

5.2.3 Development Scheme by the Year 1995

1) Target Number of Tourists and Guest Night

The number of tourist arrivals to Desaru New Tourism Core is targeted at 330,600 persons in 1995 which is equal to 5.4 times of that of 1987 as shown in Table 5.2.1. The Japanese market is expected to be the greatest, accounting for 56% of the total arrivals, followed by Singaporean for 26%. The main reason for the rapid increase of Japanese tourists is attributable to the increasing Japanese tourists to Singapore, about 15% of whom is expected to visit Desaru via Singapore as an arranged course of group package tour. The achievement of the target requires close cooperation with Japanese travel agents.

The average length of stay is targeted to be 2.34 days in 1995 which is equal to 1.33 times of that of 1987. The tourist stay will be lengthened in the future because of the possible increase of holiday availability as well as disposable income. By the year 1995, however, it is rather difficult to expect a rapid increase of length of stay for Malaysian, Singaporean, and Japanese. Other foreigners including Australians, Europeans, and Americans, however, have a potential to lengthen their stay through the enhancement of attractiveness of Desaru.

Hotel guest nights in 1995 is estimated based on the target number of tourists and the average length of stay explained above. Total guest nights will amount to 772,900 which is equal to 6.9 times of that of 1987. The percentage share of Japanese accounts for 48%, followed by Singaporean for 31%, and Other Foreigners for 15%.

2) Target Number of Day Trippers

The number of day trippers to Desaru amounted to 130,000 persons in 1987. These are mainly visitors to seashore as well as small local tourist spots in Desaru. It is expected in the future that the number of day trippers will greatly increase in accordance with the introduction of a ferry link between Tg. Belungkor and Changi Point, and recreation and entertainment facilities in Desaru New Tourism Core.

The number of day trippers in 1995 is assumed at 2.6 million persons based on the rough estimation as shown in Table 5.2.2. The major market is Singaporeans, amounting to 2.3 million persons and the remaining is Malaysian.

Table 5.2.2 Target Number of Day Trippers

		Johor	Singapore	Total
Urban Population	(million)	1.26	2.84	
Potential Coverage	(%)	75	100	
Population Covered	(million)	0.95	2.84	
Potential Segment	(%)	44	60	
Potential Day Trippers	(million)	0.416	1.704	2.120
Holidays in a Year	(days)	130	135	
Holiday Trip Generation	(%)	5	10	
Holidays for Trip	(days)	6.51	13.50	
Yearly Day Trippers	1) (million)	2.71	23.00	25.71
Share of Desaru	(%)	10	10	
Yearly Day Trippers to Desaru	(million)	0.27	2.30	2.57

Note : 1) Yearly Day Trippers = (Potential Day Trippers) X (Holidays for Trip)

Source : JICA Study Team

3) Development by the Year 1995

It will take a long time before the Desaru New Tourism Core is developed into a full-scale self-contained resort complex. The period up to 1995 can be defined as the first stage of development as stated in Section 5.1.2. It is required, for the successful debut to the international tourist market, that a set of quality core facilities be presented in an attractive way, somewhat different from the competing resorts.

Fig. 5.2.4 illustrates the proposed development scheme of Desaru New Tourism Core in the year 1995. The development area extends to almost all the area for the long term development. The basic idea is to introduce core attractions of the structure components shown in Fig. 5.2.3 in its debut period. This way of development will make the debut more noticeable for international tourists as well as day trippers though it incurs larger investment at the beginning than otherwise.

