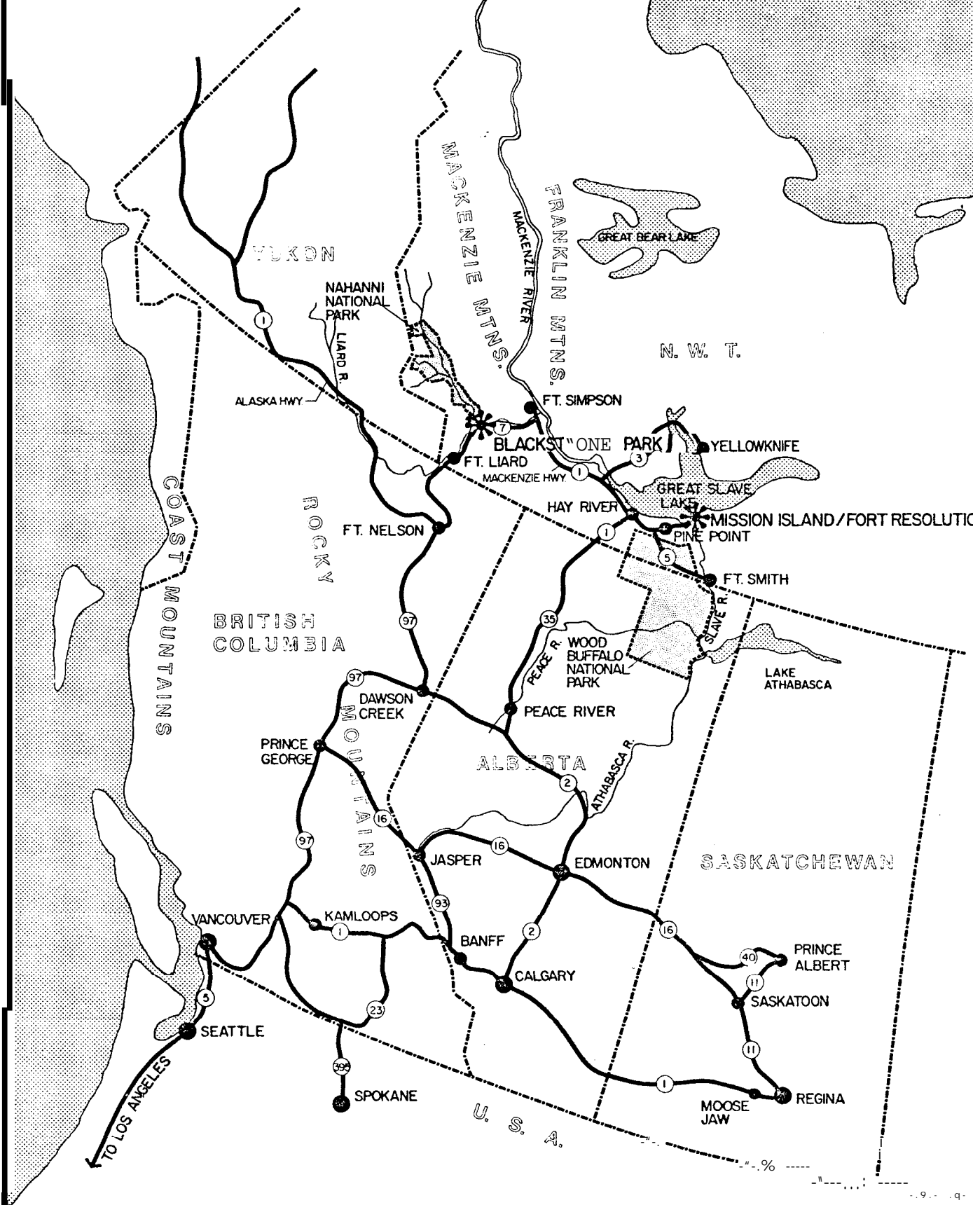
area. Guidelines for an administration of the project and an interpretive program are also to be provided. As a check on the validity of all proposals, the consultant has been asked to provide an evaluation of the probable effects of his recommendations on the natural and cultural resources of the area and the effects of his proposals on the economic and social welfare of the people in the vicinity.

1.2 APPROACH AND METHOD

A multi-disciplinary team of planners and designers undertook the project in early November 1980 just after freeze-up commenced. The team, consisting of two engineers, two architects, a landscape architect, two planners and a management consultant, worked from bases in Yellowknife and Fort Resolution. They examined the site in detail, although their findings were somewhat limited because the ground was snow covered and the lake and rivers were frozen during the principal period of site investigation.

During November and December a number of meetings were held with the Tourism and Parks Committee of the Fort Resolution Settlement Council and with officials of Territorial Tourism and Parks to establish a preliminary concept and an approach to the development and operation of the project. On the basis of comments received, plans and an Interim Report were prepared for further study by departments of the Territorial Government and community groups. Revisions and production of the material in final form will be based on this second round of reviews.

The following sections summarize the main features of the plan and the report.



PLANTION

1.3 SUMMARY

1.3.1 Market Factors

The opening of the Liard Highway in 1983 will establish the first circle-tour route in the Northwest Territories. It will provide visitors with an alternative to remaining on the Alaska " Highway and will provide more direct access to the southern part of the Territories from British Columbia and the Yukon. This improved access is expected to increase tourism traffic in the Fort Resolution area, however, even with an attractive interpretive program it is expected that the levels of tourist visitation will be quite modest as compared with figures for locations nearer the large population centres in the south.

It is estimated that there will be about 1600 visitors to the Fort Resolution area in 1982 when ~~the~~ park and interpretive programs are planned to be in operation. By 1986, with increasing popularity of the project, it is estimated that visitation will reach about 2300.

Based on analyses of markets and user requirements, the camping facilities required to meet 1986 requirements are: 10 serviced campsites, 5 unserviced campsites and 4 cabins.

1.3.2 Characteristics of the Site

The natural features of the area consist of pleasant views and forested areas covering relatively flat delta lands. However, the historic and geologic features and the cultural heritage of the local

people have good potential for establishing attractive interpretive programs and visitor tours. The island, on which camping facilities are proposed contains delightful sites for camping and cabins along the southern shoreline and good sites for trailers and tents on a high point overlooking the lake and exposed to pleasant breezes.

Wildlife is not plentiful in the immediate environs of the island or the settlement, however, in the surrounding **bush, many** residents still carry on lucrative trapping enterprises. Fish abound in the lake and the local people depend on the source both for their own consumption and as food for the dogs. Fort Resolution is frequently used as a base for fishermen who are seeking bigger prizes in the East Arm.

1.3.3 Development Concept

The existing road to the island passes by the community refuse disposal sites and takes a relatively long and indirect route around the airport. A new road along the bay is proposed which will take visitors directly from the Information Centre in Fort Resolution, along the edge of the bay, to the island. Although this will be a relatively expensive undertaking, it is almost essential to the success of the project.

After obtaining directions and general information at the Information Centre, visitors will proceed along Beach Road to the Registration Centre on the island. This centre, on a height of land about 500 metres west of the Snye and overlooking Moose

Deer Island and the lake, will be attached to the Park Supervisor's residence. A maintenance compound for park materials and equipment will be established nearby.

Having registered and paid the required fees, campers will proceed along Island Road to the Serviced Campsite or along the Shoreline Trail to unserviced campsites and cabins on the lakeshore. The serviced campsites will be drive-through tent or trailer sites clustered around a wash house with drinking water, toilets hot and cold showers and laundry tubs. Unserviced sites will be served by pit toilets and water will be obtained from the lake or by walking to the wash house about 500 metres distant.

The former mission site is proposed to be further developed as a picnic area, particularly for local residents. Parking should be restricted to a location outside the picnic ground and it is proposed that the graves be fenced and the old log building rehabilitated.

To further increase the attractiveness of the island to visitors, a lookout is proposed on a height of land near the junction of Island Road and Shoreline Trail. Near this location walking trails will lead to the north point and historic sites of lime kilns and early trading posts. At the picnic area a dock should be built to facilitate boat trips from the Settlement Wharf and to the surrounding lake area. Re-opening the Snye would be a strong asset to boat tours in the area and it is recommended that the channel be dredged, diked as necessary and provided with a handsome bridge on the entrance road to the island.

In the town, it is proposed that the Mission House be established as a visitor attraction by refurbishing it as an Interpretive **Centre** (Heritage **Centre**). **Two** or three rooms should be used for displays of historic materials, natural history and cultural exhibits.

1.3.4 Design Motif

Sawn logs are recommended as the ideal building material for park facilities on Mission Island. Construction in this medium will take maximum advantage of the local mill and the skills of local builders and craftsmen. This medium, enhanced by glass and stone will allow designers to respond readily to visitor images of rustic camping experiences in a frontier setting.

Simple buildings which blend with the landscape and which are comprised of low horizontal panels are proposed, and it is recommended that modular approaches be included to allow for expansion. All tables, benches, litterbins and signs **will** be designed in a harmonious and consistent style in order to unify all built elements.

Because of the sloping terrain, terracing will be required in the development areas. Sites for campsites and buildings will thus have special potentials which should be carefully exploited by architects, landscape architects and engineers, in order to take advantage of the lake and island views.

1.3.5 Engineering Services

It is proposed that water be supplied to the Park by truck from the settlement. Electricity is not included in the plan at this time. However, electrical

outlets at the Serviced Campsite would be an attractive feature and could eventually be included in the development.

Sewage will be collected in holding tanks under all buildings containing toilets and will be taken regularly by the settlement truck to the community lagoon. Solid waste will also be taken regularly to the community dump by park maintenance staff.

1.3.6 Interpretive Programs

A variety of themes have been identified which will capture the interest of visitors and which can be enjoyed on any one of eleven tours or by visiting the Heritage Centre.

The themes around which the tours have been structured and upon which Heritage Centre displays and programs should be based include:

- . Community Life
- . Human History and the Economy
- . The Northwest Frontier
- . Physiography and Geology
- . Wildlife and Vegetation, and
- . Climate, Astronomy and the seasons.

The proposed eleven tours, some guided and some unguided, will enable visitors to personally explore a wide range subjects and northern experiences from the settlement itself to the sawmill, the island, the delta and the neighboring islands, Pine Point mines, Little Buffalo River, Slave River and the East Arm.

People with special knowledge and experience should be invited, from time to time, to further stimulate visitors **through** discussion and story telling. Actual demonstrations and participation in operating scows, preparing a pelt, building a canoe etc. should be included in the program to bring it alive for people of all ages.

1.3.7 Capital Costs and Staging

The estimated cost, in 1980 constant dollars to develop the park as described in the Development Concept is about \$777,000, of which \$456,800 will be required for park facilities, Information **Centre** and Heritage **Centre**, and \$319,500 will be required for roads and parking areas. It is anticipated that roads and parking areas will be designed and built through special arrangements among the Community, the Department of Highways, and the Adult Vocational Training **Centre**. The basic capital costs with which the Department of Economic Development and Tourism will become involved will amount to \$456,800, of which it is expected that about 25% may be financed by sources other than the Departmental budget.

If design and construction work proceed quickly, it will be possible to open the park to visitors in 1982 and the following program of expenditures is based on that assumption. (Figures are in 1980 constant dollars) .

| | | |
|-------|-------------------|-------------------------------|
| 1981: | \$100,000 | (excluding roads and parking) |
| 1982: | \$100,000 | (excluding roads and parking) |
| 1983: | \$ 94,500 | |
| 1984: | \$ 89,400 | |
| 1985: | \$ 64,900 | |
| | <u> </u> | |
| | \$456,800 | |

1. 3.8 Operational Guidelines

The Community have expressed keen interest in assuming control of the project. However, because of the large capital expenditures required, and because user fees are not expected to cover operating costs, it is proposed that the community appoint a Tourism and Parks Committee to work closely with G.N.W.T. in the development and operation of the project. Eventually the Community might assume full control.

The following aspects of the project will require careful development and on-going monitoring:

Mission Island Park (camping, and picnic area)

- Tours and Interpretive programs
- Heritage Centre
- Information Centre
- Accommodation and meals in Fort Resolution, especially meals in homes
- Arts and Crafts Centre
- Environmental Considerations, especially aesthetic qualities of the island and the settlement.

Research which continuously improves the interpretive programs and visitor attractions.

It is proposed that the park be managed by a Park Supervisor, that the Heritage Centre be coordinated by a Historical Committee, and that the Information Centre, tours, special programs, meals in homes, and

Arts and Crafts Centre be assisted, as may be required, under the Small Business Projects division of the Department of Economic Development and Tourism. Environmental concerns should be an overall responsibility of the Tourism and Parks Committee, and research should be undertaken by special assignments to local citizens, students and visiting consultants.

It is proposed that Fort Resolution residents be admitted free to the park, but that they pay 50% of the required fees for camping.

On-going Community initiatives and Community participation will be essential to the success of the project because the principal attractions of the area relate to cultural heritage. If the project is to succeed, a broad base of continuing local enthusiasm and support must be maintained throughout the life of the project.

1.3.9 Economic Impact

User fees collected at the Registration Centre are expected to be insufficient to cover annual operating costs. However, although there will be operating deficits ranging from about \$18,000 in 1982 to about \$15,200 in 1986, the development of project facilities and the operation of ancillary programs are expected to have substantial, positive economic impacts on the local community. During the period of construction about seventy percent of all development costs are expected to accrue directly to the settlement. This will amount to about \$314,000 between 1981 and 1985, which equates to an average of about 1400 man-days to work per year. In addition, the project

operating staff, tour operators, guides, craftsmen, people offering meals and accommodation in Fort Resolution, and local business are expected to receive annual revenues from tourist spending, totalling about \$40,000 in 1982 and \$80,000 in 1985. Furthermore, there will undoubtedly be spin-off activity generated as a result of these increases in income to the Fort Resolution area.

1.3.10 Social Impact

The principal social impact attributable to the development of the tourism project will arise from new income and new employment in the community. The greatest effects will be felt between 1982 and 1985 when construction and operation occur together. During these years it is expected that over 2500 man-days of local employment will be generated annually. That is the equivalent of about 29 people working five days a week for four months. After construction is completed, an estimated 1700 man-days of work will be required to operate and maintain the project each year.

Over and above this employment, it is expected that a great deal of volunteer effort will be expended by committee members, interested citizens and students in meetings, research and special projects. The local Tourism and Parks Committee and the Department of Economic Development and Tourism must continuously stimulate and monitor the project to ensure that local enthusiasm remains at a high level.

1.3.11 Environmental Impact

Some clearing of trees and shrubs and grading of uneven or sloping ground will be necessary in order to prepare for campsites and roads. A landscape architect should be retained, on site, during these operations to ensure that only essential clearing is undertaken and that tree screens are maintained where required. The proposals outlined in this report have been conceived with the environment in mind and with the general objective of combining built elements harmoniously with the natural landscape.

Sewage and refuse will be collected regularly from holding tanks and from animal-proof refuse containers. It will be delivered to the community disposal sites in accordance with accepted practice.

The anticipated small numbers of visitors to the area are expected to have little effect on wildlife. Guides and information brochures will nevertheless caution visitors on proper conduct with respect to wildlife.

2. MARKET POTENTIALS

2.1 SETTING AND REGIONAL "CONTEXT

Located on the south shore of Great Slave Lake at the eastern terminus of Highway #6, Mission Island/ Fort Resolution is approximately 166 kilometres east of Hay River and 298 kilometres north and east by road from Fort Smith. On a larger scale, it is approximately 270 kilometres by road from the Northwest Territories border, 1,260 kilometres from Edmonton, 2,600 kilometres from Vancouver, 3,350 kilometres from Minneapolis and 4,230 kilometres from Los Angeles (Figure 1).

At the present time, all visitors arriving by road must enter the Territories by way of the Mackenzie Highway. Five campgrounds are situated along the highways between the border and Fort Resolution. Another three are located on Highway #5 leading to Fort Smith and Wood Buffalo National Park. The opening of the Liard Highway in 1980 will provide a second access point, this one from northern British Columbia. There are presently two campgrounds on the Mackenzie Highway between its intersection with the new Liard Highway and Hay River. The campgrounds listed in Table 2.1 will provide visitors with a variety of camping experiences. The closer campgrounds to the proposed site are Galena at Pine Point (60 kilometres west of Highway #6) and Hay River within the community of Hay River (166 kilometres west) .

2.2 MARKET APPEAL

The proposed Mission Island campground will be located in a region of the Northwest Territories which has historically received the largest number of visitors.

TABLE 2.1 CAMPGROUNDS IN THE VICINITY OF MISSION ISLAND/FORT RESOLUTION

| Campground | Jurisdiction | Nearest Highway | Number of Campsites | Picnic Sites | Drinking Water | Kitchen Shelter | Dumping Station | Available Facilities |
|----------------------|------------------------|-----------------|---------------------|--------------|----------------|-----------------|-----------------|--|
| | | | | | | | | Additional Facilities |
| 60th Parallel | Territorial Government | 1 | 12 | * | * | * | * | |
| Louise Falls | Territorial Government | 1 | 18 | * | * | * | No | |
| Whittaker Falls | Territorial Government | 1 | 5 | * | No | No | No | |
| Lady Evelyn Falls | Territorial Government | 1 | 15 | * | * | * | No | |
| Paradise Gardens | Privately-Owned | 2 | 15 | No | * | * | * | Electrical hook-ups, showers |
| Hay River | Territorial Government | 2 | 22 | No | * | * | Nearby | |
| Galena (Pine Point) | Territorial Government | 6 | 12 | * | * | No | * | |
| Pine Lake | Federal Government | 5 | 36 | * | No | * | * | Wash station, change houses, interpretive theatre, boat launch, dock, primitive campsites, group campsites |
| Fort Smith | Territorial | 5 | 8 | * | * | * | * | |
| Thebacha | Privately-Owned | 5 | 8 | No | No | No | No | |
| Little Buffalo Falls | Territorial Government | 5 | 5 | * | No | * | No | |

* Facility on site

Source: Explorers Guide 8°

It has had the advantage of being accessible by road for a number of years and, until recently, a larger proportion of tourists travelled by road than by air. The proximity of Mission Island to other already established and known campgrounds will provide a base from which some visitation will be drawn. Although no figures are available for individual territorial parks, Wood Buffalo National Park statistics indicate 889 party-nights for the 1979 operating season. The planned tours for the Mission Island/Fort Resolution area will add to the attractiveness of the campground as an overnight destination.

Mission Island will also draw on the mystique of the north. For that segment of the Canadian and American tourist market looking for unique experiences, the Territories hold a sense of adventure and unknown. There has also, in recent years, been a growth in that segment of the market looking for the ultimate wilderness experience and the last true undeveloped frontier experience. Unfortunately, most of this same market segment visit each location only once.

2.3 PROJECTED VISITATION LEVELS

2.3.1 Overnight Visitors

As shown in Table 2.2, we have projected that the initial operating season will see 415 user groups. Historically, tourist visitation to the Northwest Territories occurs in summer, more than 95% of all tourist visitation occurs in summer season. We have, therefore, assumed a relatively short three month operating season from June until August for the first

TABLE 2.2 USER ESTIMATES, MISSION ISLAND PARK

| Year | Total User (1) Groups Per Year (2) | | Type of Overnight Accommodation | | | |
|------|--|----------------|------------------------------------|--------------------|-------|-----|
| | | | Serviced Site | Unserviced Site | Cabin | |
| | Over- night | Day (3) Use | Total | | | |
| 1982 | 415 | 180 | 595 | 243 | 128 | 44 |
| 1983 | 445 | 195 | 640 | 257 | 133 | 55 |
| 1984 | 485 | 210 | 695 | 272 | 138 | 75 |
| 1985 | 525 | 230 | 755 | 287 | 143 | 95 |
| 1986 | 565 | 250 | 815 | 302 | 148 | 115 |

TABLE 2.3 ORIGIN OF VISITORS

| Year | Total User Groups Per Year (2) | Total Visitors | Market Area (4) | | |
|------|--------------------------------------|-------------------|-----------------|---------------|-------------|
| | | | Canada | United States | Overseas |
| | | | % | % | % |
| 1982 | 595 | 1,685 | 79 | 20 | Less than 1 |
| 1983 | 640 | 1,815 | 79 | 20 | Less than 1 |
| 1984 | 695 | 1,970 | 80 | 19 | Less than 1 |
| 1985 | 755 | 2,140 | 81 | 18 | Less than 1 |
| 1986 | 815 | 2,310 | 82 | 17 | 1 |

- (1) Available statistics indicate that the average user group size is 2.8 persons
- (2) During at least the first five years of operation it is anticipated that Mission Island Campground will be used from June until August. It is unlikely that a large shoulder season market will develop in the immediate future for other than cabin users.
- (3) Day-use visitors are those who visit the park for picnicing, fishing, hiking etc. and will not remain overnight.
- (4) Although all markets are expected to experience an absolute growth rate, proportionally the shift will occur towards the Canadian market, primarily for two reasons: increased energy cost and the more natural appeal of Mission Island/ Fort Resolution/Slave Delta history to Canadian tourists.

five years of operation. The number of groups from Fort Resolution **using** the park for overnight accommodation is expected to be relatively **small**. We estimate that approximately 15 of the 415 visitor groups will be from Fort Resolution. While the number of user groups for the first five years of operation at Mission Island may seem optimistically high, we believe that the amenities offered in the campground, combined with well planned tours and community-oriented events such as "meals in the home", will cumulatively act as effective drawing features.