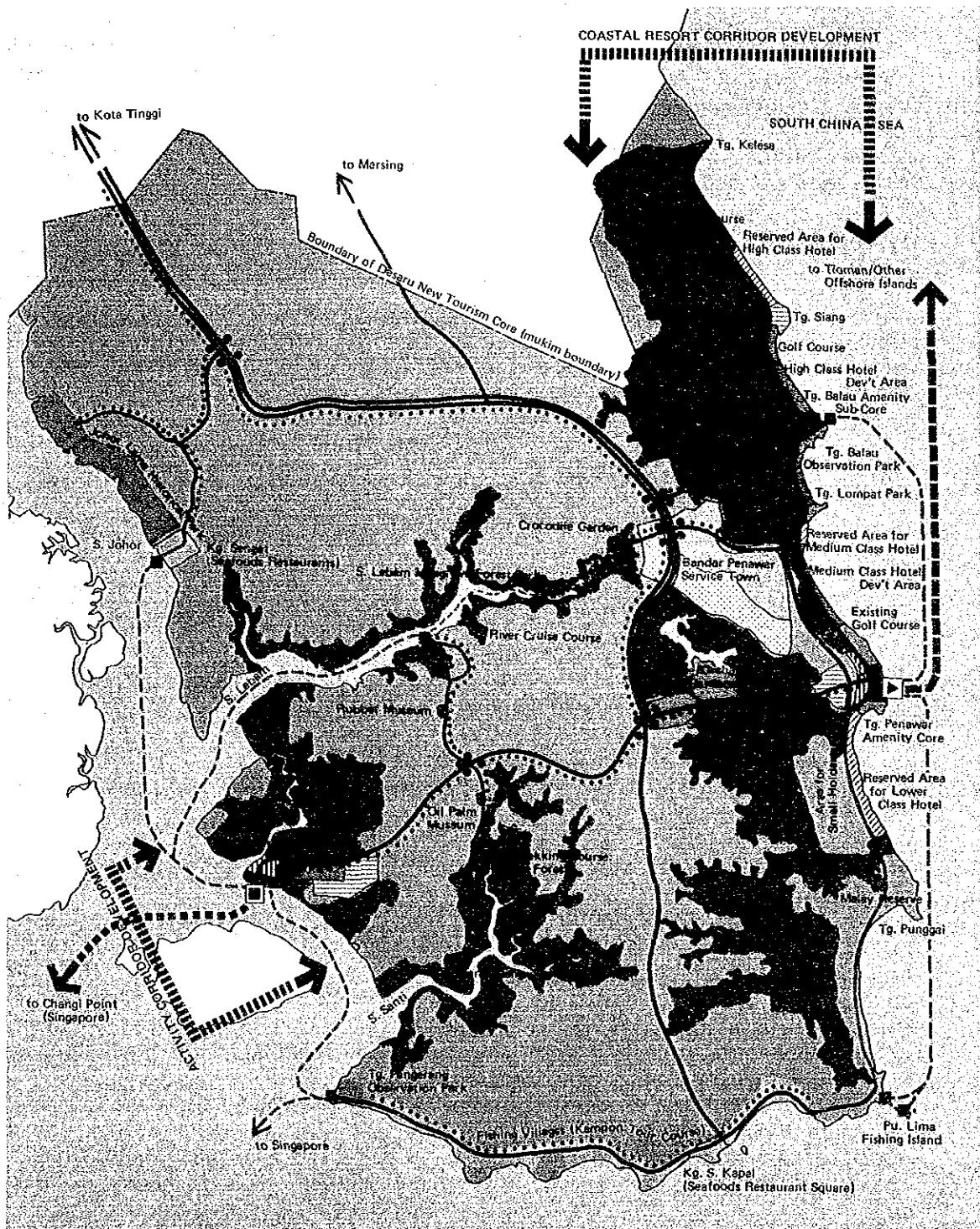
The Desaru New Tourism Core by the year 1995 will be composed of the following destination zones:

- Coastal Resort Corridor
 - Accommodation Area
 - Amenity Core
 - Amenity Sub-Core
- Day Tripper Activity Corridor
 - Tg. Belungkor Gate Area
 - Rubber and Oil Palm Museum Area
 - Orchard and Orchid Garden around Lakeside Park
- Other Activity Zones
 - Lebam and Santi River Tourism Area
 - Johor Lama Tourism Area
 - South Tourism Area
 - Pulau Lima Fishing Island

Development of infrastructure is very important during the beginning stage by 1995. This includes the road network, jetty construction, water supply and treatment system, power supply, and telecommunication network. Every kind of network as well as system is required to be ready for the possible expansion in the future though, at the same time, the initial investment must be budgeted carefully. Investment on hotel construction is another major investment in this stage. About 50% of investments will be borne by private investors.











Future development after 1995 is to concentrate on introducing more attractions and improving the total resort complex. It will be necessary to further elaborate the development scheme of each area by reflecting the requirements of tourists and day trippers visited Desaru New Tourism Core by 1995.

Fig. 5.2.4 Development Scheme of Desaru New Tourism Core by 1995



LEGEND

1995 after 1995

- | | | | | |
|---|---|--|---|--|
|  |  | Facility Oriented Development Area |  | Roadside Landscaping/Special Planting for Noda/Gate Identification |
|  |  | Hotel/Accommodation Development Area |  | Jetty for Car Ferry/Major Jetty/Minor Jetty |
|  |  | Open Space Oriented Development Area | | |
|  |  | Service Town/Kampon Development and Improvement Area | | |

5.3 Development Components of Desaru New Tourism Core

5.3.1 Coastal Resort Corridor

The Coastal Resort Corridor is designed to be developed as a self contained resort complex of quality standard. The long shoreline and tropical rain forest provides an excellent natural setting for the complex.

The Coastal Resort Corridor comprises the Accommodation Area, Amenity Core and Sub-Core, Park and Garden Area, and Bandar Penawar Town.

1) Accommodation Area

The Accommodation Area is to be located along the coast line for attaining easy access to the beach and good view from hotel rooms. The whole stretch of the beach was evaluated in view of the conditions of beach, geography, forest, and land use. As shown in Fig. 5.3.1, the stretch is divided into three sections; high class hotels in the north, middle class hotels in the centre and lower class hotels in the south.

The hotel rooms required in the year 1995 is estimated at 2,100 rooms;

- high class hotels : 800 rooms (new construction)
- middle class hotels : 1,200 rooms in total
 - 880 rooms (new construction)
 - 100 rooms (expansion of existing hotel)
 - 234 rooms (renovation of existing hotel)
- lower class hotels : 100 rooms (existing chalets)

It is proposed that new hotels of high and middle classes have 250-300 rooms each with possible future expansion of 100-120 rooms. For securing open space, the number of hotel rooms per hectare is recommended at 40 for high class hotel and 50 for middle class. The height of buildings should be lower than 20 metres in harmony with the surrounding environment.

Fig. 5.3.2 illustrates a typical sketch for a high class hotel. It is proposed, for better living environment and scenery, to keep a setback line of 60 metres from the seaside pedestrian way, 40 metres from the access road, and 30 metres from the neighbouring boundary. It is also important to introduce design criteria for landscaping and gardening of hotel lots.

The Accommodation Area contains enough space for the future expansion. 2,100 rooms by the year 1995 are accommodated in the beach stretch of 3.4 kilometres which is equal to about 20% of the whole stretch. The whole area has the capacity for around 20,000 rooms in terms of area size.

Fig. 5.3.1 Accommodation Area

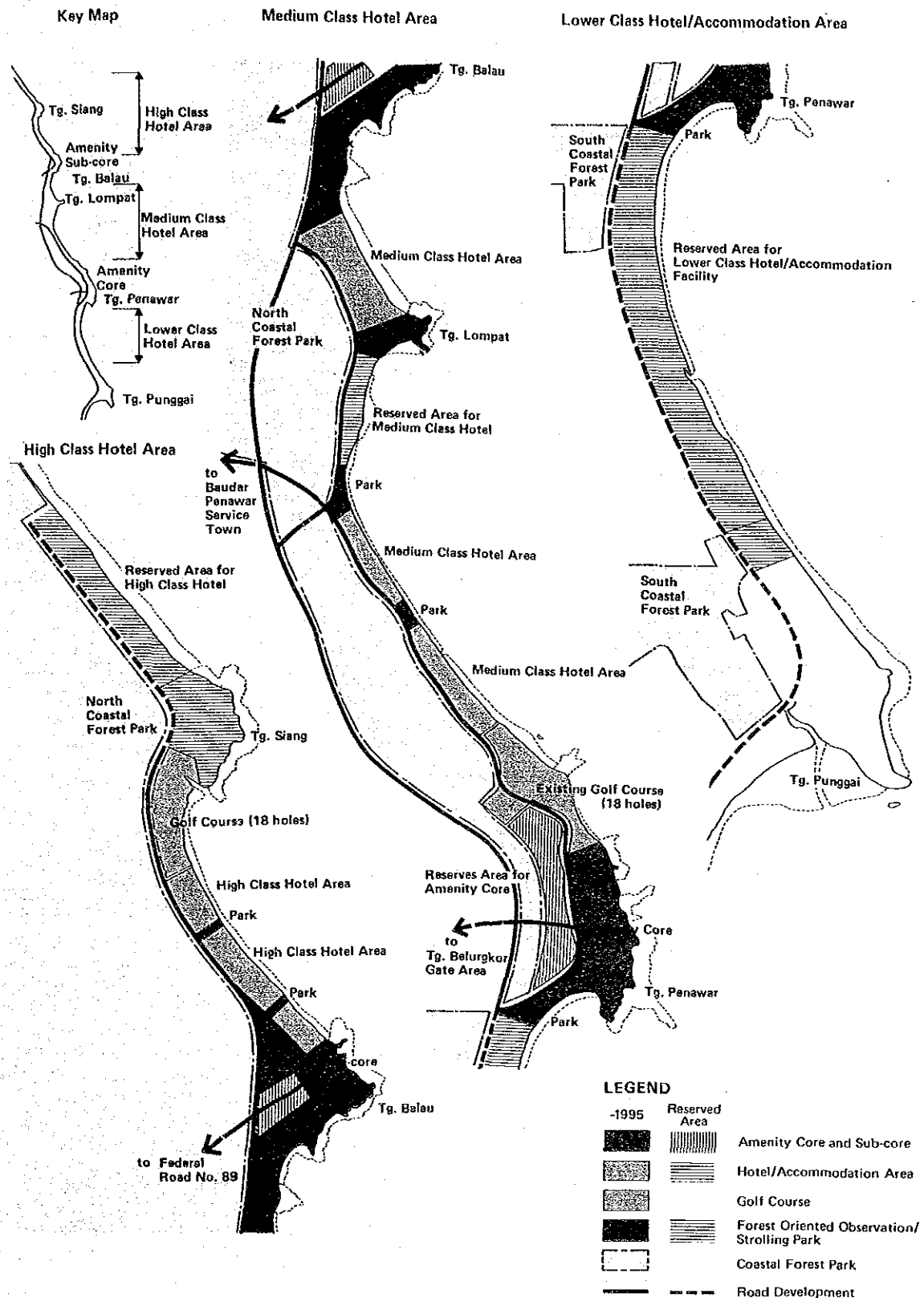
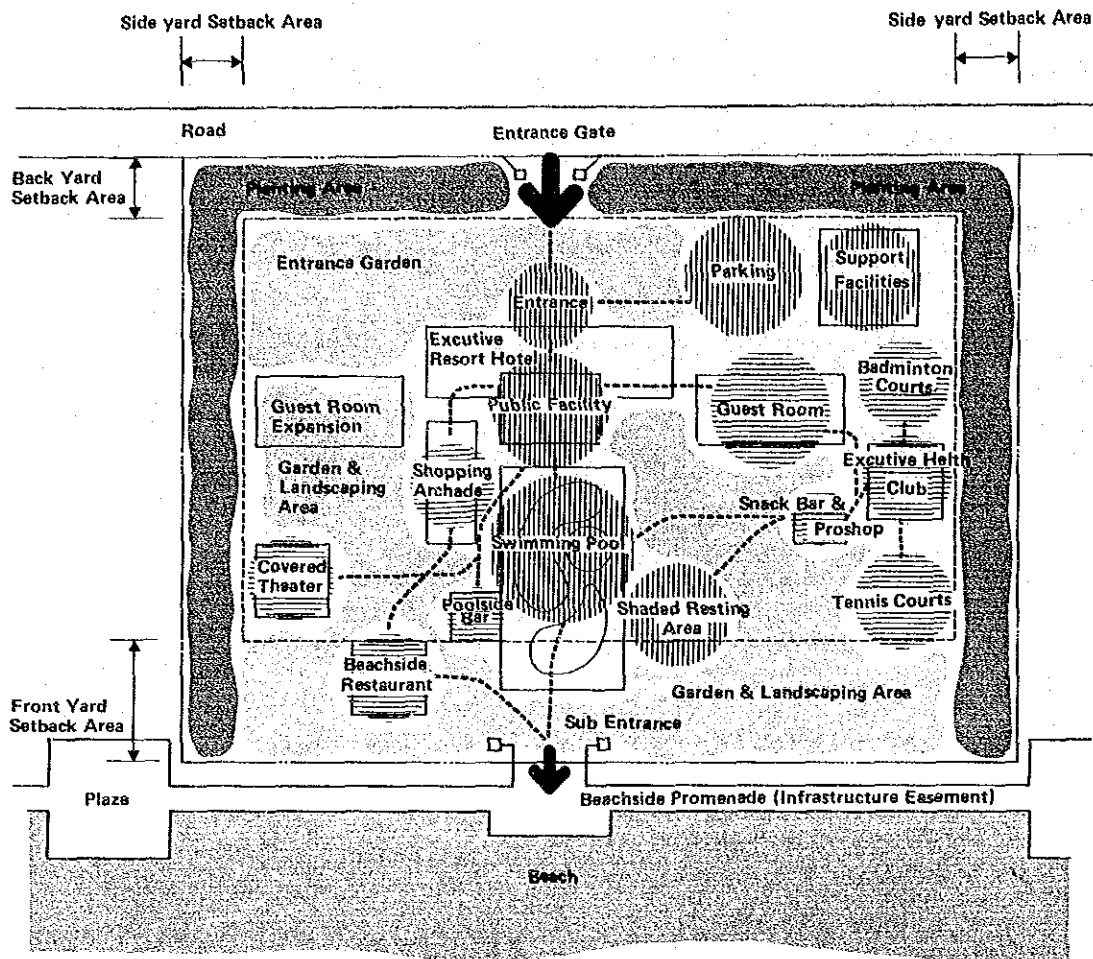