From 415 user-groups in 1982, the total is projected to grow to approximately 565 by the end of the fifth operating season in 1986. With the proper marketing program and a correctly phased development approach, the number of user groups should increase each year. The **type** of campsite use is expected to reflect the type of tourist who would visit the Northwest Territories at the present time. For this reason, it is anticipated that serviced sites catering to recreational vehicles or camper-back vehicles will receive the highest level of use, approximately 60% in the first year. The unserviced campsites along the shore of Mission Island will capture 30% of the user groups and the cabins approximately 10%.

Although it is expected that all three types of facilities will see a continuing, but gradual increase in the number of users, the proportions are expected to change from year one through year five. Due to the uncertainty of the energy question and, more particularly the predicted increase in the cost of gasoline, we have projected that 302 of the 565 user groups in the fifth year will require serviced campsites. This represents a decrease of about 5% in

this type of campsite use. No matter what happens regarding either the availability or price of gasoline, serviced site use will continue to dominate the campground use profile. The strongest growth, however, should occur in the demand for cabin accommodation. We have projected that the proportional use of cabins will double from 10% in 1981 to 20% in 1986. The cabins should be particularly appealing for weekend use to residents of Hay River, Pine Point and Fort Resolution who desire cottage/cabin type experience without the necessity of owning one. The ability to escape the insect problem through the use of a screened-in porch or veranda should provide additional appeal.

Electric hook-ups at the serviced sites would be a desirable eventual addition. Such a facility would increase the market appeal of the Mission Island/Fort Resolution campground. At the present time, there is only one campground in the Northwest Territories providing electricity for campground use.

2.3.2 Day Use Visitors

Day use of the Mission Island/Fort Resolution Tourism facilities and programs is expected to appeal primarily to Fort Resolution residents who will use the park for picnicing, hiking and fishing. (Hunting of ptarmigan will probably also be permitted in the fall). An estimated 120 visitor groups from the settlement are expected to use the park each year for day-use purposes, these will probably be augmented by week-end users from Pine Point and other settlements within

day-trip driving distance. The numbers of these visitor groups from outside Fort Resolution has been estimated to increase from about 60 in 1982 to 130 in 1986 (Table 2.2., Col. 3).

2.4 MARKET AREA

Mission Island overnight visitors will come predominantly from the Canadian market, followed by residents of the United States and overseas respectively (Table 2.3). Beyond use by residents of the Northwest Territories, Alberta will be the dominant generator of tourist visitation. British Columbia and Ontario, in that order, are expected to be the other Canadian markets of note.

Although Mission Island and Fort Resolution will appeal to the tourist in all markets desiring a unique northern experience, the distance from travel markets will restrict the number of tourists from areas other than Alberta. The opening of the Liard Highway in 1983 will provide direct access from northern British Columbia and could increase the number of British Columbia and Yukon visitors.

Approximately 20% of the Mission Island campground users can be expected from the United States. The major portion of these visitors will come from those states bordering Alberta and British Columbia, although the type of experience available at Mission Island should also appeal to residents of Minnesota and Wisconsin. The energy questions will continue to cast doubt on the growth potential of the United States market. As a result, we expect that the proportion of visitors from the United States will slip slightly to approximately 17% or 18% of the total. We estimate that the overseas market will provide less than 1% of the total users of the campground.

The numbers of campsites and cabins which will be required to provide the estimated overnight accommodation in 1986 are: 10 serviced campsites, 5 unserviced campsites, and 4 cabins (Table 2.4).

These quantities have been taken as the basis for planning the first five years of campsite and cabin development. Expansion beyond these quantities has been provided for in the Development Concept (Figure 4).

TABLE 2.4 OVERNIGHT PARK ACCOMMODATION REQUIREMENTS,
1982 AND 1986

| | <u>Accommodation</u> | <u>Total Uses Per Year⁽¹⁾</u> | <u>Average Uses Per Day⁽²⁾</u> | <u>Design Quantity⁽³⁾</u> |
|------|----------------------|--|---|--------------------------------------|
| 1982 | Serviced Site | 243 | 2.6 | 8 |
| | Unserviced Site | 128 | 1.4 | 4 |
| | Cabin | 44 | 0.49 | 2 |
| | | 415 | | |
| 1986 | Serviced Site | 302 | 3.3 | 10 |
| | Unserviced Site | 148 | 1.6 | 5 |
| | Cabin | 115 | 1.2 | 4 |
| | | 565 | | |

(1) From Table 2.2.

(2) Assumes the tourist season is 92 days, June 1 to August 31.

(3) Three times "average uses per day" to allow for peaking on holidays and weekends; figures are rounded.

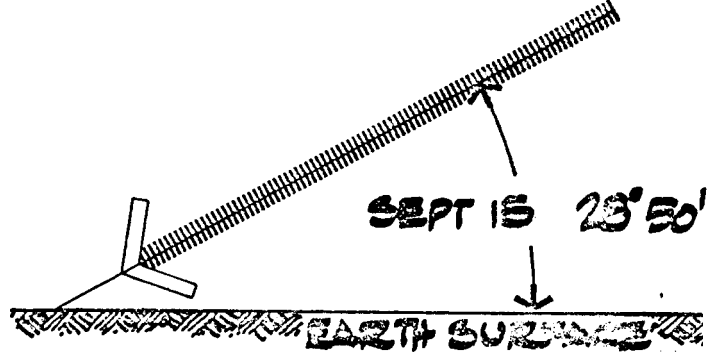
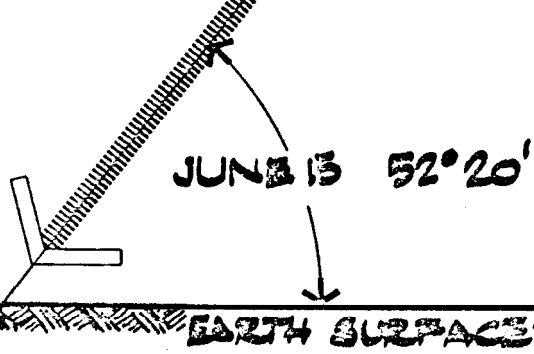
3. THE SITE AND ITS ENVIRONS

3.1 BACKGROUND

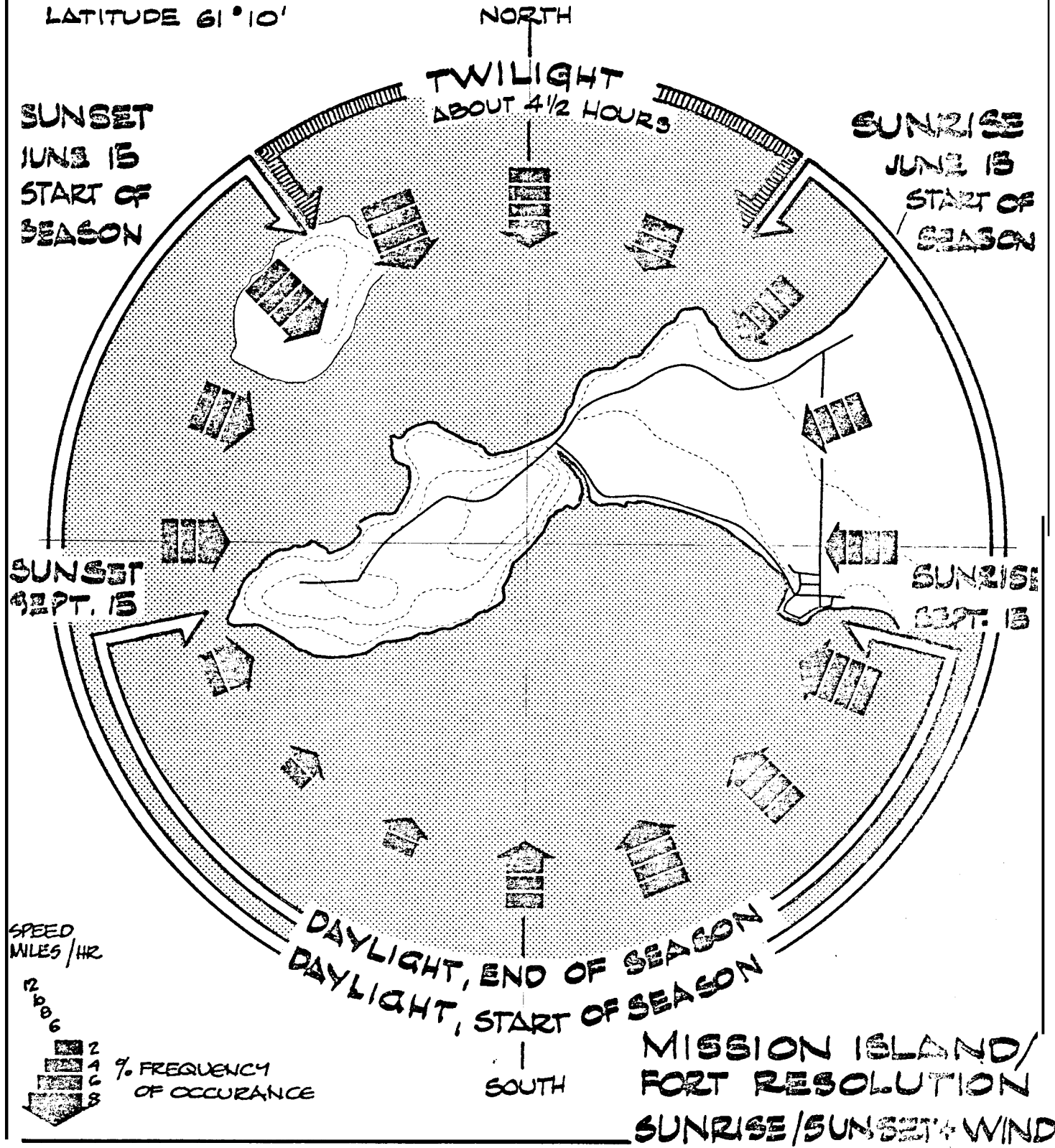
Fort Resolution and Mission Island, on the shores of one of the largest fresh water lakes in the world, are located at the mouth of the broad alluvial plain of the Slave River. More than five thousand years ago this area lay under Glacial Lake McConnell which is thought to have extended from the present Lake Athabaska to Great Bear Lake. In their strategic location at the mouth of the Slave River and on the MacKenzie River route to the Arctic Ocean, Fort Resolution and Mission Island were key stopping points for voyageurs, traders and transporters between the late 1700's and the early 1900's. Recent changes in transportation modes and travel patterns have shifted the focus of activity on the South Shore towards Hay River. This change has left Fort Resolution with a reduced role in the northern economy, but has at the same time created a tourism potential for this historic location. The island and the settlement are now somewhat separated from the main stream of primary commercial activity in the north, but the history and the expansive northern setting, together with the people and their heritage provide a sound basis for expanded tourism activity.

3.2 THE PEOPLE AND THE ECONOMY

Fort Resolution is predominately an Indian settlement, including Chipewyan and Metis, as well as a few residents of European descent. The Chipewyan are the traditional residents of this area, having



INCLINATION OF SUN
 LATITUDE 61° 10'



KUJANGI

survived near extinction during the smallpox epidemic and famine of 1782. The arrival of Europeans during the fur trade era, and inter-marriage with the French, gave rise to the Metis people of the Territories.

This settlement of approximately 520 people has an economy based on hunting, trapping, fishing and wage employment at a local sawmill and at the lead/zinc mines in Pine Point. More recently tourism has provided jobs locally and, with it, a small arts and crafts industry. The Hudson Bay Company store is still very much a part of the economy of Fort Resolution particularly as a market place for furs.

3.3 CONSTRUCTION SUITABILITY

3.3.1 Geology and Soils

Mission Island consists of a fine limestone outcrop of the Pine Point limestone formation. The surface has been fractured by weathering and wave action into layers of gravel in which the size of stones generally range from ten to thirty centimetres. Excavations for foundations will be difficult, but any type of spread footing should be satisfactory. Construction of serviced campsites on high ground (Figure 4) will also be difficult due to the undulating terrain, however this site is otherwise the best location on the island for serviced campsites (Figure 3).

The geological nature of the Island will facilitate a very fast percolation rate and surface runoff will not be of concern at any point on the Island.

The proposed new Beach Road (Figure 4) will not require drainage culverts, however excavation will be difficult and it has been assumed for cost estimates that cut and fill construction of roads and campsites cannot be fully utilized; a significant amount of fill will be required for these installations. Suitable gravel deposits for this fill are located about 10 kilometres east of the settlement and immediately north of the airport at Fort Resolution.

On the north side of the Island, west of the point, there is a low lying area which is not suitable for any form of construction; it should be left in its natural state.

3.3.2 Clearing for Construction

Tree cover on Mission Island is relatively sparse in most areas. The black spruce, which form dense clusters, will have to be selectively cleared for roads and campsites, but are not large enough to be milled and utilized for building construction. Furthermore, trees cut during clearing or slashing tend to be damaged in transportation by heavy equipment. It is recommended, therefore, that all medium and larger sized trees which must be cut on site should be stored and later used for firewood.

3. 3.3 Lake Water Levels

For the purposes of this study the water level of Great Slave Lake has been taken as 513 feet (156 metres) ⁽¹⁾. Wind induced wave action does not exceed two feet. Roads and campsites near the water's edge should therefore be established at least one metre above the lake waterlevel and buildings should be built at least two metres above the lake water level.

3.4 CLIMATE, VEGETATION AND VIEWS

The climate of Mission Island and Great Slave Lake is classified as northern continental. The winters are long and cold and the summers short and warm with low annual precipitation. Figure 2.1 "Sunset, Sunrise and Wind" indicates the inclination of the sun, the sunset and sunrise and the frequency of occurrence and direction of winds for the summer tourist season. The sun is never directly overhead during the summer and by September the inclination is approximately 28 degrees. The long hours of sunlight, approximately 19.5 hours, and short twilight nights during the summer, contrast sharply with the shorter days of the fall. The prevailing winds are from the northwest and southeast throughout the tourist season. Furthermore, the climate of the south shore communities is moderated by Great Slave Lake, the fifth largest lake in North America.

(1) There are unresolved discrepancies in existing data on lake water levels. National Topographic maps and hydrographic maps give the level as 513 feet, whereas other sources range from 495 feet to 518 feet. The official level given by the Federal Department of Public Works is 515.9 feet (157.2 metres). For the purpose of this study, we have taken 513 feet (156 metres) as the design water level because it conforms best with available land contour information.

In the MacKenzie lowlands the white spruce forest stretches across the south shore of Great Slave Lake as far east as the Slave River. Abundant growth is evident in the delta area and on the rich alluvial soils of the numerous river banks. The lands east of the Taltson River, in the pre-cambrian zone, are part of the Jack Pine Forest area and have ground species of bear-berry and extensive lichens.

The expanse of Great Slave Lake, the sweeping shoreline of Resolution Bay, the starkness of the Shield and the forests of the lowlands, convey to the visitor the remarkable northern vastness sought by travelers.

3.5 FISH AND WILDLIFE

Wildlife habitats at Mission Island in the MacKenzie lowlands contrast sharply with those of the Canadian Shield. The rugged Precambrian area, 100 km to the east of Mission Island is the home of upland game and the scattered deep lakes and fast flowing rivers are renowned for their abundance of fish. Similarly numerous birds and animals inhabit the wooded lowlands with their broad marshes, many streams and shallow lakes.

Resolution Bay is a lucrative area for local fishermen, and hunting and trapping are carried on inland away from the settlement. In the immediate vicinity of the park and the settlement predatory birds and small game are still common.

The values, customs, beliefs of people are central to understanding their history, culture and traditions., The Chipewyan were the largest of the four tribes that inhabited the MacKenzie lowlands at the time of the arrival of the first explorers. They lived a nomadic life following the caribou through the lowlands and the sparse Shield. A guardian spirit and the belief in a future state after death were their guiding beliefs.

The arrival of the Eurpoeans, intermarriage with the French, near extinction by the smallpox epidemic in 1782, and the fur trade, altered the traditional life-style of the Chipewyan dramatically. Today in Fort Resolution one finds a community of Dene, Metis and Europeans, three peoples of diverse backgrounds working together to resolve the contemporary challenges of land rights, community management and employment.

4. DEVELOPMENT PLAN

4.1 CONCEPT (Figure 4)

The principal components of the development concept are:

- visitor accommodation on the Island consisting of serviced campsites, unserviced campsites and cabins,
- an Island Picnic Area at the historic Mission site,
- a Registration Centre combined with accommodation for the Park Supervisor and adjacent to a maintenance compound,
- an Information Centre at a central location in Fort Resolution,
- an Interpretive Centre (Heritage Centre) in Fort Resolution, and
- a system of roads and walking trails.

Other elements included in the concept are a lookout at a high point on the Island, historic locations of the early mission, trading posts, lime kilns, and the Snye.

4.1.1 Serviced Campsites

The recommended location for the first serviced campsites is a high, relatively level site where there are fine vistas to the north, where prevailing

breezes will minimize insect problems, and where black spruce groves are far enough away to further reduce insect problems. In addition, the selected location can be made readily accessible to large recreation vehicles, at reasonable cost and with minimum tree removal.

The proposed site will contain ten individual sites suitable either for tents or recreation vehicles. An expansion area for nine or ten additional individual sites is included in the area shown on Figure 4. Centrally placed within the area will be a wash-house with drinking water, toilets, showers, washbasins and laundry tubs (Figures 5.4 and 5.5) . All sites will be designed so that trailers will not have to be backed-up.

4.1.2 Unserviced Campsites and Cabins

The south shore, near the tip of the island, provides the best terrain and views for lakeside campsites and cabins. Because the land rises steeply near the shore, the space available for campsites is relatively narrow and the sites must be arranged in a chain-like fashion along the road. Clusters of three or four sites are recommended, with a pair of pit toilets for each cluster. All sites should be designed so that trailers will not have to back-up.

4.1.3 Picnic Area

The approximately 11 hectare former Mission site has been used by Fort Resolution residents for many years as a picnic area. It is proposed that this

use be continued, provided that approval is obtained from the parishioners. We recommend that a fence be erected around the cross and grave yard, that vehicles be parked outside the picnic area and that a number of picnic tables and fireplaces be provided as well as a dock for small boats.

4.1.4 Registration Centre, Park Supervisor's Residence and Maintenance Compound

To control the use of the park and to collect park-user fees, the Park Supervisor and park registration should be located near the park entrance. A high, relatively level area, with good views of the lake and about 500 metres west of the Snye, has been selected for these uses. Figure 5.3 illustrates a recommended layout for the facilities including a nearby maintenance compound, parking for staff and visitors and an expansion area for a possible future Park Interpretive Centre.

4.1.5 Information Centre

The Mission Island/Fort Resolution tourism project is based on a well-integrated system of services, tours, accommodation and interpretive programs which will operate on the Island, in the settlement and in the surrounding region. For such a broad-based project, the Information Centre must be located at a focal point in the settlement which will be easily found by first-time visitors. A location on the main east-west road near the spire of the Roman Catholic church, has been selected. All visitors who enter the community by road must pass this location. It has the added advantage of being

adjacent to the Arts and Crafts Centre, the G. N. W.T. office and the Settlement office. Furthermore, when standing in front of the proposed Information Centre and looking directly westward along the road, one sees, across the bay, the old Mission building and the cross. These markers will immediately orient visitors and point the way to Mission Island (Figures 5.1 and 5.2).

4.1.6 Heritage Centre

The old Mission House and residential school next to the Roman Catholic church is currently not used and it is proposed that this building be converted, if feasible, into an Interpretive Centre for the tourism project. The centre would display artifacts, documents relevant to the history, economy, natural features, geology and physiography of the area in order to stimulate visitors to lengthen their stay and to explore the region more fully.

4.1.7 Roads

4.1.7.1 Beach Road

The present road to Mission Island is a long, circuitous route around the airport, past the community garbage dumps and through gravel pits. Although it will be an expensive project, we recommend that a new road be built along the shore of the bay to the north end of the Snye where it will join the existing road to the Island. The proposed new road has the following advantages over the existing route:

- from the Information Centre, visitors enroute to the campsites will simply follow the edge of the bay directly to the Snye; with careful clearing

of trees, the Island and the bay will be continually in view and visitors will not become disoriented;

the quality of views will be far superior to those on the existing route around the airport;

because of the adjacent forest and views of the lake, visitors will feel that they have entered the park within a few moments of leaving the Information Centre.

4.1.7.2 Island Road

Island Road will connect Beach Road to the serviced campsites. It will be a two-lane road following, quite closely, the alignment of the existing trail along the crest of the Island.

4.1.7.3 Mission Road

Mission Road will be a two-lane road following the alignment of the existing trail to the Mission site, and terminating in a cul-de-sac outside the picnic area and adjacent to a parking lot for about 10 cars.

4.1.7.4 Shoreline Trail

Shoreline Trail will be a one-way road with widenings at intervals to allow vehicles to pass. The trail will be relatively narrow and will be designed to reflect the natural qualities of the forest and lakeshore (Figure 5.7).

4 .1.8 Walking Trails

A number of trails exist on the island and these have been incorporated on the plan into an expanded system of trails linking all focal points (Figure 4).

4.1.9 Lookout

There is a natural sand and gravel hill at a high point on Island Road, about midway between the Serviced Campsites and the Registration Centre. A viewer can see long distances in all directions from this location and it is proposed that this site be identified with a tall directions marker pointing to such features as the Delta, Moose Deer Island, East Arm, Hay River, Yellowknife, Fort Resolution etc. The site should be designed to appeal to visitors as a campfire area from which the sunset - sunrise can be viewed.

4.1.10 Historic Locations

The Mission site and old log building on the south shore, the remains of lime kilns and the sites of early trading posts of the Hudson Bay Company and the North West Company on the north shore, and the Snye, are points of historic interest, all of which require further research and all of which must be carefully preserved or redeveloped. The approximate locations of the sites are indicated on Figures 2 and 4.

4.1.11 Overview of the Concept

The principal components of the plan as described in Sections 4.1.1 to 4.1.10 are the camping area, the picnic area, the Settlement and the road system.

By placing the camping area at the extreme west end of the island, touring visitors will be able to take maximum advantage of the northern setting and the lake without interference from visitors who have come to the island for a picnic.

The importance of the Settlement as an integral part of the plan cannot be overstressed. In terms of visitor **experiences**, the Settlement is just as important as developments on the Island. The quality of landscape, views and wildlife on the island are not particularly **unusual**, and **will** probably not cause visitors to extend their visits. The key elements for attracting people to the area will be the tours and programs, the quality of the Settlement and, most of all, the people of Fort Resolution.

4.2 COMPONENTS OF THE PLAN

This section presents detailed planning information on the various components of the plan. The material has been prepared in check-list form, primarily as a guide for architects, designers and engineers who will prepare the detailed designs.

4.2.1 Information' Centre (Figures 5.1, 5.2)

First point of direct contact with the tourism project by in-coming visitors.

Must be easy to find and readily identifiable.

Parking should be provided, nearby, for at least 5 vehicles.

The Centre should be closely integrated with the existing Arts and Crafts Centre and the proposed Heritage Centre⁽¹⁾.

The Centre will be the distribution point for information on accommodation, meals, tours, interpretive programs and sources of supplies.

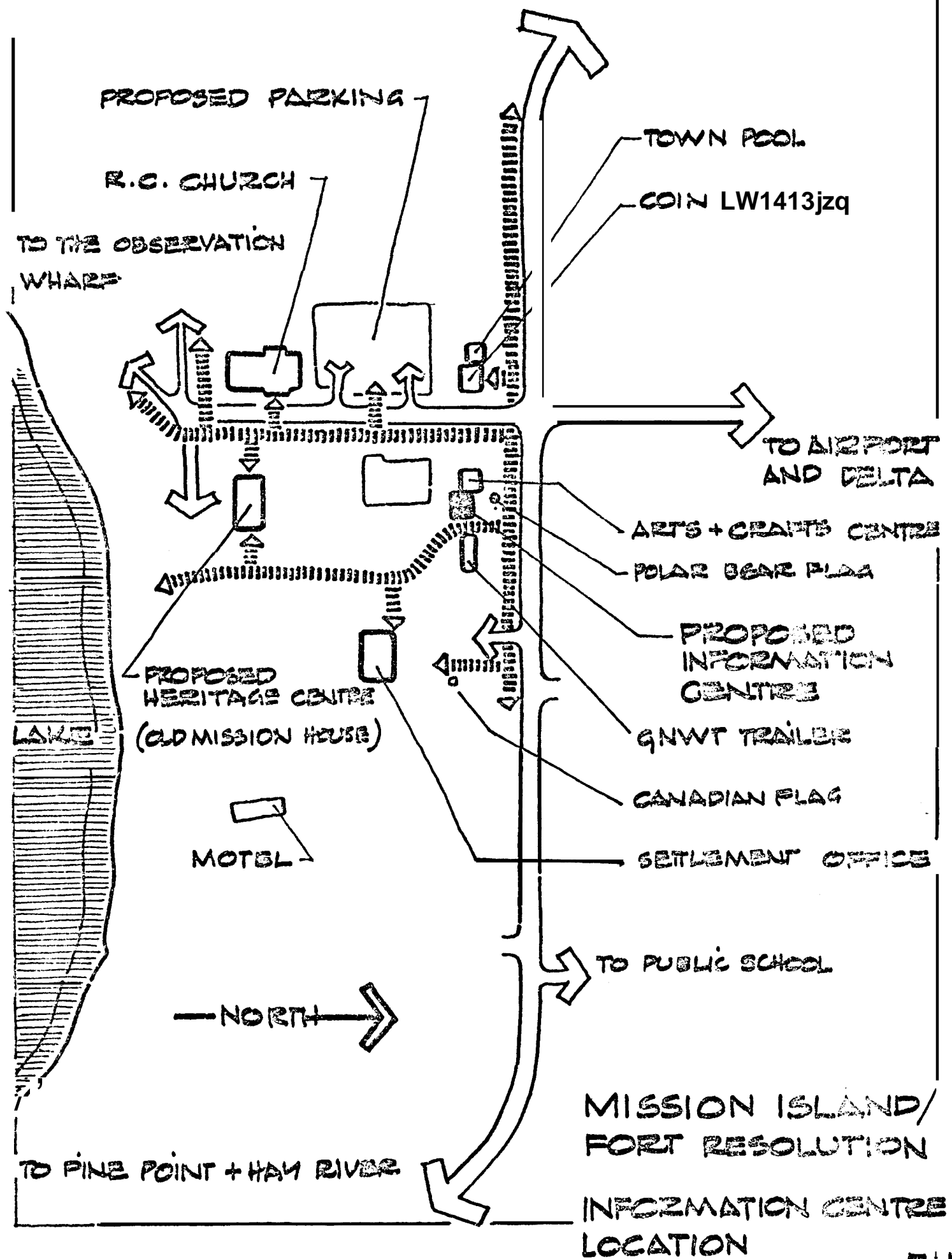
Tour organization, tour co-ordination and tour ticket sales will be managed from the Centre.

Staff: 1 seasonal employee

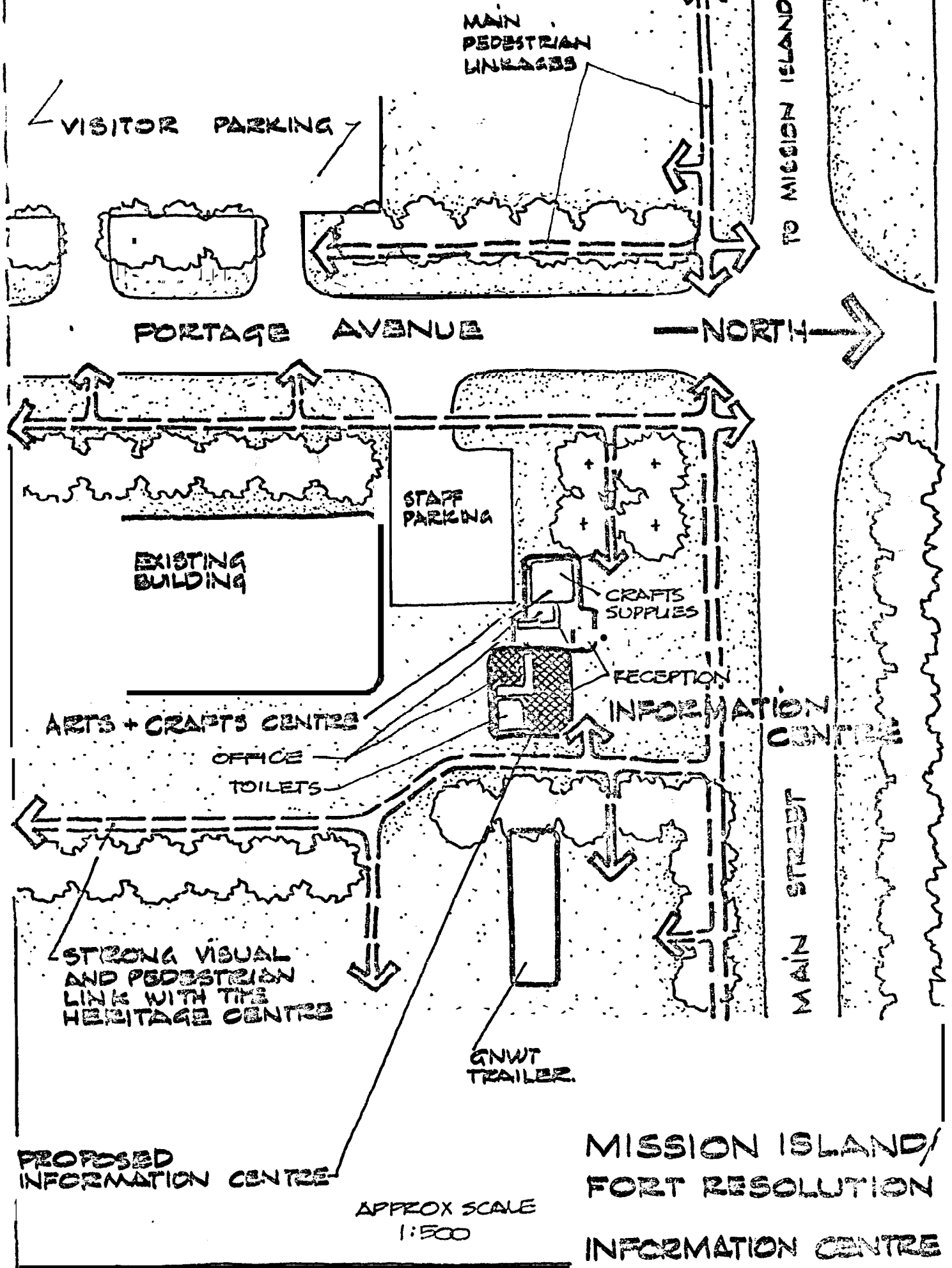
Specific Requirements:

| | |
|-------------------------|-------------------------|
| . office | 10 m ² |
| . reception and display | 20 m ² |
| . toilets | 5 m ² |
| . entry | 2 m ² |
| Total | 37 m² |

(1) To provide for closer integration and possible staff interchange between the Arts and Crafts Centre and the Information Centre, a rearrangement of the interior of the Arts and Crafts Centre is recommended as shown in Figure 5.2.



KF JAN. 81



- . electricity
- . telephone
- . water storage
- . sewage holding tank

4.2.2 Heritage Centre

- For display and interpretation of items of historical significance in Fort Resolution/Mission Island/Slave Delta region. Displays of local collections of historical material, artifacts, pelts, equipment, geological and cultural data.
- Conversion of existing space in the Mission House (adjacent to the Roman Catholic Church), may be feasible and should be carefully evaluated.
- Strong visual and pedestrian links to the Information Centre and Arts and Crafts Centre are desirable.

- Staff: 1 part-time, seasonal employee

- Specific Requirements:

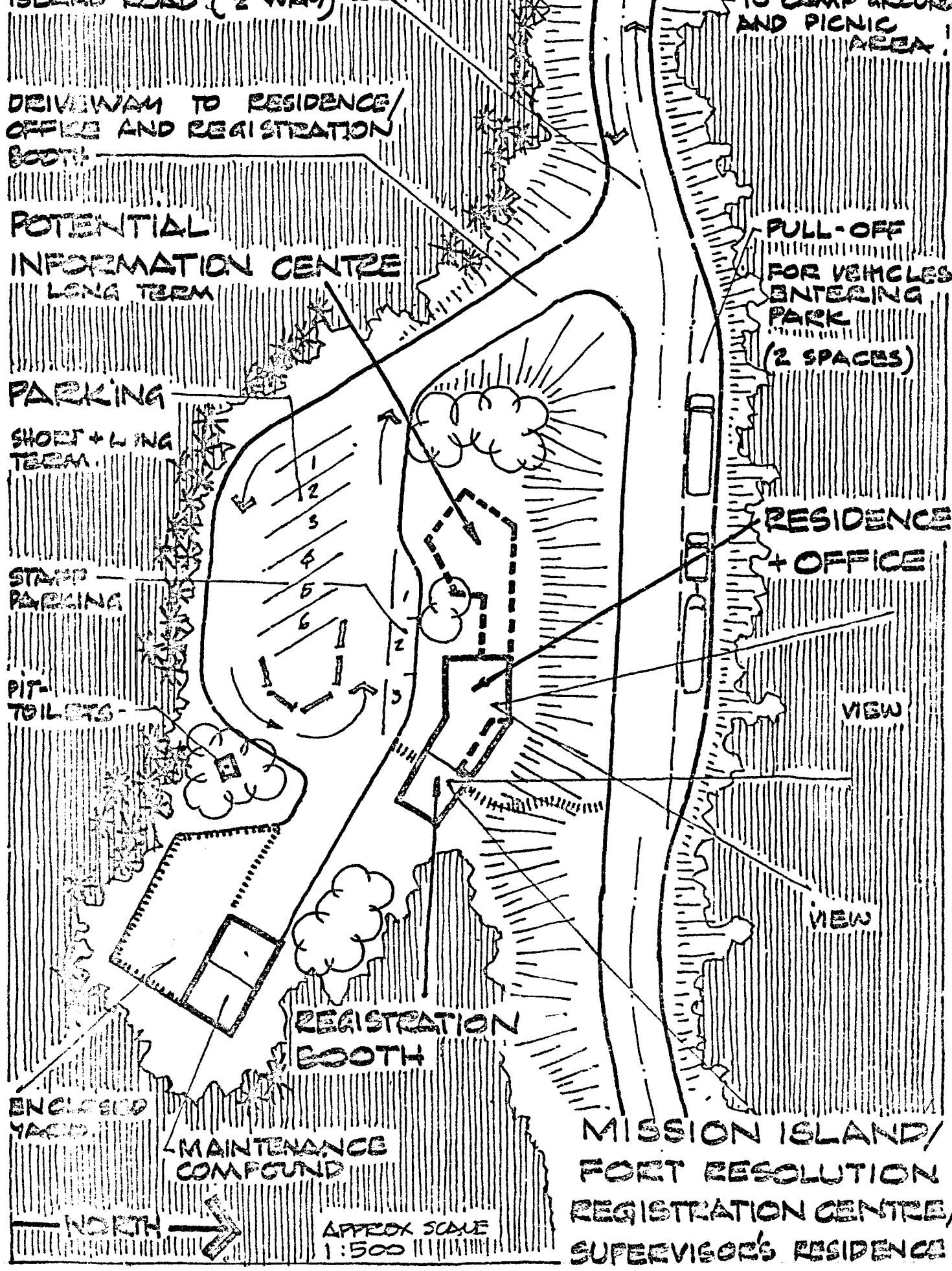
| | |
|--|--------------------------------|
| . display area | 50 m ² (expandable) |
| . assembly area for tour groups, including school groups | 50 m ² |
| . reading room | 35 m ² |
| . office, storage and workspace | 20 m ² |
| . toilets | 5 m ² |
| . circulation space | 10 m ² |
| | <hr/> |
| Total | 170 m ² |

- . electricity
- . telephone
- . water storage
- . sewage holding tank

4.2.3 Registration Centre "a"n"d" Park Supervisor's Residence

(Figure 5 .3)

- Point of control for Mission Island Park facilities.
- Highly visible and accessible directly from the Island Road as well as from a loop drive at the rear.
- Adjacent to Maintenance Compound.
- Expansion area for possible future Island Interpretive Centre.
- Staffed by one person, possibly with family.
- Specific Requirements:
 - registration area 25 m²
 - supervisor^s residence:
including living/dining,
kitchen, bedroom, sleeping
loft, toilet, storage, screened
verandah 100 m²
 - propane lighting
 - radio-telephone
 - water storage
 - sewage holding tank
 - visitor parking (3 vehicles)
 - pit toilets (2) for visitors



4.2.4 Maintenance Compound (Figure 5 .3)

- Storage and repair facilities for park vehicles and equipment.
- Near Park Supervisor's Residence.
- Parking for staff (3 vehicles) and long-term parking for tourists (at least 5 vehicles).
- Screened by planting.
- Staffed by seasonal maintenance personnel.
- Specific Requirements:

| | |
|---|--------------------|
| . vehicle garage | 40 m ² |
| . tool shed and maintenance shop | 30 m ² |
| . boat storage | 30 m ² |
| Total | 100 m ² |
| | |
| . fenced compound for storing tables, pit toilets, signs, fill and gravel | 100 m ² |
| . propane lighting | |
| . pit toilet (1) | |

4.2.5 Lookout

- This mound, at a high point on the Island, affords views of the lake, adjacent islands, Fort Resolution and the Delta and provides an ideal location for viewing the sunset-sunrise.
- Filling and grading are required to rehabilitate the mound.
- A tall directions-marker should be installed to identify the site and the points of interest in the distance.

- Selective clearing is required to enhance the views.
- A camp fire area **should** be established from which the sunset - sunrise can be seen.
- Parking should be provided for 5 vehicles, near but not immediately adjacent to the site.
- A pit toilet and litter bin are required.

4.2.6 Serviced Campsites (Figure 5.4)

- Located on high, relatively level ground with views of the lake; exposed to breezes and away from spruce groves to minimize effects of mosquitoes and black flies.
- 8 sites required in 1982; 10 sites in 1986.
- All sites accessible by car and **useable** by either tents or recreation vehicles.
- Each site within about 50 **metres** of the wash house.
- Circulation system to accommodate trailer movements without backing up.
- Trailer pump-out on Island Road about 500 **metres** from the campsites.
- Selective clearing for campsites and vistas.
- Grading and installation of pads for tents or recreation vehicles.

POSSIBLE FUTURE
CAMP SITES

ONE WAY
LOOP ROAD

VEGETATION BUFFER
BETWEEN CAMPSITES

PATHWAYS
TO THE
SERVICE AREA

LEVEL
CAMP SITES

MAINTENANCE ACCESS

SERVICES
AREA :

DRINKING WATER
HOT + COLD SHOWERS
TOILETS
WASH BASINS
OUTSIDE
WASTERS.

CAMP SITES

WALKING DISTANCE
BETWEEN CAMP-
SITES AND SERVICES
AREA IS ± 75M

NOTE :

THIS ILLUSTRATION
IS PICTORIAL
ONLY, ACTUAL ROAD
ALIGNMENTS AND
CAMPSITE LOCATIONS
WILL BE SELECTED
ON SITE DURING
DETAILED DESIGN AND
CONSTRUCTION STAGES.

TO TRAILER PUMP OUT

APPROX.
SCALE
1:2500

ISLAND ROAD

— NORTH —

MISSION ISLAND/
FORT RESOLUTION

SERVICED CAMPSITES

SHOWER AND CHANGE AREA (BENCH + HOOKS)

WASH BASINS AND COUNTER SPACE

TOILETS + URINAL*

DRINKING WATER

ROOF OVERHANG TO SHELTER THE ENTRANCE.

POSSIBLE EXPANSION

WASH TUBS.

ENTRANCE

WATER SUPPLY

MAINTENANCE AND STORAGE SPACE

TOILETS

SHOWER AND CHANGE AREA

WASH BASINS + COUNTER SPACE

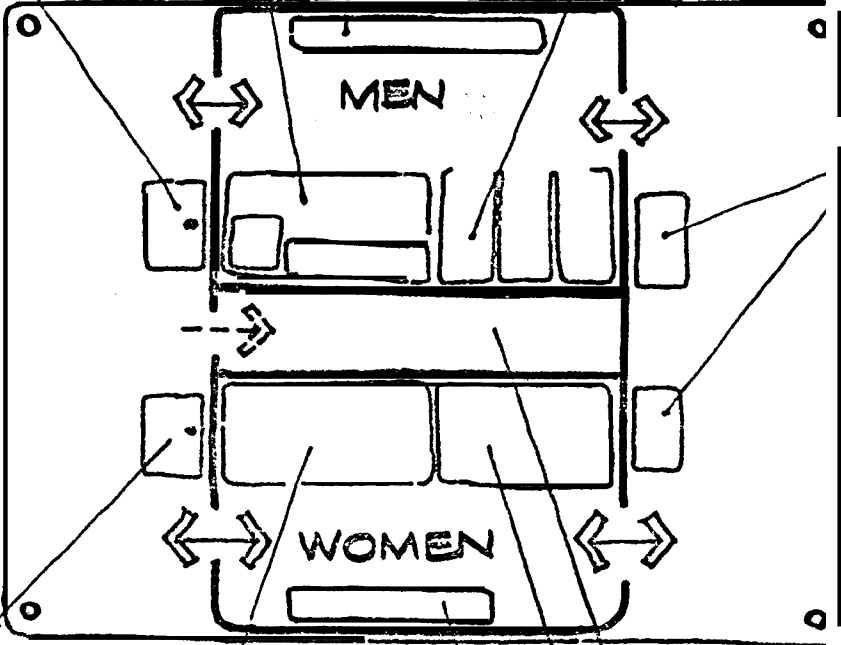
NOT TO SCALE

NOTE * URINAL MAY BE SUBSTITUTED BY A TOILET FOR EASE OF MAINTENANCE + HYGIENE.