Fig. 5.3.2 A Typical Sketch for High Class Hotel



2) Amenity Core and Sub-Core

The Amenity Core is planned to be located at the intersection of Coastal Resort Corridor and Activity Corridor at Tg. Penawar for the common space for both hotel guests and day trippers. The main function is to offer opportunities for various kinds of amenities for hotel guests. It comprises marine/beach/inland sports and recreation activities, cultural, as well as artistic performances, and other kinds of activities like shopping, eating, and communicating with other tourists.

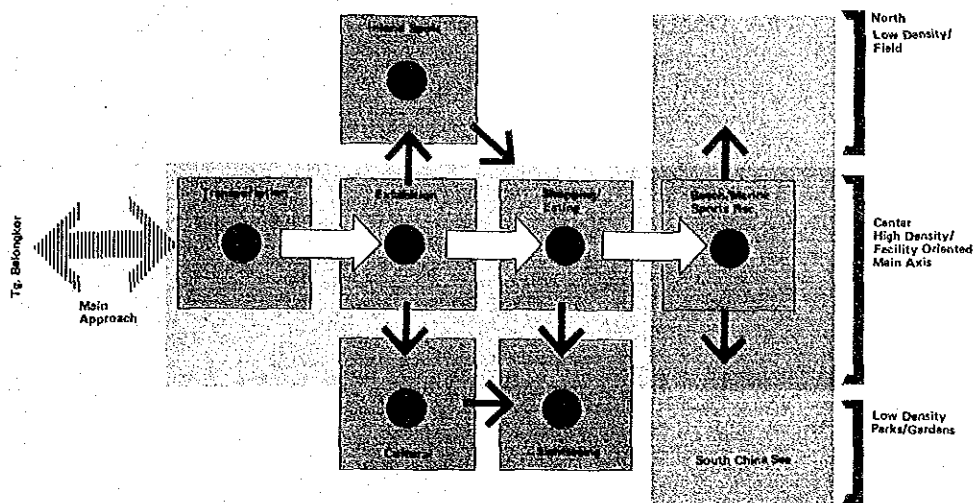
Fig. 5.3.3 illustrates a proposed structure of the Amenity Core. The main entrance at the west end is connected to Tg. Belungkor Gate Area, and the opposite side is facing to the east coast. The exhibition facility performs a central function of the Amenity Core. Fig. 5.3.4 shows the facility location in the Amenity Core.

The Amenity Sub-Core is designed to serve mainly the hotel guests in high as well as middle class hotels. It is desirable that the sub-core offers personal quality services to the consumers in a pleasant atmosphere without crowds, lines, and hassles. It is planned to be located between the high and middle class hotel areas.