MISSION ISLAND/
FORT RESOLUTION

HOT WATER SUPPLIED BY SOLAR HEAT AND/OR PROPANE GAS.

WASH HOUSE

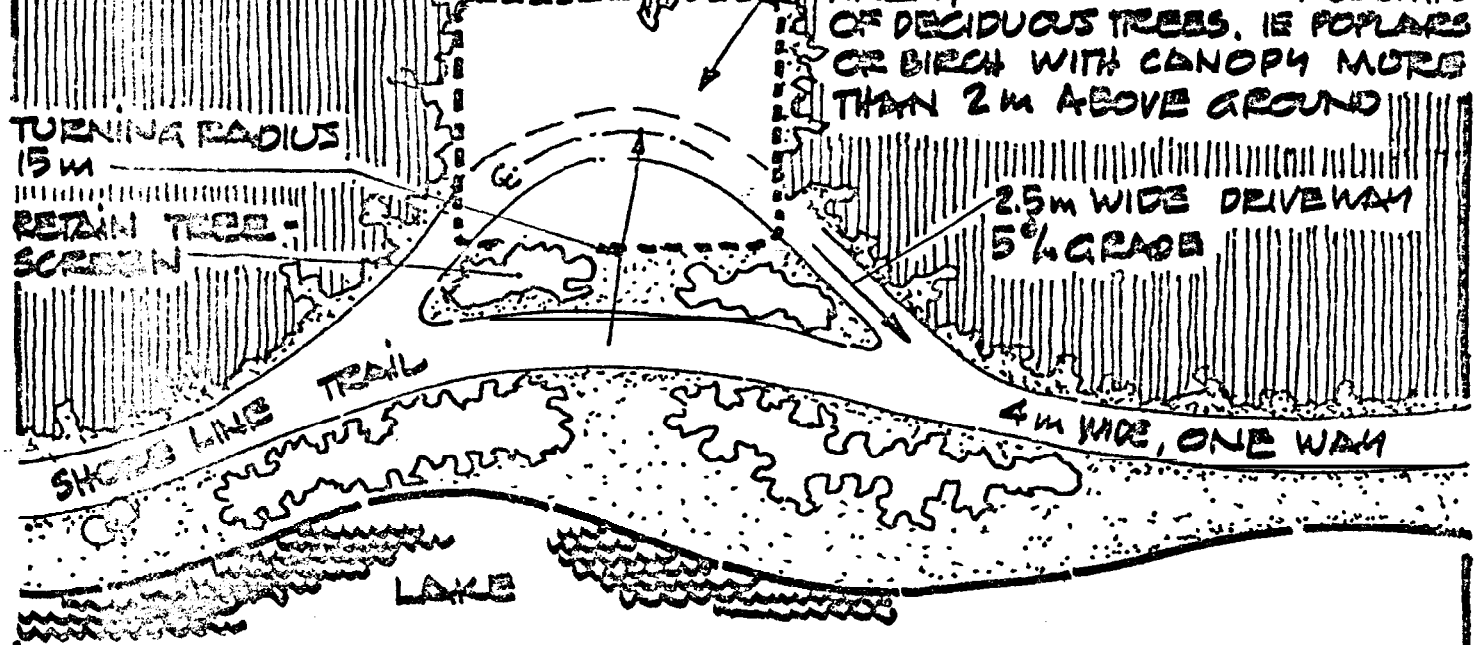


4.2.7 Wash House (Figure 5.5)

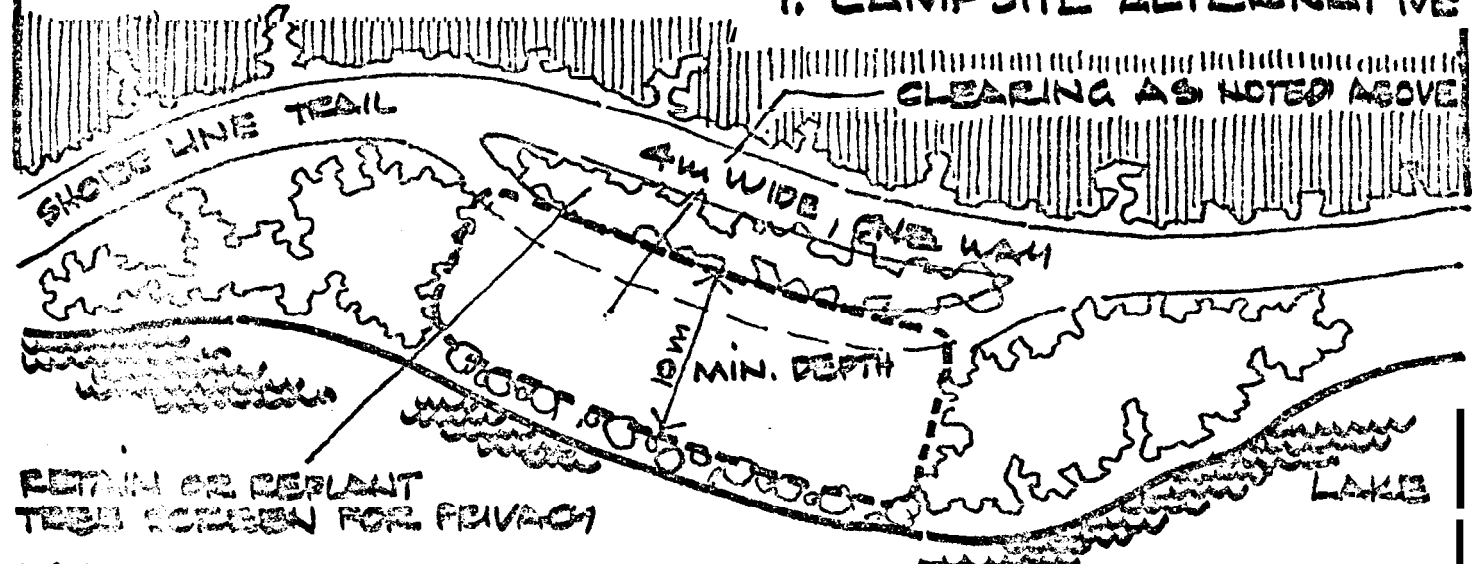
- Road access for service vehicles.
- Central location in serviced campsite area.
- Estimated maximum demand: 28 persons initially.
- Solar heat incorporated, if feasible, for heating shower water.
- Specific Requirements:
 - . drinking water supply
 - . 1 male and one female wash house each with 2 WC's, 2 showers, 2 lavatories (2 x 15 m²) 30 m²
 - . exterior wash tubs (roofed)
 - . firewood enclosure
 - . water storage (hot and cold)
 - . propane heater and solar panels
 - . sewage holding tanks (separate tanks for gray water and sewage)

4.2.8 Unserviced Campsites (Figure 5.6)

- Located on Shoreline Trail close to lake edge.
- Accessible by car on a one-way road (Shoreline Trail) .
- All sites useable by tents or recreation vehicles.
- Circulation system to accommodate trailer movements without backing up.
- 4 sites required in 1982; 5 sites in 1986.
- Selective clearing of campsites.
- Grading and installation of pads for tents and vehicles.
- Possible future water tank to serve all shoreline sites, including cabins.
- Pit toilets (2).



1. CAMPSITE ALTERNATIVE



2. CAMPSITE ALTERNATIVE

NOTE:

CAMPSITE GRADE NOT TO EXCEED 4%.

PARKING/DRIVEWAY GRADE NOT TO EXCEED 5%.

TURNING RADIUS ON DRIVEWAYS 15m MINIMUM.

LOCATE CAMP SITE NOT CLOSER THAN 25m TO EACH OTHER (BUTTER = 25m)

- CAMP SITE CONTENT :**
- MAX. 50m² TENT FLD,
 - PICNIC TABLE
 - FIRE PLACE
 - GARBAGE CONTAINER
 - PERMIT POST
 - AREA FOR HANGING SLEEPING BAGS

APPROX SCALE 1:500

**MISSION ISLAND/
FORT RESOLUTION**

UNSERVICED CAMP SITES

4.2.9 Cabins (Figure 5.6)

- Located on Shoreline Trail, close to the lake and accessible by car (one-way road).
- Each cabin contains 4 sleeping bunks, wood stove, and counter.
- Specific Requirements:
 - . living/dining/kitchen area 15 m²
 - . sleeping areas: 2 x 7.5 m² 15 m²
 - Total 30 m²
 - . screened verandah 10 m²
 - . pit toilets (2 pairs)
 - . Selective clearing and site preparation

4.2.10 Picnic Area

- Enhancement of original Mission site as a day-use area, primarily for residents of Fort Resolution and Region.
- Specific Requirements:
 - . parking for ten vehicles outside picnic area
 - . refurbish Mission structure and the cross
 - . fence graveyard and cross area and consider correcting the date on the marble placque from 1852 to 1856
 - . explanatory signs
 - . picnic tables (10)
 - . fireplaces (10)
 - . dock
 - . children's play equipment constructed of local material and in keeping with the overall park motif (simple wooden structures)
 - . litter bins (5)
 - . pit toilets (1 pair)

4.2.11 Signs

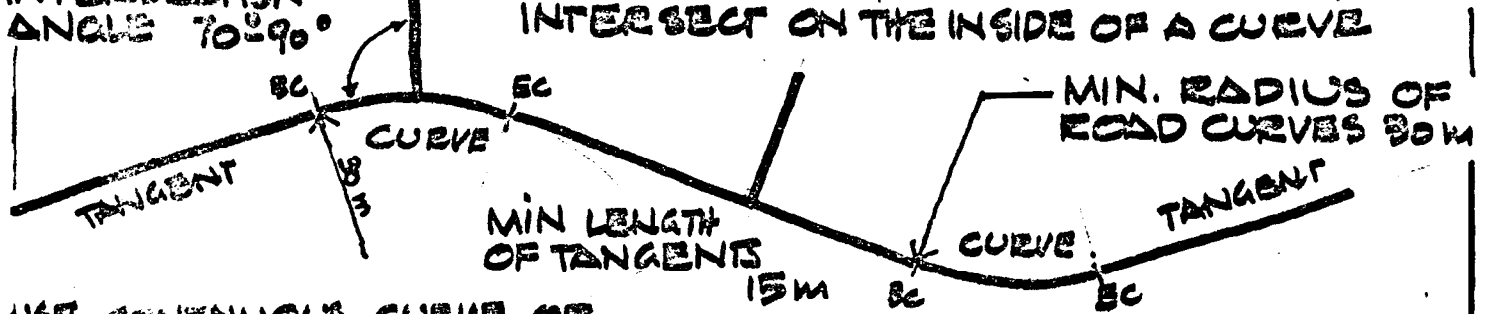
- All signs must be consistent with the Mission Island Park motif and take into account the availability of **local** skills and materials.
- A few large signs will be required for the main entrance and for information or interpretive purposes (5 signs).
- A large number of smaller signs will be required for directions, identification of facilities and names of roads and trails (35 signs).

4.2.12 Roads (Figure 5.7)

- Beach Road (2.5 km) 2-lane
- Island Road (3 km) 2-lane
- Shoreline Trail (4 km) 1-lane, one-way
- Mission Road (0.6 km) 2-lane, cul-de-sac
- Trailer pump-out 500 m.west of Serviced Campsite.

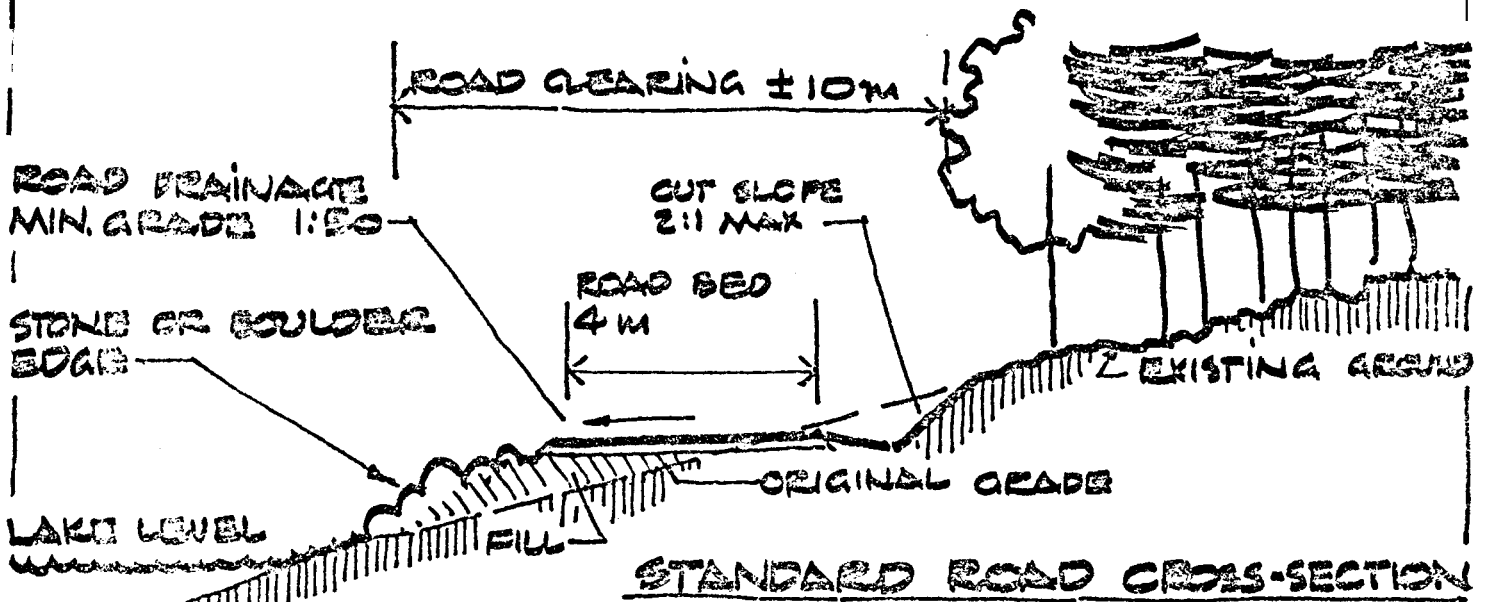
4.2.13 Walking Trails

- 2 ft. to 3 ft. wide (approximately 7 km)
- Litterbins at key points where they will not be otherwise provided for campsites or picnic area (6 such extra bins will probably be required for the trails)

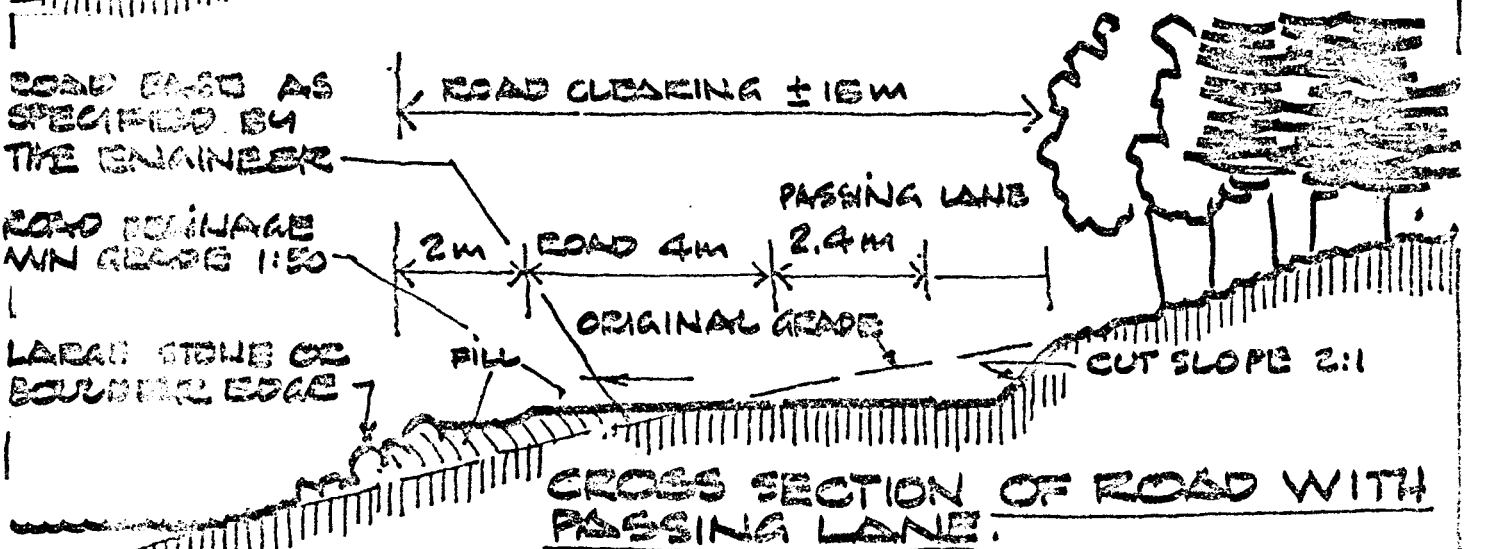


USE CONTINUOUS CURVE OR CURVE-TANGENT SYSTEM ONLY, FOR THE ROAD LAYOUT ON THE ISLAND

HORIZONTAL ROAD GEOMETRICS



STANDARD ROAD CROSS-SECTION



CROSS SECTION OF ROAD WITH PASSING LANE.

NOTE: PASSING LANES TO BE NOT CLOSER THAN 300 METERS. LOCATIONS TO BE SELECTED ON SITE BY THE ENGINEER.

MISSION ISLAND/
FORT RESOLUTION

ROAD DETAILS

4.2.14 Snye Redevelopment

- A feasibility **study** is required to determine whether this important historic element can be reopened at a reasonable cost, for canoes and scows. Use of the dredged material for roads, trails and tent sites will be an important factor in this analysis.
- A wooden bridge which conforms with the overall Mission Island Park motif should be constructed to establish a handsome entry feature to the park.

4.3 DESIGN MOTIF

4.3.1 Introduction

The recommended design motif for man-made work at Mission Island Park and for complementary tourist facilities in Fort Resolution derives from two basic principles. Firstly, all man-made works should complement the existing features of the island and the town. Secondly, the works should utilize, to the best possible advantage, materials indigenous to the region and should take maximum advantage of the skills of local builders and craftsmen.

A simple design vocabulary including wood, glass, shingle, and stone can accomplish both of these objectives in a natural and appealing manner, particularly if a consistent design expression and harmony are maintained in all structures including buildings, signs, picnic tables, benches, retaining walls, bridges, fences and bollards. Such a unified design approach will aid in relating elements which differ in size or function, and will present a cohesive and memorable image of the Mission Island/Fort Resolution tourism project within the context of local historic traditions. The following sections present a recommended design vocabulary with respect to form, siting, materials, colour and texture - the essential ingredients of an architectural expression or motif.

4.3.1.1 Form

All buildings, signs, tables etc. should clearly relate to one another, and all elements of the tourism project should form a family of elements

with a unique architectural expression. That is, they should be derived from a common generic base. which allows for ready extension to new structures or elements which may be added at a later date. Details of this architectural expression will be worked out during the design and working drawing stage of the project, but at this time a number of underlying principles can be established. The following design guidelines are recommended for each building, structure or element:

1. Simple, carefully proportioned geometric forms which blend with the surrounding landscape or townscape.
2. Low, horizontal panels of wood, stone, glass, and shingle combined in wall and roof panels. This theme should be reflected in harmonizing forms of tables, pit toilets, litterbins, fences etc.
3. Relatively few building appendages.
4. Straight forward detailing of materials.

4.3.1.2 Siting

The location and siting of each element should achieve close integration with the surrounding landscape. Balancing this requirement, however, is the need for visibility. Visitors will be generally unfamiliar with the area and will require readily visible landmarks for orientation. Public facilities should therefore be visibly apparent and prominent but not obtrusive. Surrounding foliage should be thinned,

but not cleared. In keeping with the suggested horizontal expression, the ground plane should be brought up to the building face with no apparent separation between **the** building and its site. Where a less prominent expression' is desired" the grade should be brought part way up the building face. At **all** times, the undulating terrain of Mission Island should be maintained, or emphasized, in the siting of facilities.

4.3.1.3 Materials

The abundance of sawn spruce timber from the Fort Resolution mill coupled with the extensive traditional use of spruce logs in the region, make sawn logs the ideal building material for new tourism and parks facilities. However, Particular design attention **will** be required in order to adapt this material, in a consistent manner, to the requirements of **buildings and** facilities of various sizes and. functions.

The traditional difficulty in load bearing log construction arises from the introduction of doors and windows. Working around these apertures is time consuming; furthermore the apertures introduce problems in stability due to irregular shrinking and settling of the **logs**. Nevertheless, openings will be needed in proposed buildings in order to capitalize on the attractive natural setting, pleasant views and vistas. Furthermore, the amount of natural light within buildings should be maximized. Most facilities should therefore contain a relatively high percentage of light apertures. This will not cause a serious heat loss problem, because most of the buildings will be

used only during the summer months. Such openings would be protected from vandalism by permanent heavy wooden shutters closed during the winter. For summertime protection decorative screens would be incorporated into the aperture designs.

To overcome the weaknesses introduced by windows and doors in traditional log buildings, and to provide for plenty of natural light and view potential, it is proposed that the new tourism and park facilities at Mission Island and Fort Resolution utilize sawn logs combined into load bearing panels rather than as individual members. The size and proportions of the panels would vary with the size and function of the facility, while wall and roof enclosures would consist of glass, shingle or stone.

This approach would lend itself well to **on-the-ground** prefabrication and rapid erection. It would utilize plentiful local material in a simple manner leading to economical construction methods.

4.3.1.4 Colour and Texture

Muted grey - brown stains are recommended as the best means of achieving harmony with the local setting, particularly on the Island. It is recommended that wood be installed with a rough-sawn, matte finish.

4.4 INTERPRETIVE PROGRAM

4.4.1 Introduction

The interpretive program will be an essential ingredient in the Mission Island/Fort Resolution project and has been designed to induce visitors to prolong their stay. The following sections outline an interpretive program designed to take full advantage of the natural and cultural attractions of Mission Island, Fort Resolution and the Great Slave Lake region.

4.4.2 Objectives and Program Concept

The objective of the interpretive program is to assist visitors to recognize, appreciate and enjoy the diverse natural and cultural components of the community, the park and the surrounding region.

The program should be based on the following themes:

- . Community Life;
- . Human History and the Economy;
- . The Northwest Frontier;
- . Physiography and Geology;
- . Wildlife and Vegetation and
- . Climate, Astronomy and the Seasons.

Each theme should be presented by making the fullest possible use of a variety of presentation techniques including:

- . Brochures, maps and information folders for use on guided and self-guided tours.
- . Tours, tour guides and outfitters stationed in Fort Resolution who would accompany groups on guided tours, provide advice on unguided tours and rent equipment including boats, and camping and/or fishing gear.
- . An Interpretive Centre containing interpretive displays, facilities for slide and film presentations, sales area for books, slides and pictures, and a reading room.
- . Walking trails and tour routes.

In addition, special approaches to interpretation may be required for selected subject areas. These could include:

- . Guest speakers e.g. a trapper to discuss his experience,
- . Log building construction demonstration,
- . Trapping equipment, scows, barges and dog sled exhibits and
- . Scale models of historic settlements.

Many additional ideas for special approaches will probably be added as the program develops. One of the guiding principles in making these additions

should be to establish a high sense of immediacy and personal involvement of the visitor. First hand, interpersonal contact with the attractions and subjects of interest should be continuously introduced into the program in a creative manner.

4.4.3 Interpretive Programs

Each program theme is described below in terms of underlying principles. Section 4.4.4 incorporates these themes in eleven tours, originating from Mission Island Park of Fort Resolution.

4.4.3.1 Community Life

Underlying Principles:

The settlement of Fort Resolution grew after the establishment of the Hudson Bay Company store in 1786. The present settlement name was adopted in 1821 at which time the Hudson Bay Company and the Northwest Company amalgamated.

Today Fort Resolution is largely a Métis and Dene community with both status and non-status Indians as well as residents of European descent. The settlement currently has a population of 521 residents many of whom are dependent upon trapping, fishing and employment at the local sawmill and nearby Pine Point Mines. The closest community is Pine Point, 26 km. to the south-west on an all-weather road. The airport, located to the north of the settlement is a scheduled stop-over twice a week for flights from Yellowknife serving the communities on the south shore of Great Slave Lake (Pine Point, Hay River and Fort Resolution).

Special Approaches:

Tour 1, the settlement tour, provides a useful overview of day-to-day community activities and settlement buildings. The special qualities of the local people will enrich visitor experiences as they talk with residents in the stores, on the streets and possibly in their homes.

4.4.3.2 Human History and the Economy

Underlying Principles:

The study area was at one time an equatorial climatic zone inhabited by prehistoric wildlife in a setting of lush vegetation. Recently discovered deposits of oil and gas originated in this early period. With the retreat of the Pleistocene glaciers, approximately 9,000 years ago, the shores of Great Slave Lake became the home of early man and much later of the nomadic Indian hunter-gatherer groups. It is thought that the Slave River would have been a "preferred location" for settlements by historic and prehistoric people and although this is not documented, archaeological studies are presently being conducted to test this assumption.

The arrival of the Europeans in the 1600's, in pursuit of the Northwest passage and furs, altered the lifestyle of the Chipewyan people of Great Slave Lake. Because, it was thought that the Peace/Slave/MacKenzie River corridor held the key to access to the Pacific and the Orient and there was intense movement by explorers on these river highways and aggressive action to establish trading posts.

Today the economy of the Northwest Territories has expanded from traditional hunting, fishing and trapping to include mining, lumbering, tourism and petroleum enterprises.

Special Approaches:

Tours 1 through 11 will contribute to an understanding of the human history and the economy. In addition, the Interpretive Program should address a comprehensive list of attractions including historic settlements, legends, language and colloquial expressions? the river system and the modes of transport. Time charts would be useful in portraying the various periods of human history and economic activity.

4.4.3.3 The Northwest Frontier

Underlying Principles:

In recent years the Canadian North has generated a great deal of interest in a wide variety of subjects of both national and international concern. Native rights, oil and gas exploration, the MacKenzie Valley pipeline, environmental impact and the 200 mile jurisdiction on the seas (discussed in the Law of the Seas Conferences) are but a few. The Northwest Territories has therefore increasingly become an attractive and interesting region to visit. Many see the North as a last frontier, relatively untouched by man, and argue that it should be left in its natural state. Others strive to open it up for resource development. This

conflict will be evident to all who visit the Territories and the Interpretive Program at Fort Resolution and Mission Island can increase visitors' understanding and appreciation of the complex problems facing the north.

Perhaps the most attractive feature of the north is the mystery of the vast lands; the untouched environment, the legends and the challenges of "man and nature".

Special Approaches:

Tours 1 through 11 reflect the old and new and suggest some of the challenge of the North. Discussions should be programmed with guest speakers such as Lou Menez who have a grasp of the old and new ways of the north.

4.4.3.4 Physiography and Geology

Underlying Principles:

Mission Island is located in the MacKenzie lowlands region in the District of MacKenzie. The east arm of Great Slave Lake cuts into the Precambrian rocks of the Canadian Shield to the northeast. While Mission Island itself is situated on the Silurian rocks which form the eastern margin of the lowlands. The Slave River lies almost on the border between the shield and the lowlands.

The vastness of Great Slave Lake, the fifth largest lake in North America (10,430 square miles) is the principal and most fascinating natural feature of the area.

Special Approaches:

All of the tours with the exception of the settlement and sawmill tours will reflect this theme. A map of the region indicating the MacKenzie lowlands, the Canadian Shield, Great Slave Lake and the rivers would be of interest to the visitor. In addition, a geological cross-section of the area would assist in discussions of the formation of glacial Lake McConnell. The geologist at Pine Point mine should be invited to present material and lead a tour from time to time.

4.4.3.5 Wildlife and Vegetation

Underlying Principles:

The surrounding area is inhabited by numerous large mammals, game species, birds, fish and waterfowl. These include moose, bison, blackbear, wolf, beaver, lynx, rabbit, muskrat, fox, mink, marten, otter and wolverine; Canada geese, snow geese, sandhill crane, spruce grouse, ptarmigan, bald-headed eagle, perigreen falcon, swans and ducks; lake whitefish, jackfish, sucker, inconnu (coney), cisco, lake trout, trout-perch, northern pike, walleye and burbot. The delta particularly, is important for wildlife year round, as well as in the summer and fall. It is a stop-off on a major migratory flyway for swans, geese and ducks. The abundance of wildlife is important to the local economy and to the survival of most small settlements in the region.

The vegetation of the Atlabaska - Great Slave area falls into four categories, two of which are common

to the study area. Firstly, on the southshore of the lake and up the Slave River is the "Flood-Plain White Spruce Forest". The white spruce is in many places mingled with balsam, poplar and willows*. Secondly, there is an area referred to as the Jack-Pine Forest" comprising a narrow zone east of the Taltson River*. The forest resources in the Mission Island/Delta region include saw-timber and pulp-size soft wood as well as scrub forest and barren areas on the shield**.

Special Approaches

Each of the tours will reveal various aspects of wildlife and vegetation. In addition, wildlife maps indicating habitat and game management zones would be useful, as would vegetation mapping. Guided tours in the vicinity by naturalists should be programmed on selected weekends.

4.4.3.6 Climate, Astronomy and the Seasons

Underlying Principles:

Visitors to the Northwest Territories will be impressed by the long summer days, the phenomenon of a "near-midnight sun"⁽¹⁾ and the effects of climate on vegetation, wildlife and community life.

* Source: D.S. Rawson, "The Physical Linnology of Great Slave Lake", University of Saskatchewan 1945.

** Indian and Northern Affairs. "Fort Resolution - Northwest Territories Map": Ottawa, Land Use Information Series 1975.

(1) "Near-midnight sun": In the more extreme northern latitudes the sun does not set during the mid-summer months. Further south at Mission Island the sun dips below the horizon for a short period at night producing prolonged twilight and virtually no darkness at night.

Special Approaches:

Each of the tours, with the exception of the sawmill tour, will 'reveal various aspects of this theme. Climatic data charts, a telescope and star charts would be of assistance in communicating the ' messages. Special locations for viewing the sky should be identified and eventually "improved" as may be required.

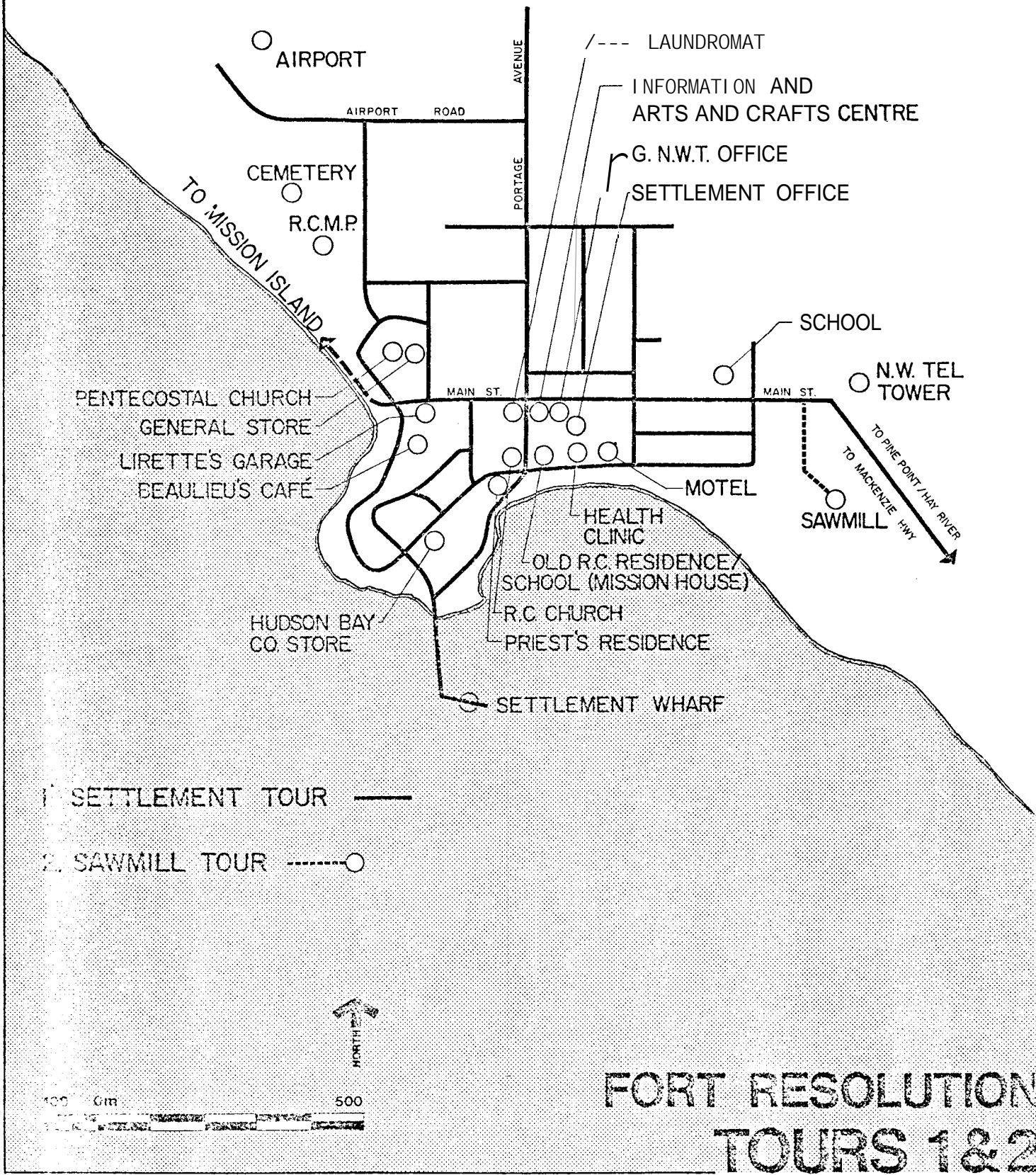
Eleven tours have been selected which will appeal to a broad spectrum of people of all ages with diverse interests. In preparing the tours consideration has been given to the specialized requirements of bus groups and to special infrastructure which may be required such as campsites, picnic areas, toilets and to weather problems associated with air and water travel. Each tour is outlined in the following sections with respect to objectives, target audience(s), themes, presentation sites, infrastructure and whether a guide is required.

Tour 1: Settlement Tour

The Settlement Tour includes points of interest in Fort Resolution. Visitors who wander through the settlement either guided or unguided will quickly and easily experience an enjoyable variety of insights into community life, human history and the local economy of this northern community.

Points of
Interest:

Information Centre and the Arts and Crafts Centre; Hudson Bay Company store; old Roman Catholic residence and school (Mission house) ; Pentecostal and Roman Catholic churches; priest's residence; settlement wharf; sawmill; school and the settlement office, G.N.W.T. office, settlement housing, Hunter's Store, R.C.M.P. detachment, cemetery and the airport.



Presentation: Tour brochure and Settlement Map (Figure 7.1) ; guide (optional); Heritage Centre program (slide show, historic pictures, history books on the topics of the pre-historic times up to the fur trade era, the Dene and the Métis in the twentieth century; models of the old fort and the Mission); signs at historic sites; new street signs particularly on the main streets.

Infrastructure: Information Centre located near the Arts and Crafts Centre and a list of guides willing to escort visitors through the settlement and comment on the history of Fort Resolution.

Distance and Time: Return trip 2 - 5 km; 1 to 4 hours.

Guide: A guide is optional.

Tour 2: Sawmill Tour

The sawmill, in the south-east part of the settlement, is very much a part of community life and is an essential component of the local economy. It is necessary to have a guide who is both familiar with the operation of the mill and is able to explain the evolving changes in the mill process over time. Tours should be arranged in advance through the Information Centre in the settlement.

Points of Interest: Transporting and unloading logs; conveyor system, various saw types, packing process; history of the

sawmill and more generally the logging industry over the years; discussion of the old mission sawmill in the **Delta**.

Presentation: Site visit outlining the sequential movement of logs from the forest to the mill, the saws, sorting and packaging.

Infrastructure: Safety rails, hard hats; benches(2) with a litter container at the tour assembly point outside the mill.

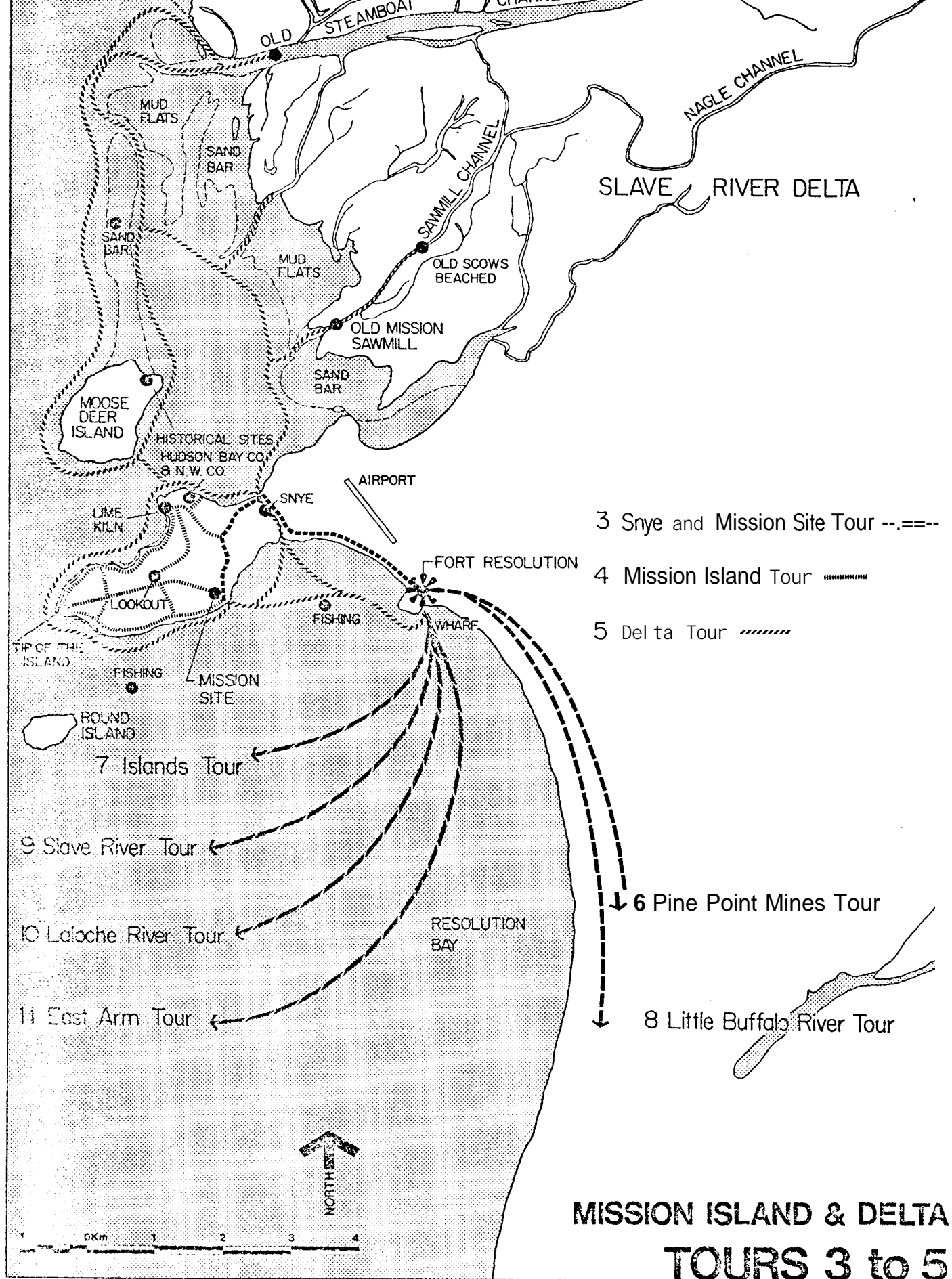
Distance and Time: Return trip 1 km; 1 hour.

Guide: A guide is required.

Tour 3: Snye and Mission Site

The old mission site on the south shore of Mission Island and the Snye are perhaps the most important historic sites on the Island. Visitors may walk along the proposed Beach Road and travel across the bay by boat (Figure 2, "Natural and Cultural Features") .

This tour is designed to show the historic locations to visitors, to enable them to experience at close range the natural beauty of the shoreline of Resolution Bay, and to enable visitors to see the local people fishing and carrying on their day-to-day activities. A prearranged boat trip to the settlement wharf will complete the tour. Human history, economy, physiology, geology, wildlife



and vegetation should be outlined in a brochure and guides should be prepared to explain these subjects.

Points of Interest: Shoreline **trail**; Snye; **mission site**; boat ride; fishing activities, and settlement wharf.

Presentation: Tour brochure.

Infrastructure: Proposed facilities at the Picnic Area and walking **trails** (see Section 4.2) ;**improvements** to the settlement wharf and shoreline walking **trail**.

Distance and Time: Return trip 2½ km. by water (one way), 3½ km. by land (one way), 4 hours to a full day.