As shown in Fig. 5.3.5, the beach and marine sport facilities are situated along the coast. The shopping promenade and restaurant plaza are

arranged along the access road from the transport terminal at the entrance to the shoreline. It is also necessary to introduce outdoor sport facilities and theatres with different features with those of Amenity Core for the choice of hotel guests.

Fig. 5.3.3 Conceptual Structure of Amenity Core



3) Forest Park Area

The western border of the Coastal Resort Corridor is covered with tropical rain forest as was shown in Fig. 5.2.4. The forest is important for the zone in the following aspects:

- protection from erosion
- a variety of wildlife, birds, and insects as well as vegetation in a large area
- protection from extremes of temperature and wind
- distinctive scenery in contrast to shorelines and headlands.

In the Coastal Resort Corridor, there are two forest parks in the north and the south. These forests should be conserved to the maximum extent possible. Some areas may, however, be used for tourist attractions such as nature trails. The variety of wild life is one of the outstanding features of the area. It is essential to preserve the forest chain from Desaru to Rompin/Kota Tinggi on a habitat for this wild life. It is required, however, for the safety of tourists that buffer strips be provided between the forest and tourism zones.

4) Bandar Penawar Service Town

Bandar Penawar Service Town is planned by KEJORA with a target population of 35,000 persons. It is desirable to develop this town in the context of the development of Desaru New Tourism Core which is expected to absorb a substantial number of employees and develop related industries. It is expected that the development of Bandar Penawar Service Town will be accelerated through the close inter-relationship with the planned tourism development. The planned size of the town is large enough to accommodate the demand, however, it is preferable to reserve an area for the possible expansion in the long term. It is recommendable to reserve the area between the southern edge of the planned location and the northern boundary of watershed forest for the existing water reservoir.