Guide: A guide is optional and a boat and operator are required for the boat trip.

Tour 4: Mission Island

Mission Island Park should be a designated tour outlined in a brochure and utilizing proposed park facilities. The trail system will permit access to the highest point (lookout) and to the shoreline. Views to Moose Deer Island, Round Island and over to Fort Resolution will portray the vastness and untouched character of the Great Slave Lake region

and the north. Human history, local economy physiography and geology, wildlife and vegetation, climate, astronomy and the seasons will be of interest on this tour around the island (Figure 2).

Points of Interest: Hudson Bay Company and Northwest Company posts locations; lime kilns; tip of the island looking out to Great Slave Lake; island lookout; mission site; fishing industry and offshore islands.

Presentation: Tour brochure and signs at points of interest. Visitors may travel by walking trails or by boat.

Infrastructure: Utilize campground, picnic area and Registration Centre infrastructure (pit toilets, trails and litter bins).

Distance and Time: Return trip 10 km., 2 hours to one day.

Guide: A guide is optional.

Tour 5: Delta

The Slave River delta is the single most attractive natural feature in the immediate vicinity of Mission Island. The delta has assumed a focal role in the development of the region by offering hunting and fishing to the local people by providing an historic stopping point on a principal northern water route.

Stony Island and Grant Point trading posts for example, were established in the early 1700s. The constantly changing character of the delta will be of interest in terms of human history, the local economy (hunting and trapping), **physiography** and geology and wildlife and vegetation.

Points of Interest: Nagle Bay; Moose Deer Island; Ring Island, Stony Island and Grant Point; sand bars and mud flats; old mission sawmill; beached scows; Nagle Channel and Old Steam boat Channel; Slave River; Resolution Bay and Great Slave Lake; hunting and trapping; viewing wild life and the evolution of the delta.

Presentation: Tour brochure and guides

Infrastructure: Pit toilet and benches (2) at locations to be selected during detailed planning of the tour.

Distance and Time: Return trip 24 km., one day.

Guide: A guide will be required for most visitors.

Tour 6: Pine Point Mines

The lead and zinc mining operation at Pine Point is reputed to be one of the largest open-pit operations in the world. The mines are particularly important to the regional economy and offer employment to

nearby communities, including Fort Resolution. Cominco offers guided tours during the summer and interested parties can make arrangements for departure from Pine Point on the company bus.

Points of Interest: History of the mines (1899-1981); finding the ore, developing an open pit, processing the ore, zinc and lead products, marketing the products environmental impacts.

Presentation: Tour brochure and Pine Point Mines Limited brochure entitled "Zinc\ Lead Mining at Pine Point, N.W.T."

Infrastructure: Roadside picnic area between Pine Point and Fort Resolution (picnic tables (4) and litter bins (2)), an appropriate lookout point with a view of Great Slave Lake.

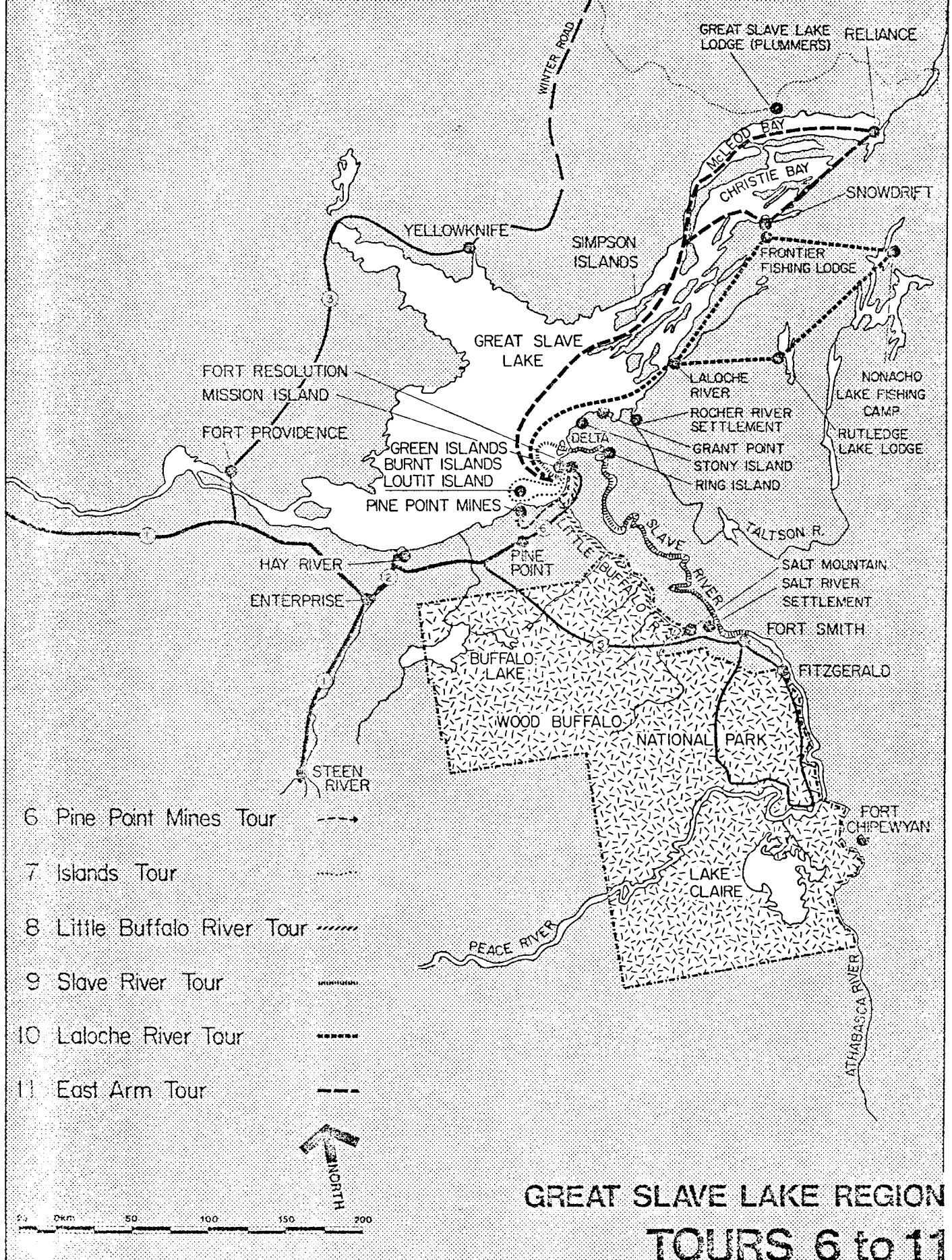
Distance and Time: Return trip 120 km., one day.

Guide: A guide is provided by Cominco at the mine site.

Tour 7: Islands

A chain of islands which include the Green Islands, Burnt Islands and Loutit Island, Round Island and Egg Island; and the paddle wheel steamer beached at the Burnt Islands.

Points of Interest: Green Islands, Burnt Islands, Loutit Island, Round Island and Egg Island; and the paddle wheel steamer beached at the Burnt Islands.



**GREAT SLAVE LAKE REGION
TOURS 6 to 11**

Presentation: Tour brochure and tour boat.

Infrastructure: Pit toilet on one of the Green Islands.

Distance and Time: Return trip 50 - 80 km.; one day.

Guide: A guide will be required by most visitors.

Tour 8: Little Buffalo River

The Little Buffalo River continues to be an important route for hunters and trappers. The natural beauty of the river is attractive to canoeists in pursuit of a journey offering a cross section of the landscape from Wood Buffalo National Park to Great Slave Lake. Several themes including physiography and geology, wildlife and vegetation, climate, astronomy and the seasons will make this trip most interesting for canoeists.

Points of Interest: Hunting and fishing; Wood Buffalo National Park; natural environment including wildlife, vegetation, Salt Mountain and the river itself.

Presentation: Tour brochure.

Infrastructure: Ten primitive campsites appropriately identified in the brochure and on the shoreline.

Distance and Time: Return trip 300 km; 5 - 7 days.

Guide: A guide is optional.

Tour 9: Slave River

The Slave River is a natural boundary between the MacKenzie lowlands and the Canadian shield and is well known in Canadian history as an important route for the early explorers and trappers. Furthermore, its timber resources have been of great importance to the development of both Fort Resolution and the Mission. This tour entails a car trip along highway #5 and then downstream by canoe from Fort Smith through Salt River and northward towards Great Slave Lake. The history (sawmills, fortsites and cabins) vegetation and wildlife, nomadic life-style of the hunters, **physiography** and geology of the lowlands will be highlighted on this tour.

Points of
Interst:

Delta (Grant Point and Stony Island);
sawmills; cabins used by trappers;
Salt River settlement, Fort Smith;
Wood Buffalo National Park and
historic Ring Island (old fort,
Chiswick House and Northwest Company,
Hudson Bay Company and X Y Company
posts) .

Presentation: Tour brochure.

Infrastructure: Ten primitive campsites appropriately
identified in the brochure and on the
shoreline.

Distance and
Time:

Return trip 300 km., 5 - 7 days.

Guide:

A guide is optional.

Tour 10: Laloche River

The Laloche River is a tour departure point from Great Slave Lake for an excursion over the Canadian Shield. Anglers and hunters, and those with an interest in geology, physiography, vegetation, wildlife and the natural environment of the northwest frontier will be interested in this route.

The old fishing lodges, and communities will be of particular interest in this combined boat and plane trek across the Canadian Shield.

Points of Interest:

Fishing at Frontier Fishing Lodge, Nonacho Lake Fishing Camp and Rutledge Lake Lodge; Canadian Shield; east-arm of Great Slave Lake and the geology of the region; Rocher River settlement (optional) and Snowdrift.

Presentation:

Tour brochure.

Infrastructure:

Package tours (all inclusive) are necessary for the boat/plane or plane trip including accommodation at selected destinations.

Distance and Time:

Return trip 600 - 700 km.; one week.

Guide:

A guide is recommended for boat sections of the trip.

Tour 11: East Arm

The east arm of Great Slave Lake features the Canadian Shield, formed mostly of crystalline rocks, but with some important exposures of metamorphosed sedimentary and volcanic rock. The "Pleistocene ice sheet apparently moved southwest through the East Arm forming the deep basins now occupied by McLeod and Christie Bays. The MacDonald Fault and the Red Cliffs, soaring to over 1000 feet above the water, are attractive natural phenomena of the region. Visitors on this boat/place tour will experience community life in Snowdrift and Reliance; wildlife and vegetation, and probably the violence of an East Arm storm.

- Points of Interest: Great Slave Lake and the East Arm; Reliance and Snowdrift; Canadian Shield; MacDonald Fault; McLeod and Christie Bays (1900 feet and 2000 feet deep) ;Red Cliffs (1000 feet); Great Slave Lake Lodge (Plummer's) ; Simpson Islands and fish factory - F.F.M.C.
- Presentation: Tour brochure and guide.
- Infrastructure: Package tours (all inclusive) are necessary for the boat/plane or plane trip including accommodation at selected destinations.
- Distance and Time: Return trip 600 - 800 km.; 4 to 10 days.
- Guide: A guide is recommended.

When establishing the interpretive program, the following points should be considered:

- . The Interpretive Program should be progressively developed towards its first year of operation in 1982.
- . Interpretive approaches are very much a dynamic process, evolving over time as peoples' perceptions change and issues arise and fade. The Community must, therefore, be prepared to modify, update and even delete portions of the Interpretive program in an effort to ensure that the program remains alive, interesting and attractive for all visitors.
- . Tour operators, based in Fort Resolution, or nearby, should offer tours of the settlement, the park and the region as may be arranged through the Information Officer.
- . It will not be possible to accommodate bus tour groups overnight at Mission Island Park, but accommodation can probably be arranged in the community; operators should be prepared to book tours in advance to ensure that equipment and programs will be available for up to 20 people at one time.
- . Brochures should be prepared for the interpretive program well in advance of the first tourist season in 1982. Each tour description should be based on firsthand experience of the various locations, routes and attractions.

The following resources will be useful in developing brochures and interpretive material for the Mission Island Park Interpretive Program.

Berger, Joanne et al. Our Métis Heritage, 1976

Craig, B.G. Glacial Lake McConnell, and the Surficial Geology of Parts of Slave River and Redstone River Map - Areas, District of MacKenzie. Department of Mines and Technical Surveys, 1963.

Fumoleau, Rene OMI. As Long As This Land Shall Last. A History of Treaty 8 and Treaty 11 1870 - 1939. Toronto McClelland and Stewart Ltd., 1973.

Indian and Northern Affairs, "Fort Resolution, Northwest Territories" map. Ottawa: Land Use Information Series, 1975.

Indian and Northern Affairs. The Canadian Indian. Ottawa, 1973.

Ken, D.G.G. A Historical Atlas of Canada. Don Mills: Thomas Nelson & Sons (Canada) Ltd., 1966.

Rawson, D.S. The Physical Limnology of Great Slave Lake. Department of Biology, University of Saskatchewan, 1949.

Smith, James K. Alexander MacKenzie, Explorer - The Hero Who Failed. Toronto: McGraw-Hill Ryerson Limited, 1973.

Travel Arctic. Explorers' Guide '80. **Yellowknife:**
Government of the Northwest Territories, 1980.

Y_{ong}, Richard J. A Prospectus of Historical Sites
In The Northwest Territories Manuscript #81.
Ottawa: National and Historic Parks Branch,
Department of Indian Affairs and Northern
Development, 1970.

5. ENGINEERING SERVICES

5.1 BASIS OF ESTIMATES

The requirements for water supply, waste disposal and roads are based on the Development Concept (Figure 4) , Components of the Plan (Section 4.2) and the following estimates of maximum occupancy of the park on any one day.

| | 1982 | 1986 |
|-----------------------|-------|-------|
| Park staff and family | 5 | 5 |
| Tourists | 39 | 53 |
| Community Park | 40 | 40 |
| | <hr/> | <hr/> |
| | 84 | 98 |

5.2 WATER SUPPLY

Potable water will have to be provided at the Information Centre, Registration Centre, and the Wash House. Estimated water consumption, excluding the Information Centre, which is in the settlement, is 10,000 litres per day. This small amount does not justify the building of a water supply system on the Island. Instead, it is recommended that the existing settlement water supply system be used to service the Island. The village water truck would deliver water to holding tanks installed in all park buildings with flush toilets.

The Information Centre should be equipped with a 1,200 litre storage tank which would be filled twice a week.

Estimated water consumption at the Registration Centre is about 2,000 litres per day of which 500 litres will be used for washing and showers. There will be separate water storage tanks for cold and warm water. Because there will be no electrical power in the park, both tanks will have to be elevated above the points of consumption. The warm water tank will be connected to a simple solar heating panel or to a propane heater.

Estimated water consumption in the Wash House is 8,000 litres daily. About 3,000 litres of warm water will be required each day for showers and washing. Warm and cold water storage tanks are proposed. Solar heating or propane will be used to keep the water temperature at about 35 degrees C. Tanks will have to be elevated.

All estimates are based on peak use at full development of the park. The size of tanks should be such that there is a two-day supply available. At the initial stage of operation, water should be delivered twice a week; this frequency will increase with increased consumption.

5.3 LIQUID WASTES

Liquid waste from the Registration Centre and Wash House will consist of sewage from toilets and grey water from showers and washing. The grey water can be disposed of on-site; a pipe outlet from the building should be diverted to a small cesspool. The good drainage quality of the soil will enable quick percolation.

The sewage outflow from the toilets should be collected in holding tanks located directly under the toilets. The capacity of the holding tanks must be larger than that of the water holding tanks. The Registration Centre should have a tank with a capacity of 3,000 litres and the capacity of the tank at the Wash House should be 10,000 litres. This tank should be larger because of the possibility of erratic water use, vandalism or misuse. The Information Centre should have a 2,000 litre sewage holding tank and both sewage and grey waste should be collected.

Sewage from the holding tanks should be pumped out by the existing settlement sewage truck and disposed of at the existing sewage lagoon. The estimated quantities of sewage from the above sources are so low that there is no possibility of overloading the lagoon from the additional inflow.

5.4 SOLID WASTES

There will be about 200 kg of solid waste generated daily at peak visiting periods. This is assuming that each person will generate about 2 kg/day. (5 staff, 53 tourists, 40 visitors at the Island park). The primary collection of this waste will be in receptacles with special covers to prevent entry by larger animals and ravens. Because of the danger of spreading the waste by animals and birds, collection should be carried out daily. The existing settlement truck should collect the waste and dispose of it at the community dump.

5.5

ELECTRICITY

There is no provision made for central power generation. The Supervisor's Residence and Registration Centre might use a small portable generator in the future if park use warrants. Similarly, consideration may be give to adding a small generator at the Wash House at some time in the future.

5.6

ROADS

There is a requirement for about 6,300 metres of two-lane roads and 4,300 metres of one-lane roads. Beach Road, Island Road and Mission Road (two-lane roads) should be 7 metres wide. One lane roads should be 3.5 metres wide. In the absence of detailed soils data for the Beach Road alignment, it has been assumed that the road bed will consist of one metre of gravel fill. This fill may be mixed with some fine sand from the excavation of the Snye. The road crown will be topped with 100 mm of crushed gravel. The main source of gravel is about 10 km east of Fort Resolution, and it may be possible to arrange for coarse material to be taken from a deposit immediately north of the Fort Resolution airport.

6.1 CAPITAL COSTS

The cost to develop the facilities illustrated in the "Development Concept", Figure 4 and described in Section 4.2 "Components of the Plan", is estimated to be \$777,300 (1980 constant dollars). This amount includes \$319,500 for roads and parking areas which it is anticipated will be developed through special arrangement among the Department of Highways, the Adult Vocational Training Centre, Fort Resolution and the Ministry of Economic Development and Tourism. The remaining \$456,800 will be required for the construction of campsites, park buildings, Information Centre, Heritage Centre, walking trails, signs, park furnishings and redevelopment of the Snye (Table 6.1).

TABLE 6.1 SUMMARY OF CAPITAL COSTS, EXCLUDING ROADS

| <u>Facility</u> | <u>Cost in 1980 Constant Dollars</u> | |
|--|--|-----|
| Information Centre (in Fort Resolution) | 17,800 | |
| Registration Centre and Park Supervisor's Residence | 67,900 | |
| Maintenance Compound | 37,900 | (2) |
| Serviced Campsites (10) | 37,300 | |
| Unserviced Campsites (5) | 9,000 | |
| Cabins (4) | 60,800 | |
| picnic Area | 16,000 | |
| Lookout | 6,700 | |
| Trailer Pump-out | 10,000 | /km |
| Snye Redevelopment | 72,000 | |
| Heritage Centre | 88,400 | |
| infrastructure for Tours | 12,300 | |
| Signs | 9,200 | |
| Walking Trails | 3,500 | |
| Total | 456,800 | |

Costs have been based on the following unit costs (Table 6.2). Square-metre costs for buildings include all building fixtures and tanks etc. required for operation as set out in Section 4.2 "Components of the Plan". Costs are in 1980 constant dollars and assume that buildings are not winterized. Design fees are not included.

TABLE 6.2 UNIT COSTS

| Facility | Cost Per Square Metre (\$) | Size (m ²) | cost (\$) |
|---|----------------------------------|---------------------------|-----------------------|
| Information Centre | 480 | 37 | 17,760 |
| Heritage Centre | 520 | 170 | 88,400 ⁽¹⁾ |
| Registration Centre and Supervisors Residence | 520 | 125 | 65,000 |
| Maintenance Facilities buildings | 350 | 100 | 35,000 |
| fencing | 30/m | 100 | 1,200 |
| Lookout | | | 6,700 |
| Campsite clearing, grading, levelling | 5.7 | | 1,100 |
| Wash House | 700 | 30 | 21,000 |
| Cabin | 470 | 30 | 14,000 ⁽²⁾ |
| Trailer Pump-out | | | 10,000 |
| Signs large | | | 600 |
| medium | | | 150 |
| markers | | | 50 |
| Walking Trail | | | 500/km |
| Picnic Table | | | 170 |
| Litter Bin | | | 50 |
| Fireplace | | | 150 |
| Pit Toilet | | | 850 |

(1) winterizing would increase the cost to about \$170,000.

(2) includes allowance for verandah.

6.2.1 Assumptions and Guidelines

The recommended staging of development has been based on the following assumptions and guidelines:

approximately \$100,000 of capital works may be undertaken annually for up to 5 years,

roads and parking areas will be constructed by special arrangement and the costs will be over and above the \$100,000 annual investment in project development,

sufficient facilities and services must be in place in 1982 and 1986 to serve the estimated visitor demand established in Chapter 2, Table 2.4,

it will cost about \$200,000 to prepare the Park for use by visitors; it is proposed, therefore, that year 1981 and the spring of 1982 be devoted to development work and that the project not be open to visitors until June 1982.