Fig. 5.3.4 Facility Location in Amenity Core

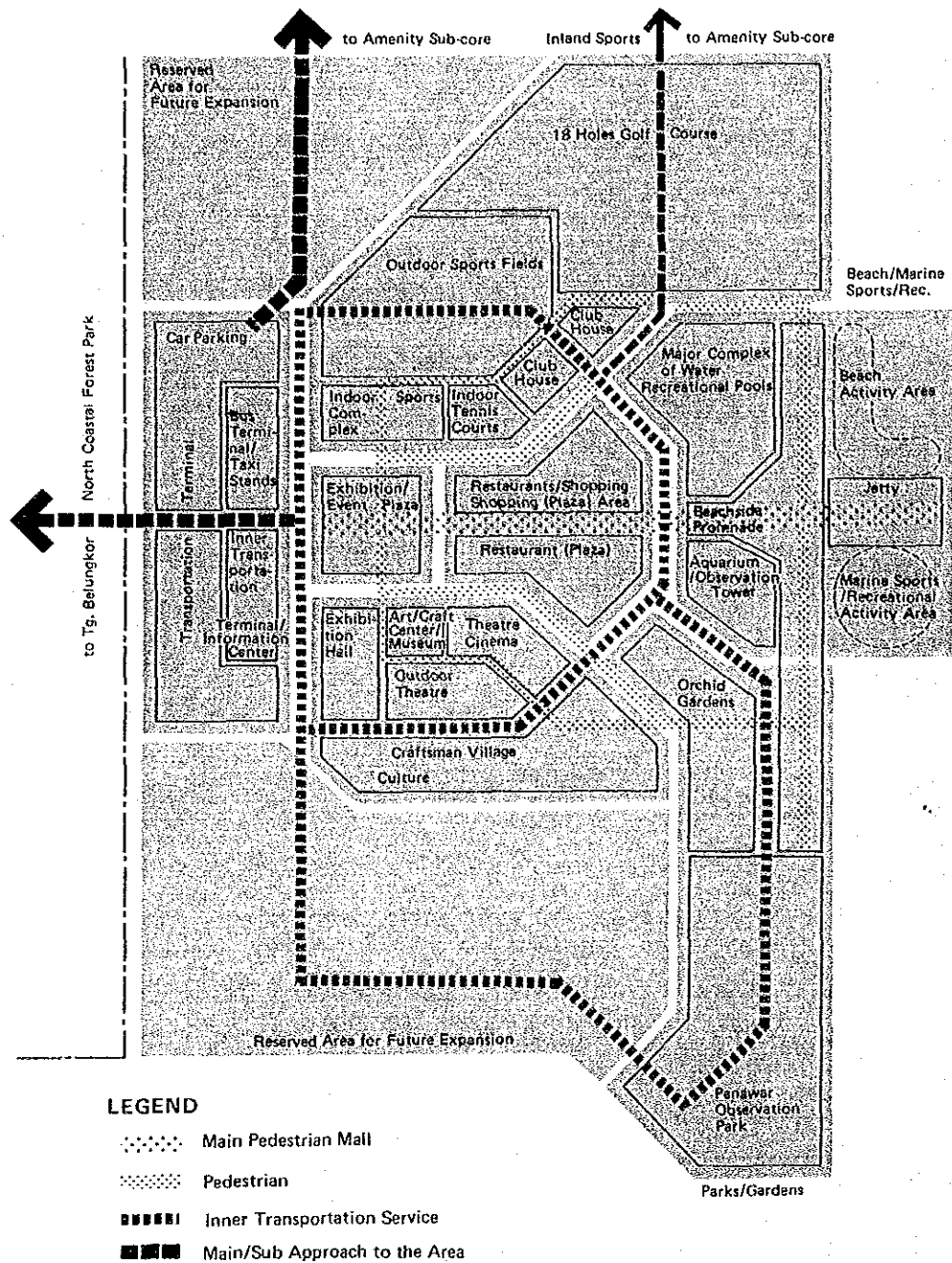
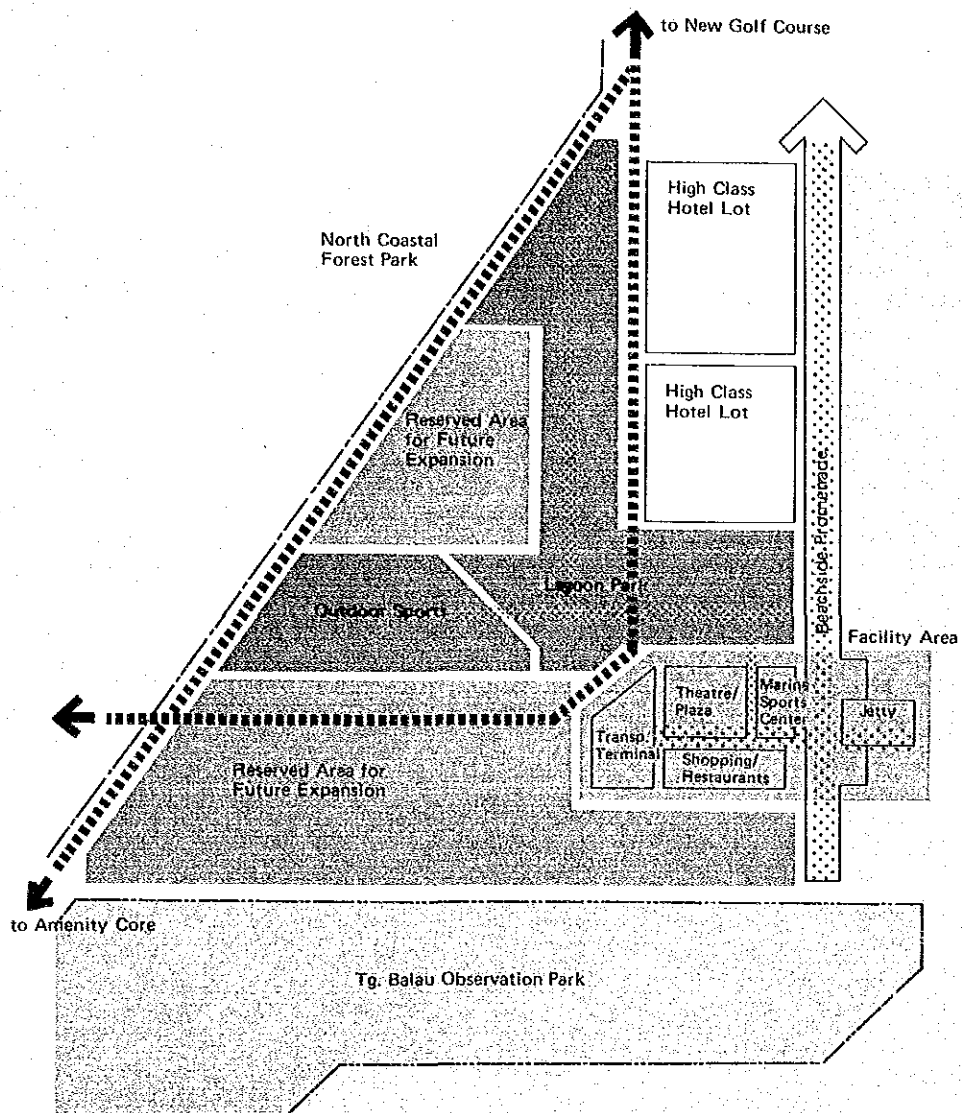


Fig. 5.3.5 Facility Location in Amenity Sub-core



5.3.2 Activity Corridor

Activity Corridor connects Tg. Belungkor of the main entry point to Desaru New Tourism Core from Singapore with Amenity Core in Coastal Resort Corridor. The Federal Road 89 is the main spine of the corridor on which international tourists and day trippers from Singapore move to their various destinations in Desaru New Tourism Core.

Major attractions in the corridor are Tg. Belungkor Gate Area, Orchard and Orchid Gardens around Lakeside Park, and Museums for Rubber and Oil Palm as shown in Fig. 5.3.6. In order to further enhance the attractiveness, some tourism resources in the circumference are to be developed as optional destinations for half day stay. These are Johor Lama Historical Park, Sg. Lebam River Cruise Area, the Local Street along South Beach, and Pulau Lime Fishing Island.

1) Tg. Belungkor Gate Area

Tg. Belungkor Gate Area is the main transportation terminal of the Desaru New Tourism Core. The ferry jetty, terminal building and interface with land transportation service are the minimum necessities.

The gate area is to be developed as a main destination of day trippers and weekenders as well by making the most of the natural environment near the river. The area is an amenity centre mainly for day trippers and weekenders just as Amenity Core for hotel guests. It is expected that the development of the dual corridors for hotel guests and day trippers will contribute to keep the Accommodation Area calm and tranquil though they can enjoy bustle and festive atmosphere at the intersection of both corridors. Fig. 5.3.7 illustrates facility location in Tg. Belungkor Gate Area.

Fig. 5.3.6 Facility Location in Tg. Belungkor Gate Area

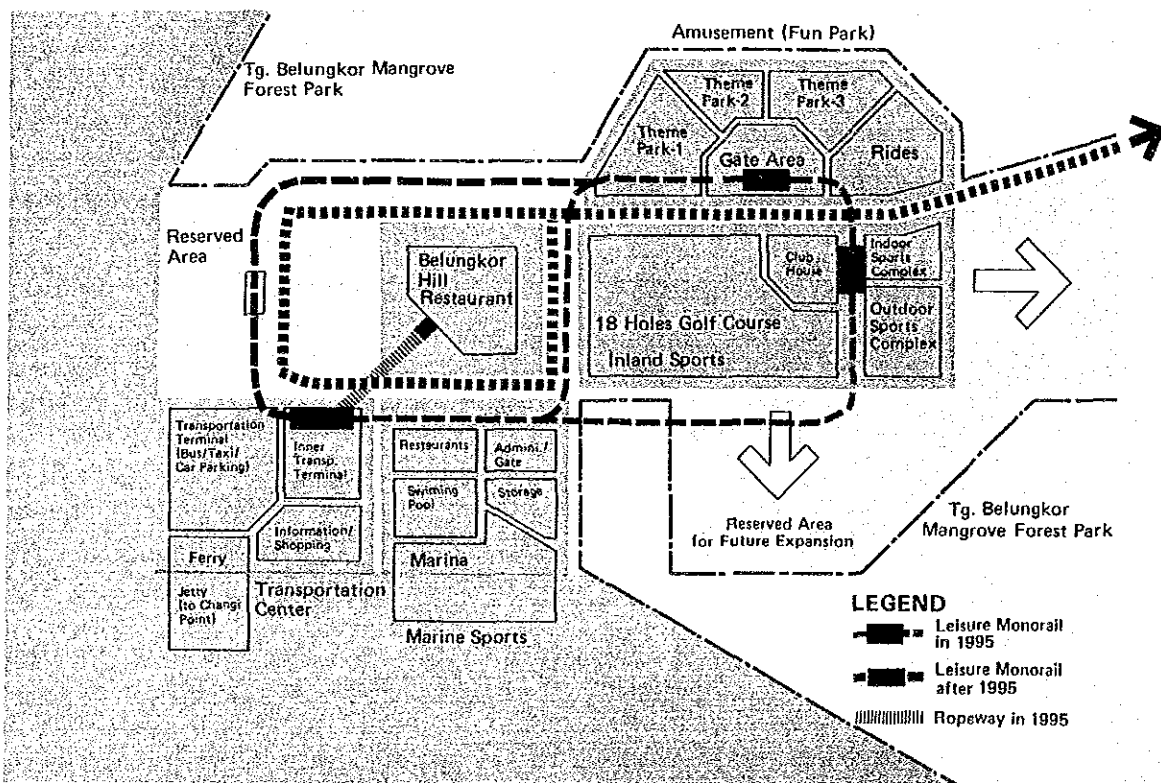
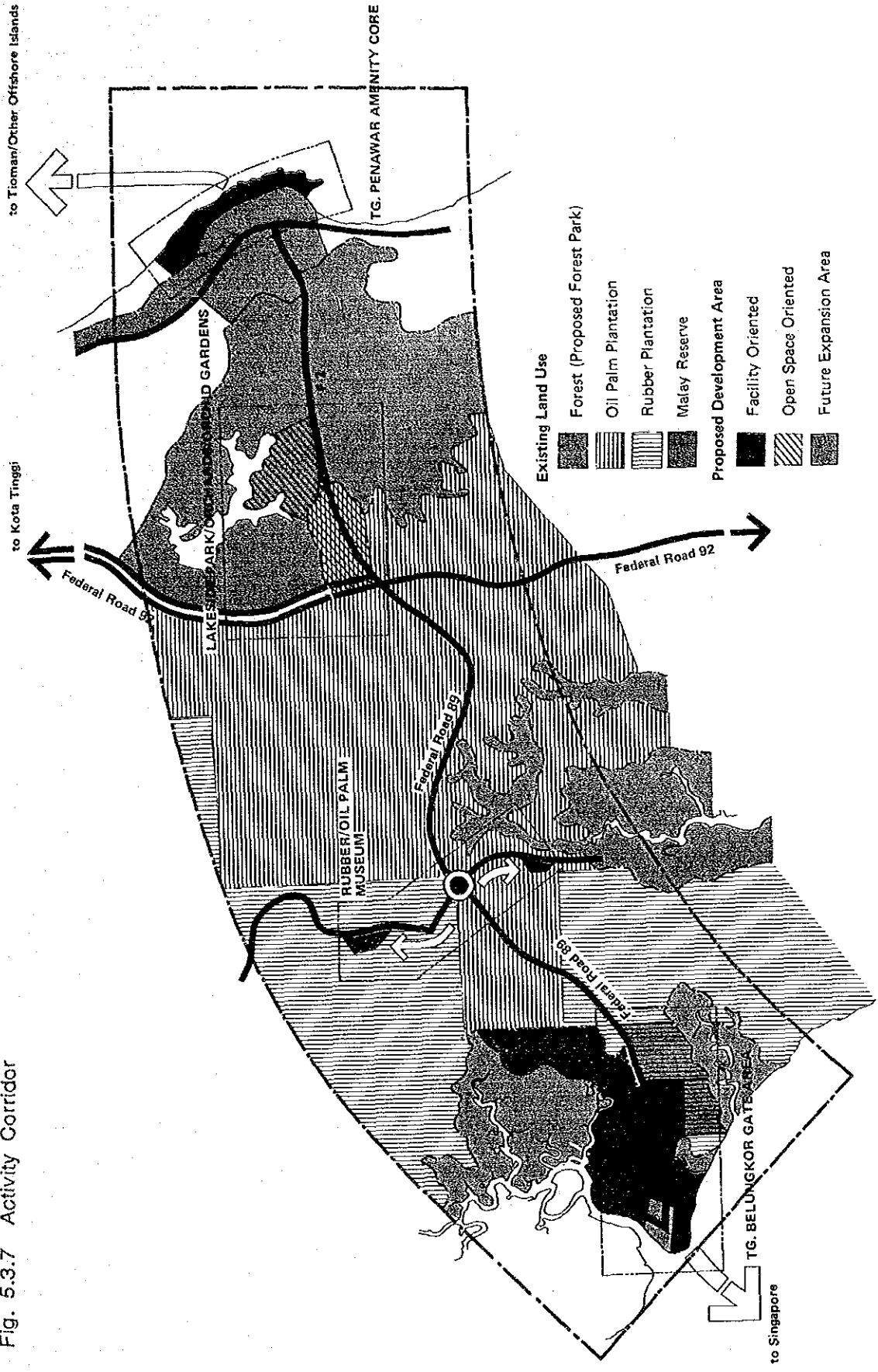