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6.2.2 Priorities

Based on the foregoing assumptions and guidelines, the following priorities are recommended:

1. Roads and parking areas should be completed to finished surface by June 1982.
2. When the tourism project opens to the public, the following facilities should be in place:
 - most signs,
 - several walking trails,
 - the Information Centre,

- the Registration Centre and part of the Supervisor's Residence,
- part of the Maintenance Compound, all serviced and unserviced campsites,
- two cabins, about 50% of the picnic area improvement,
- the Trailer Pump-out.

3. When the basic framework of the project is in place, the following facilities should be added:

Snye redevelopment and ancillary parking, additional walking trails and signs, completion of Park Supervisor's Residence, completion of the Maintenance Compound, two additional cabins, completion of the picnic area redevelopment, the Lookout, the Heritage Centre infrastructure facilities to enhance the tours (tables, benches, pit toilets, litter bins, primitive campsites, roadside picnic area)

4. Eventually, when the project is firmly established consideration should be given to adding electricity to the Serviced Campsites.

6.2.3 Five-Year Development Program

The recommended development program shown on Table 6.3 takes into account the foregoing staging assumptions, guidelines and priorities. The following is a summary of Table 6.3.

| | | |
|------|---|--|
| 1981 | Roads, parking, trails, signs, Registration Centre, Maintenance Compound, Supervisor's Residence, campsites, cabins, picnic area, trailer pump-out. | \$100,000 (excluding roads and parking) |
|------|---|--|

| | | |
|------|---|--|
| 1982 | (Park-opening year) further work on the above plus Information Centre. | \$100,000 (excluding roads and parking) |
| 1983 | Further work on parking areas, trails, signs, Registration Centre, Maintenance Compound, picnic area, plus Lookout, Snye redevelopment, Heritage Centre. | \$ 94,500 |
| 1984 | Additional signs, maintenance facilities, litter bins, cabin, Snye redevelopment, Heritage Centre. | \$ 89,400 |
| 1985 | Cabin, Snye redevelopment, Heritage Centre, infrastructure for tours. | \$ 64,900 |
| 1986 | No capital expenditure proposed. | |
| | | <hr/> \$456,800 |

TABLE 6.3 CAPITAL COSTS AND STAGING (in 1980 constant dollars) Sheet 1

| Facility | Total Cost | 1981 | 1982 Park Opens | 1983 | 1984 | 198 |
|---|----------------|----------------|--------------------|--------------|--------------|-----|
| Roads | 315.300 | | | | | |
| 2 lane 5.8 km | | | | | | |
| Clearing Beach Road | 30,000 | 30,000 | | | | |
| Base | 232,000 | 232,000 | | | | |
| Finish | 23,600 | | 23,600 | | | |
| 1 lane 4.2 km | | | | | | |
| Base | 21,200 | 21,200 | | | | |
| Finish | 8,500 | | 8,500 | | | |
| Parking | 4,200 | | | | | |
| Registration | 1,500 | 1,500 | | 750 | | |
| Lookout | | | | | | |
| Picnic Area | | | | | | |
| Snye | | | | 450 | | |
| 28 @ \$150 | | | | | | |
| Total: Roads and Parking | 319.500 | 284.700 | 33.600 | ,200 | | |
| Walking Trails 7 km @ \$500/km | 3,500 | 1,000 | 1,000 | 1,500 | | |
| Signs | 9,200 | 3,000 | 1,200 | 1,200 | 1,000 | |
| 5 @ \$600 | | | | | | |
| 35 @ \$150 | | | | | | |
| 19 @ \$ 50 | | | | | | |
| Information Centre (in Ft. Resolution) | 17,800 | | 17,800 | | | |
| Registration Centre/Residence | 67,900 | 21,000 | 34,800 | 2,100 | | |
| \$65,000 + 2 pit toilets, litter bins, selective cleaning | | | | | | |
| Maintenance Compound | 37,900 | 5,000 | 8,000 | 8,000 | 6,900 | |

TABLE 6.3 CAPITAL COSTS AND STAGING (in 1980 constant dollars) Sheet 2

| Facility | Total Cost | 1981 | 1982 Park Opens | 1983 | 1984 | 1985 |
|--|------------|--------|--------------------|--------|--------|--------|
| Serviced Campsites | 37.300 | | | | | |
| Sites 10 @ 1,100 | 11,000 | 11,000 | 10,000 | | | |
| Wash house 21,000 | | | | | | |
| Vista clearing, tables, fireplaces, litter bins 5,300 | 2,000 | 2,000 | 2,500 | | 800 | |
| Unserviced Campsites | 9,000 | | | | | |
| Sites 5 @ 1,000 | 5,500 | 5,500 | | | | |
| Tables, fireplaces, pit toilets, litter bins 3,500 | | | 3,000 | | 500 | |
| Cabins | 60.800 | | | | | |
| Cabins 4 @ 14,000 | 19,500 | 19,500 | 8,500 | 14,000 | 14,000 | |
| Tables, fireplaces, litter bins, pit toilets 4,800 | | | 2,400 | 1,200 | 1,200 | |
| Picnic Area/Mission Site | 6.000 | | | | | |
| -refurbish building and fence cross and graveyard 4,000 | | 1,000 | | 3,000 | | |
| -tables, fireplaces, litter bins, dock, pit toilets, play equip- ment 12,000 | | | 8,000 | 4,000 | | |
| Lookout | 6,700 | | | 6,700 | | |
| -signs, fireplace, toilet, vista clearing, site rehabilitation | | | | | | |
| Trailer Pump-out | 10,000 | 10,000 | | | | |
| Snye Redevelopment | 52,000 | | | 24,000 | 20,000 | 28,000 |
| Dredging, dyke 22,000 | | | | | | |
| Bridge 50,000 | | | | | | |
| Heritage Centre | 88,400 | | | 34,000 | 45,000 | 9,400 |
| Infrastructure for Tours | 12,300 | | | | | 12,300 |
| pit toilets, litter bins, benches, primitive campsites, roadside picnic area | | | | | | |

In order to proceed with the construction of facilities and the implementation of programs, detailed planning should commence as soon as possible after this Tourism Development Plan is approved. Consultants have already been appointed to prepare detailed plans for construction in 1981, and arrangements are being made to prepare preliminary information brochures and pamphlets (tour-guides) . Additional tasks should include:

establishment of a Tourism and Parks Committee,

selection and appointment of project staff,

detailed planning and organization for tours and special programs,

organization and orientation sessions for "meals in homes",

expansion of the range of arts and crafts to be made available to visitors.

7. OPERATIONAL GUIDELINES

7.1 SCOPE OF THE PROJECT

The Mission Island/Fort Resolution tourism development project includes the following:

7.1.1 Mission Island Park Development and operation for camping, interpretive programs and community use;

7.1.2 Development and operation of Tourism Facilities and Services including:

- Tours and Interpretive Programs;
- The Heritage Centre;
- Arts and Crafts Centre (this project is currently operating with assistance from the Small Business Projects division of the Department of Economic Development and Tourism) ;
- The Information Centre;
- Accommodation and meals in Fort Resolution as a supplement to services already offered by private businesses;
- On-going environmental assessments to ensure that aesthetic, safety and sanitation aspects of the settlement and the natural features of the environs are at all times of a high standard and attractive to visitors;

Research into history, geology, natural environment, community life and legends in order to improve tours and visitor programs and to solicit assistance from governments, institutions and organizations for further research and development of visitor attractions tours and programs.

7.2 GENERAL APPROACH TO ORGANIZATION AND CONTROL

The development and operation of the tourism project at Mission Island and Fort Resolution will be a special kind of tourism venture that will depend for its success on the fully integrated participation of the Community of Fort Resolution and the Government of the Northwest Territories. If the project is to flourish, initiatives must come from the Community and the Territorial Government in a fully productive and cooperative manner. In general, the consultants recommend that leadership of the project be given by the people of Fort Resolution and that the resources and expertise of the Territorial Government be provided as underlying support for the project.

7.3 CAPITAL COSTS

A preliminary estimate of the basic capital expenditures required to establish the project as a visitor attraction is \$741,500. Of this amount about \$285,000 will be required for road construction and about \$457,000 will be required for park facilities, Information Centre and Heritage Centre development.

A major portion of these costs is expected to be borne by G.N.W.T. and, based on development plans prepared by, or for, G.N.W.T. Tourism and Parks and

D. P. W., it is recommended that the Community apply for additional financial assistance through the following programs:

LEAP; special ARDA grants; The General Development Agreement (GDA) between the Federal Government and the Territorial Government; Canada Manpower Programs including Youth Employment Program and Summer Employment Program; STEP (Subsidized Term Employment Program) ; Northern Roads Program.

In addition, one of the principal sources of assistance with capital development may be the Adult Vocational Training Centre (AVTC) who, together with the Department of Highways, should be requested by the Community to consider undertaking the design and construction of roads in Mission Island Park.

7.4 OPERATION AND MAINTENANCE COSTS

Annual operating costs for supervision and maintenance will probably be in the order of \$18,000 to \$20,000. This includes a full-time, round-the-clock, park supervisor in residence in the park during the summer season as well as part-time assistance for repairs, maintenance and for staffing the Information Centre.

7.5 TOURIST REVENUE

We estimate that the number of visitor groups per year will be 585 in the first year rising to 815 in the fifth year. By making the facilities, services, tours and programs particularly attractive, these figures might be increased, but using conservative estimates, registration fees would be about \$3,000 in 1982 increasing to about \$4,800 by 1986.

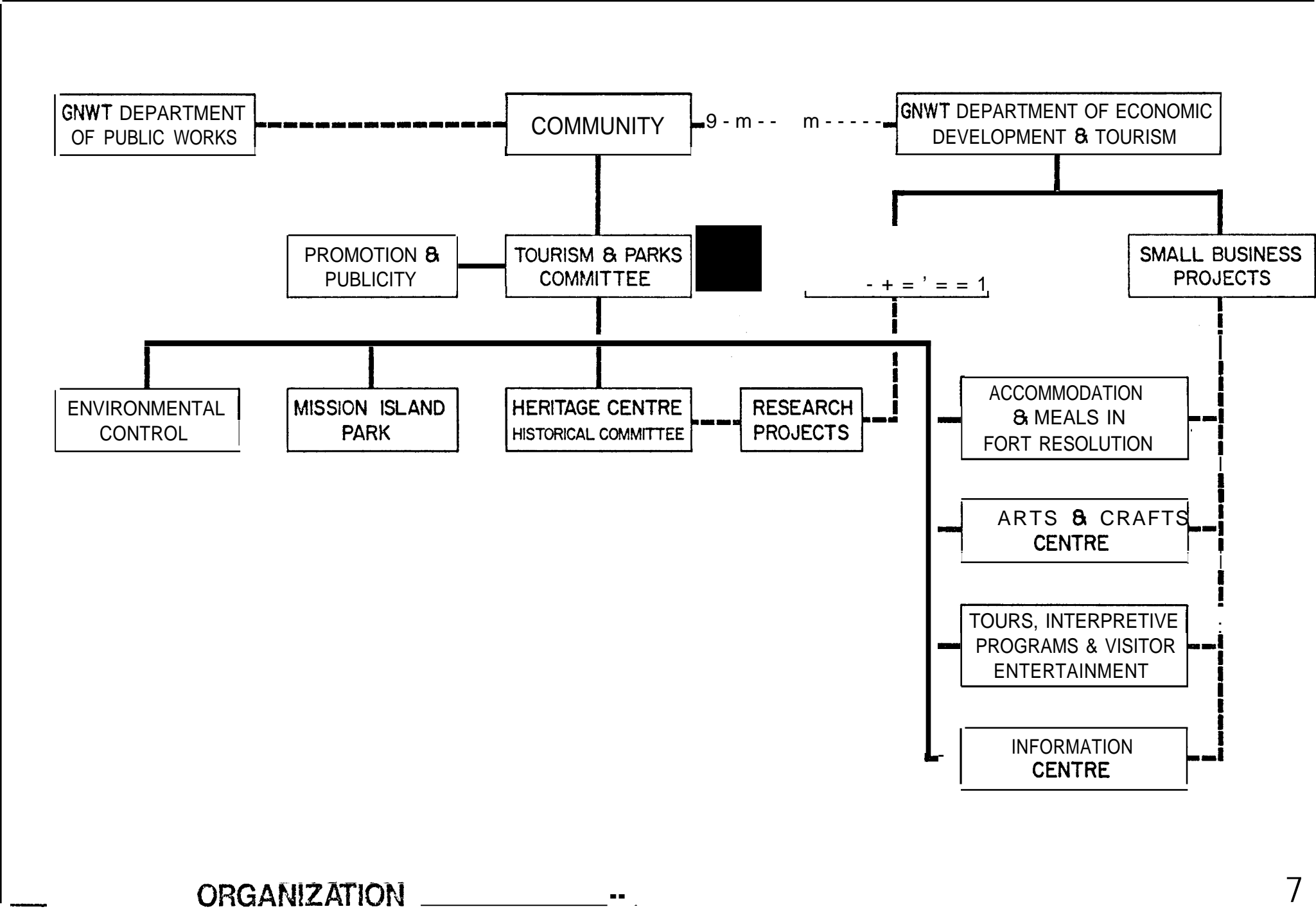
There would be additional income from tours and special programs, but the revenue from these services would go to the guides for these services and would not be available for paying the development and operating costs included in Sections 7.3 and 7.4.

Annual operating deficits during the first five years may therefore be expected to be about \$15,000.

7.6 BASIC MANAGEMENT PLAN

The foregoing figures indicate that visitor fees are unlikely to pay operating costs during the first five years. After that time, if the programs, tours and services are maintained at a high level, it is possible that operating costs can be recovered from user fees, and that there may eventually be an operating profit.

For the foreseeable future, however, both operating and capital costs will have to be heavily subsidized by G.N.W.T. Management arrangements must take this fact into account. We propose that the Community establish, immediately, a tourism and Parks Committee to advise on all aspects of the tourism project as listed in Section 7.1. The Committee would operate in close consultation with G.N.W.T. through its services for Tourism and Parks, Public Works and Small Business Development. During the early years of the project, all project staff, and most capital development, should be the direct responsibility of G.N.W.T.; during this period the Tourism and Parks Committee of Fort Resolution should, act in an advisory capacity until it is prepared to assume overall coordination and management of the project.



Under the foregoing plan, until the Community takes over the project, the G.N.W.T. Department of Economic Development, Tourism and Parks, and the Department of Public Works, in consultation with the Community should be responsible for planning, design, construction and on-going general supervision of Mission Island Park Development including:

picnic and community area and facilities, campsites, roads, parking areas, signs, trails, clearing of sites, water supply, sewage collection and disposal, garbage collection and disposal, park supervisor's residence, park maintenance facilities and equipment, lookout, wash-houses and toilets, litterbins, **Snye** redevelopment and **Snye** Bridge.

Planning and design of these facilities should be done by G.N.W.T. departments or their consultants.

Construction, operation and maintenance should be carried out under contracts to local businesses and individuals in the Fort Resolution area as may be agreed with, and in the best interests of, the Community.

Supervision and periodic site inspections should be done by D.P.W. and Economic Development and Tourism (especially Tourism and Parks) through their regional offices.

The planning and design of tours and visitor programs should be undertaken by G.N.W.T. , Tourism and Parks, together with specialist consultants, in consultation with the Community.

Brochures should be designed and printed by G.N.W.T. ,
Tourism and Parks.

The actual tours and programs should be operated by
a Small Business Enterprise in conjunction with the
operation of the Information Centre, Arts and Crafts
and "Meals in Homes".

To assist with the promotion and organization of
tours and visitor programs in the first year or two,
a manager (possibly a student with organizational
capability) should be hired for the tourist season.
To offset the cost of wages, a grant should be requested
from the G.N.W.T. or from other agencies such as the
Canadian Government Office of Tourism.

7.9 INFORMATION CENTRE AND ARTS AND CRAFTS CENTRE

The Arts and Crafts Centre is already operating as a
Small Business Enterprise. No change is recommended
except that consideration be give to enlarging the
scope of the Small Business Enterprise to include
the Information Centre, Tours and Visitor Programs
and Meals in Homes.

7.10 HERITAGE CENTRE

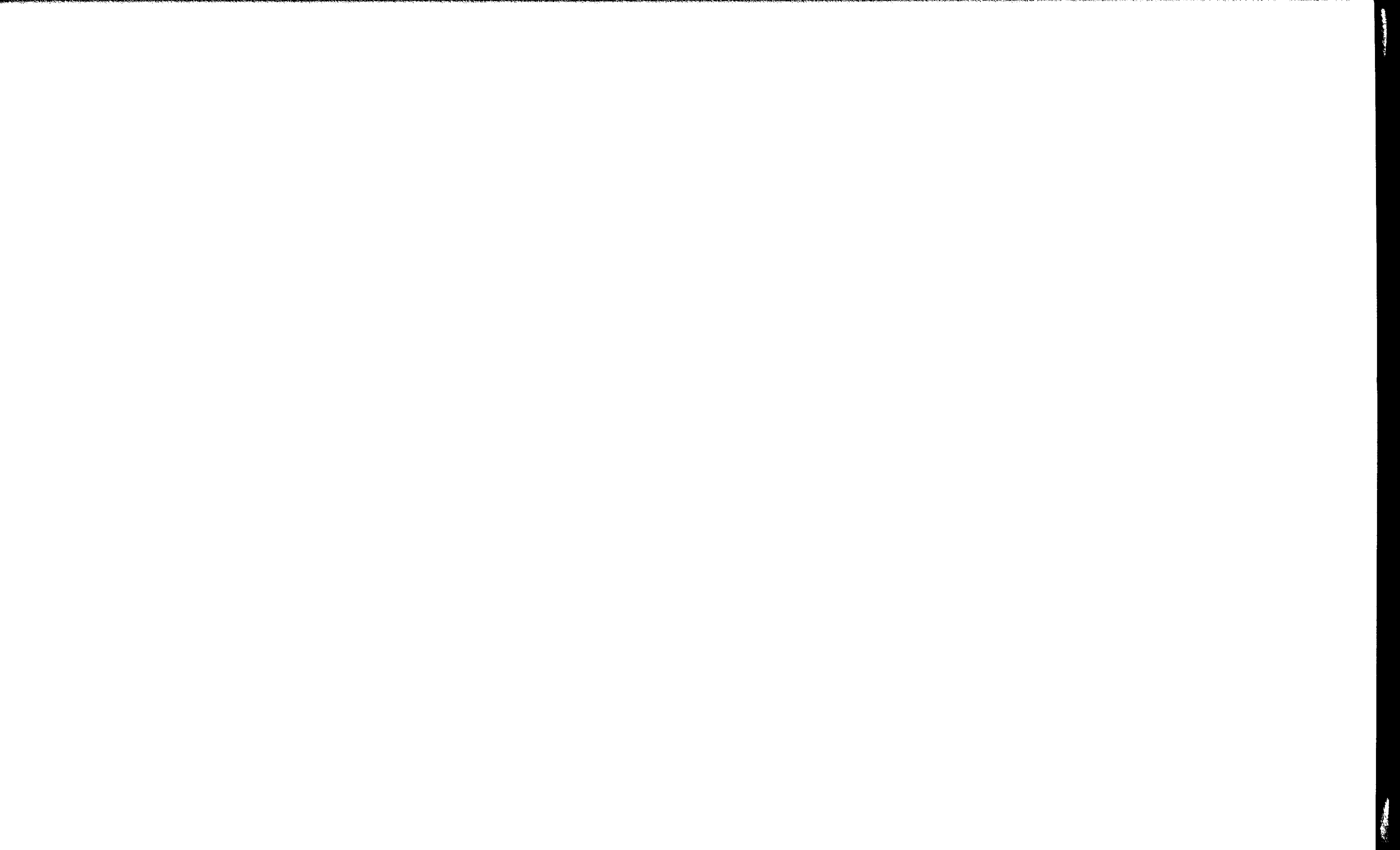
An excellent collection of data, slides and photographs
has already been prepared by Father Lou Menez. There
are in addition, throughout the Settlement and environs,
artifacts, clothing, tools, etc. which will help tell
the story of native activities, hunting, fishing,
trapping, exploration, the Mission, the Métis, the
Hudson's Bay Company, the Northwest Company, lumbering,
etc. An Historical Committee should be established

to display and interpret these subjects to visitors. The Mission House beside the Roman Catholic Church should be considered for this purpose. One or two rooms should be developed at first with the help of special advisors. Applications for assistance should be made to G.N.W.T. Museum Fund, Heritage Foundation of Canada, and the Canada Council.

7.11 RESEARCH

The historical work of Father Lou Menez should be continued and should be enlarged on with information on geology, community life, natural environment, legends and the changing local economy. All of the subjects will be of interest to visitors. In addition, the area might qualify as a National Historic Site when it is considered that this pivotal location on the historic Slave River/Mackenzie River route was the site of the first fur "trading posts" in the Northwest Territories (1786 at Grant point); an early Northwest Company post in the Delta (1791) and one on Mission Island (1794); an early Hudson's Bay Company Post on Mission Island about the same time; and the first mission structure in the Northwest Territories (Mission Island 1856).

We recommend that the initiative for on-going research be given by G.N.W.T. , Parks Planning in consultation with the proposed Fort Resolution Historical Committee. Students should be encouraged to prepare Master's or Ph.D. theses or working papers on the area. Students from AVTC in Renewable Resources and Parks Planning should be encouraged to participate in the work and approaches should be made to such institutions as



The Boreal Institute, University of Saskatchewan and Northern Institute, University of Alberta, in order to attract student work in the area. Such work might be combined with employment in establishing the Heritage Centre and the exhibits.

7.12 PROMOTION AND PUBLICITY

In conjunction with the research program, researchers and interested citizens should be encouraged to prepare magazine articles on their findings and supply them to such publications as "**Muskox** Journal" (Boreal Institute) and "Canadian Geographic". Such work will stimulate interest in the area and begin the process of having the area possibly identified as a National Historic Site. In this connection, an approach should be made to the Canadian Government Office of Tourism to interest their staff travel writers in preparing articles on the project.

Radio and TV coverage should continue as at present, Augmented by inputs from the proposed Historical Committee.

7.13 ENVIRONMENTAL QUALITY

To ensure that the environmental quality of the area is continually **maintained**, improved or **enhanced**, there should be regular reviews of the various elements of the project. While the principal responsibility for these environmental concerns will often rest with the various Territorial Government bodies, the Community through its Tourism and Parks Committee should play an active role in on-going monitoring of environmental factors. Any work done in this regard will be sound preparation for the eventual taking over the project.

The main environmental factors to be monitored by the Community and the government bodies responsible are as follows:

Fish and Wildlife: G.N.W.T., Renewable Resources

Vegetation: Northwest Lands and Forests

Sewage Disposal, Refuse Disposal and Pit Toilets: Department of Public Works and the Environmental Health Officer

Water Quality: Department of Public Works and the Environmental Health Officer

Visual Quality: Department of Public Works and G.N.W.T. Tourism and Parks

Visitor Safety: G.N.W.T. Tourism and Parks, Community fire protection and Park Supervisor re: dangerous animals.

7.14 VISITOR FEES

Until the project is taken over by the Community, fees should be collected as follows:

- 7.14.1 Mission Island Park: all visitors should pay the prescribed fee except Fort Resolution residents who will be able to receive a free season pass at the Information Centre at the beginning of each season. Camping by Fort Resolution residents should be paid for at 50% of regular rates. Park fees should be turned over to G.N.W.T. until the Community takes over the project.
- 7.14.2 Visitor Tours and Programs: all visitors and users should pay the required fees for tours and programs. Tours and programs should be operated as a Small Business Enterprise.

7.14.3 Heritage **Centre**: all visitors and users should pay admission fees as may be set by the Historical Committee in consultation with the Tourism and Parks Committee.

To ensure that all aspects of the project are developed and operated properly, the Community should appoint a Tourism and Parks Committee. The members need not be members of the Settlement Council or the Band Council, but they should report regularly to the Councils through their Chairman on the following matters:

- . Mission Island Park development and operation,
- . Heritage **Centre** development and operation,
- . Research,
- . Environmental Quality of all aspects of the project,
- . Small Business Projects including:
 - Arts and Crafts **Centre**
 - Information **Centre**
 - Tours, Interpretive Programs and Visitor Entertainment,
 - Meals in Homes,
Accommodation in Fort Resolution.
- . Promotion and Publicity.

A committee of four or five Fort Resolution residents should be appointed to coordinate these functions. The relationship among the various programs and management groups is indicated on Figure 7, "Organization Diagram". The dotted lines connecting Tourism

and Parks and Small Business Projects to the various programs, indicate that subsidies and special assistance should be provided to the Community especially in the early stages of the project. As the project develops, this reliance on Economic Development and Tourism will probably decrease.

7.15.1 Introduction

The marketing strategy for the Mission Island/ Fort Resolution Tourism Project must be cognizant of the following factors:

The resident population of the Northwest Territories is now, and is expected for many years to remain, relatively small and dispersed. As a result, unlike southern Canadian tourist areas, there is not a large basis for domestic tourism.

Non-resident markets are a long distance away. Although the Canadian market, particularly Alberta, will continue to be the most important one for Mission Island, the opening of the Liard Highway will provide an excellent opportunity for increasing the market share from British Columbia, the Yukon and Alaska as tourists make a circle route through the southern part of the Territories.

The Northwest Territories has a strong appeal to tourists seeking a unique "wilderness" or "true-north" experience.

As the Northwest Territories is virtually a "once in a lifetime trip", repeat visitation is not an important consideration.

The Northwest Territories is perceived by most people as being a summer-season tourist destination.

7. 15. 2 Approach

Although Mission Island has the potential of being an attractive park in its own right, it will be important to take advantage of the natural and

cultural resources of Fort Resolution, the Slave River and the Delta, as well as the broader Great Slave Lake Region.

The marketing strategy should be **target-market-oriented**, concentrating specifically on those markets with an interest in Canadian history and northern wilderness **tours, and should** concentrate generally on Alberta (Edmonton and Calgary), British Columbia (Vancouver), Ontario (Toronto), Minnesota (Minneapolis - St. Paul) and California (Los Angeles).

Advertising within the above mentioned markets should focus on magazines read by canoeists, wilderness campers, back-packers, nature **photo-graphers** and those interested in history and geology. Direct mailings of park brochures to identified special interest groups should be encouraged, as should familiarization tours for group tour operators and travel editors of appropriate high profile magazines. A considerable amount of quality "free advertising" can be obtained by encouraging magazines to publish articles on the Territorial Parks; a'nd films which can be used as fillers in movie theatres or on **television**, should continue to be encouraged.

Border-point information **centres** and information centres south and west of Fort Resolution will continue to be important vehicles for promoting the area as well as the entire Territorial Park system. The Explorers' Guide is an excellent document; reinforcing it with specific brochures **on park facilities, programs and tours, will** ensure a high level of visitation to Fort Resolution by tourists who have elected to explore the Territories.

8. IMPACT ASSESSMENT

8.1 ECONOMIC IMPACT

Although Mission Island Park is projected to have an operating deficit, the development of the Mission Island/Fort Resolution tourism project is expected to have a large and substantive positive impact on the residents of Fort Resolution. This benefit to the local community will arise because most of the material and labour required to develop and operate the project will be available within the community. Thus, a high percentage of each dollar invested in the project will accrue directly to the people of Fort Resolution.

8.1.1 Mission Island Park Revenue

We have projected that the Mission Island Park will receive about \$31100 in gate receipts for day and overnight use during the first year of operation. By 1986, the fifth year of operation, the total number of user groups is expected to reach 800, resulting in gate receipts of about \$4,800. Table 8.1 outlines the total park revenue for each of the first five years of operation. The suggested user fees are \$7.00 per night for a serviced campsite, \$5.00 per night for an unserviced site, \$15.00 per night for a cabin and \$2.00 per user group per day for entrance to the park on a day use basis. The residents of Fort Resolution will receive a 50% reduction in all overnight park user fees and will be admitted to the park for day use, free of charge.

Development of the Mission Island/Fort Resolution project is expected 'to generate over 2,500 person days of employment in 1982. With an operating season estimated at 92 days, the park will require a Park Supervisor, Park Maintenance Officer and Information Centre Officer. The Information Centre Officer will serve a dual role by providing information regarding the park, the planned tours and the other activities in the community of Fort Resolution while acting as the project sales agent for the tours and the meals in the homes. The Park Supervisor could expect approximately 165 days of employment, the Maintenance Officer 150 and the Information Centre Officer 110. If the present level of handicraft sales per visitor is projected to the number of expected visitors in 1982, local craftsmen could expect 340 days of employment. Almost 1,600 person days of employment will be available to tradesmen involved in development, construction and supply of materials for the Mission Island/Fort Resolution project. As indicated in Table 8.2, we have assumed that 1,350 person days will be required in local construction and development labour, and 245 in the local production of required materials.

Conversations with Fort Resolution residents have led us to believe that 90% of the labour required for construction and development can be obtained locally. In addition, 70% of the cost of locally produced materials required for the project will be in the form of salaries and wages. The local trucking firms will receive some additional employment by delivering water to the park once per week and

hauling away sewage once per week. We have estimated that one-half day of employment per week would be required for each task during the park operation season, resulting in a total of 14 days.

8.1.3 Personal Income Generated

The pay scales used to calculate income levels for the project are based on the Public Service Association Collective Agreement. Accordingly, we have assumed \$35.00 per day for the Information Centre Officer, the craftsmen and truck drivers. The Park Maintenance Officer and construction development tradesmen have been included at a daily salary of \$40.00. A variety of skill levels will be required for the construction and development of the Mission Island/Fort Resolution project, e-9₀ carpenters, carpenters' assistants, manual workers and equipment operators. Because this variety of skill requirements will result in differing pay scales and because a more detailed study would be necessary to specifically determine the number of persons in each category, we have used an average figure of \$40.00 per day. In determining the pay scale for the tradesmen employed in producing materials locally, we have assumed that a higher overall skill level will be required and we **have**, therefore, allocated a figure of \$45.00 per day.

The Park Supervisor will be responsible for the day-to-day operation of the park as well as the supervision of other staff. The present government pay scale for individuals with this responsibility is approximately \$50.00 per day. Due to the uncertainty

TABLE 8.2 EMPLOYMENT AND PERSONAL INCOME
GENERATED THROUGH OPERATION OF THE
MISSION ISLAND/FORT RESOLUTION PROJECT, YEAR 1982

| <u>Position</u> | <u>Income Unit*</u> <u>Per Day</u> | <u>Person Days</u> <u>of Employment/ Season</u> | <u>Income</u> |
|--|---------------------------------------|--|---------------|
| Park Supervisor | \$50.00 | 165 | \$ 8,250 |
| Information Centre Officer | 35.00 | 110 | 3,850 |
| Park Maintenance Officer | 40.00 | 150 | 6,000 |
| Tour Guides | 50.00 | 170 | 8,500 |
| Craftsmen | 35.00 | 340 | 11,900 |
| Tradesmen Employed in Project Construction and Development | 40.00 | 1,350 | 54,000** |
| Tradesmen Employed in Producing Material for Construction and Development | 45.00 | 245 | 11,200*** |
| Water Truck Driver | 35.00 | 7 | 245 |
| Sewage Truck Driver | 35.00 | <u>7</u> | <u>245</u> |
| | | 2,544 | \$104,190 |

* In constant 1980 dollars

** It has been assumed that 60% of the \$100,000 for capital costs will be for **labour** and that 90% of that **labour** will be available within the community of Fort Resolution.

*** It has been assumed that 40% of the materials required for the development of the Fort Resolution Project will come from within the community and that 70% of the cost of producing the materials locally will result from the wages paid to local tradesmen.

TABLE 8.3 COMMUNITY ECONOMIC IMPACT:
MISSION ISLAND/FORT RESOLUTION TOURISM PROJECT

| <u>Receipts</u> | <u>1982</u> | <u>1986</u> |
|--|---------------------|--------------------|
| Estimated Park Revenue | \$3,060.50 | \$4,774.50 |
| Estimated Local Income from Salaries and Wages | \$104,190 | \$48,090 |
| • Park Supervisor | 8,250 | 7,500 |
| • Information Centre Officer | 3,850 | 3,500 |
| • Park Maintenance Officer | 6,000 | 6,000 |
| • Tour Guides | 8,500 | 12,750 |
| • Craftsmen | 11,900 | 17,850 |
| • Tradesmen | 65,200 | |
| • Truck Drivers | 490 | 490 |
| Estimated Income from Sale of Meals in Homes | \$3,000 | \$6,000 |
| Estimated Revenue from other Tourist Expenditures | \$19,220 | \$28,830 |
| • Groceries, Snacks, Supplies | 12,000 | 18,000 |
| • Gasoline | 6,800 | 10,200 |
| • Accommodation in Fort Resolution | 420 | 630 |
| Estimated Revenue from Tourist-Related Expenditures | \$350 | \$350 |
| • Accommodation in Fort Resolution by Government Officials, Consultants etc. | 350 | 350 |
| Estimated Revenue from Locally Produced Materials Required for Project Development | <u>\$4,800</u> | <u> </u> |
| Total Revenue Accruing to Fort Resolution Community | \$134,620.50 | \$88,044.50 |

TABLE 8.3 COMMUNITY ECONOMIC IMPACT:
MISSION ISLAND/FORT RESOLUTION TOURISM PROJECT

(Continued)

| <u>Expenses</u> | <u>1982</u> | <u>1986</u> |
|---|-------------|-------------|
| Capital Costs, Labour and Materials | \$100,000 | |
| Salaries and Wages | \$18,590 | \$17,490 |
| • Park Supervisor | 8,250 | 7,500 |
| • Information Centre Officer | 3,850 | 3,500 |
| • Park Maintenance Officer | 6,000 | 6,000 |
| • Water Truck Driver | 245 | 245 |
| • Sewage Truck Driver | 245 | 245 |
| Operating Costs (Supplies, Materials, Services) | \$2,500 | \$2,500 |
| Total Capital and Operating Costs of Mission Island/Fort Resolution Project | \$121,090 | \$19,990 |

Note: All estimates are in constant 1980 dollars and reflect only those increases attributable to increases in day-use and overnight use at Mission Island/Fort Resolution.

of the weather and the necessity of providing an appropriate vehicle for transporting the tour participants, we have assumed a wage of \$50.00 per day for the tour guides.

Based on our estimate of 2,544 person days of employment as determined in the previous section, we have projected that personal income accruing to Fort Resolution residents as a result of the Mission Island/Fort Resolution project will amount to \$104,190 in 1982. By 1986, when capital development will have been completed, personal income accruing to Fort Resolution residents will be approximately \$48,100 and income accruing to the project may be expected to remain at or above this level as long as the project is maintained.

8.1.4 Other Tourism Income

We have determined four sources from which additional income can be expected as a result of the tourism project development: the sale of meals in homes; the sale of groceries, gasoline and other supplies to tourists; room sales to tourist and **tourist-**related officials; and the sale of locally produced materials used in the construction and development of the project (Table 8.3).

The opportunity to dine in a **Dene** household and to experience the **Dene** way of life through live-in discussion and entertainment is expected to contribute \$3,000 to the **community** in 1982. Our estimate is based on the sale of 300 **meals** at \$10.00 per meal. We also expect that each group staying overnight at Mission Island Park will purchase approximately **\$30.00**

in groceries, snacks and supplies during their stay. Because of the distance to Pine Point and Hay River, we have estimated that each group will also purchase approximately 10 gallons of gasoline while in Fort Resolution. The November 1980 price per gallon was \$1.68. The purchase of gasoline would, therefore, contribute an additional \$6,800 to the community.

We anticipate that a small proportion of visitors to Fort Resolution would prefer staying in more conventional type accommodation than that available in Mission Island Park. We have estimated that tourist visitation to the community will account for 12 room-nights (\$420) during the first season in which the park is in operation. At the same time, the development of the Mission Island/Fort Resolution project will also generate increased visitation by government officials, consultants and researchers. We have estimated that an additional 10 room-nights (\$350) will result from this type of visitation.

The sale of locally produced materials used in the construction and development of the project is expected to leave another \$4,800 in the community economy. It should be noted that this sum is exclusive of the salaries and wages paid to local tradesmen in order to produce these materials.

8.1.5 Total Estimated Capital and Operating Costs

As indicated in Chapter 6, the total capital cost for the project, exclusive of road construction! will amount to \$448,800 (in constant 1980 dollars). This

cost is to be phased over a five-year period from 1981 until 1985 as shown below:

| <u>1981</u> | <u>1982</u> | <u>1983</u> | <u>1984</u> | <u>1985</u> |
|-------------|-------------|-------------|-------------|-------------|
| \$100,000 | \$100,000 | \$94,500 | \$89,400 | \$64,900 |

Capital costs have been estimated as 60% **labour** and 40% materials.

The total estimated operating costs for the park and information **centre** during the first five years of operation from 1982 until 1986 will be approximately \$101,100 (in constant 1980 dollars). We have estimated totals for each year as indicated below:

| <u>1982</u> | <u>1983</u> | <u>1984</u> | <u>1985</u> | <u>1986</u> |
|-------------|-------------|-------------|-------------|-------------|
| \$21,100 | \$20,000 | \$20,000 | \$20,000 | \$20,000 |

Construction and operation of the park and information **centre** between 1981 and 1986 will require a total outlay of approximately \$549,900^(1.) A portion of this, approximately \$19,350 will be returned as gate receipts"

Our projections indicate that the park will operate at a deficit from year one through year five. Unless visitation is much higher than we expect or the user fees are substantially **increased**, it is **unlikely** that the park will show a profit at any time during this period. The 1982 deficit will be approximately \$18,030 while the deficit in 1986 will be \$15,216.

The impact of the overall project on Fort Resolution, however, will be positive. The development project **will** generate increased revenue for the community

(1) not including road construction costs.

above and beyond that attributed directly to Mission Island park. We estimate that over 500 days of employment and \$43,000 in revenues are possible in the first year through the guided tours, meals in the home, sale of handicrafts, groceries, gasoline and room sales, none of which would occur without the Mission Island/Fort Resolution project.

At the same time, more than 70% of the capital cost of developing the project will go to the community through the use of local labour and the local production of required materials.

8.1.6 Long-Term Impact

Table 8.3 indicates that in 1986, when development has been essentially completed, about \$83,300 in revenue will accrue to the community as a result of an expenditure of about \$15,200 by the Territorial Government⁽¹⁾. This annual benefit to the community may be expected to continue as long as the people of Fort Resolution are prepared to maintain and develop programs and services of interest to tourists, and as long as the Territorial Government is prepared to contribute a relatively minor annual subsidy. over a ten year period, after 1985, this would amount to about \$152,000 in Territorial subsidies and about \$833,000 in community revenue.

In addition, the Community will have accrued about \$314,000 in revenues due to capital expenditures between 1981 and 1985⁽²⁾; and further, between 1982

(1) total revenue of \$88,044 less park revenue of \$4,774 refunded to G.N.W.T., and total expenses of \$19,990 less \$4,774 refunded to G.N.W.T.

(2) about 70% of capital costs are expected to accrue to the Community.

and 1985 the Community will accrue annual revenues ranging from about \$40,000 to about \$80,000 as a result of salaries and wages for project employees, income from meals in' homes and revenue from tourist expenditures.

8.2.1 Effects on Local People

The introduction of capital development funds and subsidies for operation of the tourism project are expected to produce the equivalent of 2500 to 3000 man-days of work each season during the period, 1982 to 1985, when construction is underway and about 1700 man-days of work each year after construction is completed. These substantial increases in local employment may be expected to produce strong, positive local benefits. Furthermore, opportunities to contribute to the proposed tourism project, either as volunteers or for remuneration, will be available to tradesmen, artisans, crafts people, guides, musicians, construction workers, home makers, shop keepers and historians.

The success of the project will rest, in the final analysis, on the desire and initiatives of the people of the community. They can, if they desire, create an attractive and memorable destination for visitors to the Territories. Angus Beaulieu, for one, has a good understanding of what is needed to capture the interest and imagination of visitors. If this spirit spreads to the whole community, a quite remarkable tourism project will develop.

There is however, a risk that the spirit will not spread and that people may tire of the project. The Tourism and Parks Committee and the Department of Tourism and Economic Development must continuously stimulate and monitor the project to ensure that local initiatives and enthusiasm do not sag.

8.2.2 Historic Elements

proposed re-use of the Mission House and **improvements** at the old mission site on the island will be positive benefits to the Community. In a similar way, studies and explorations to identify and suitably mark the lime kilns, old trading post sites on the north side of the island, and redevelopment of the Snye are expected to stimulate the enthusiasm and imagination of many people. Father Menez might lead the way in this work.

8.3 ENVIRONMENTAL IMPACTS

8.3.1 Vegetation

Trees and plants grow slowly on the island, and every care should be taken to remove only those trees and shrubs which must be taken down to establish sites for **campsites**, buildings and pleasant roads. A landscape architect should be retained to ensure that only essential clearing is undertaken and that tree screens are maintained for privacy around campsites as well as to enhance views of the surrounding area.

Some grading will be required in order to establish level areas for campsites and cabins. These changes in land profiles and the replanting of graded areas must be carried out under the supervision of landscape architects, engineers and architects who are sensitive to park requirements in a northern setting. When such work is completed it should enrich the existing natural features of the island.

8.3.2 Birds, Animals and Fish

The anticipated small numbers of visitors to the island will have little effect on wildlife. Bears are rarely found in the area and if garbage is carefully handled, no increase is foreseen in visits by bears. Guides, information leaflets and tour brochures will caution visitors on proper conduct with respect to wildlife and vegetation.

8.3.3 Town Improvements

As the tourism project develops and gains momentum, we foresee a new local interest in townscape. Local initiatives will undoubtedly be taken to **instal** street signs, to plant trees, put up flags, to clean up unsightly areas and generally to further enhance the attractiveness of the settlement.