Fig. 5.3.7 Activity Corridor

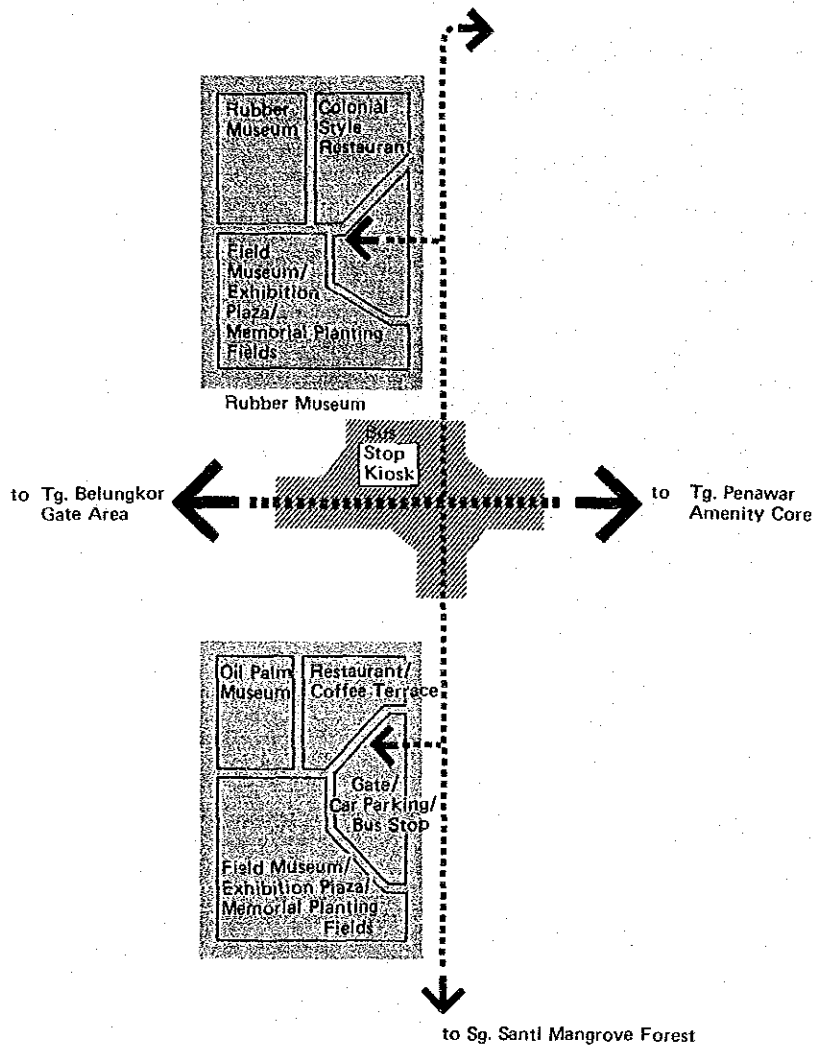


2) Museums of Rubber and Oil Palm

Rubber and oil palm are typical agricultural products in Malaysia and also in KEJORA territory. International tourists have little understanding of these products though they are aware of them. It is desirable to prepare a place where visitors can experience the whole process of planting, processing, final products, and the international market. It is advisable to introduce audio/visual equipment for easy and better understanding, and souvenir sales.

Fig. 5.3.8 illustrates the proposed facility location of rubber and oil palm museums. They are located at inbetween of Tg. Belungkor Gate Area and the Amenity Core for easy access of visitors on their way to and from other destinations.

Fig. 5.3.8 Facility Location of Rubber and Oil Palm Museums

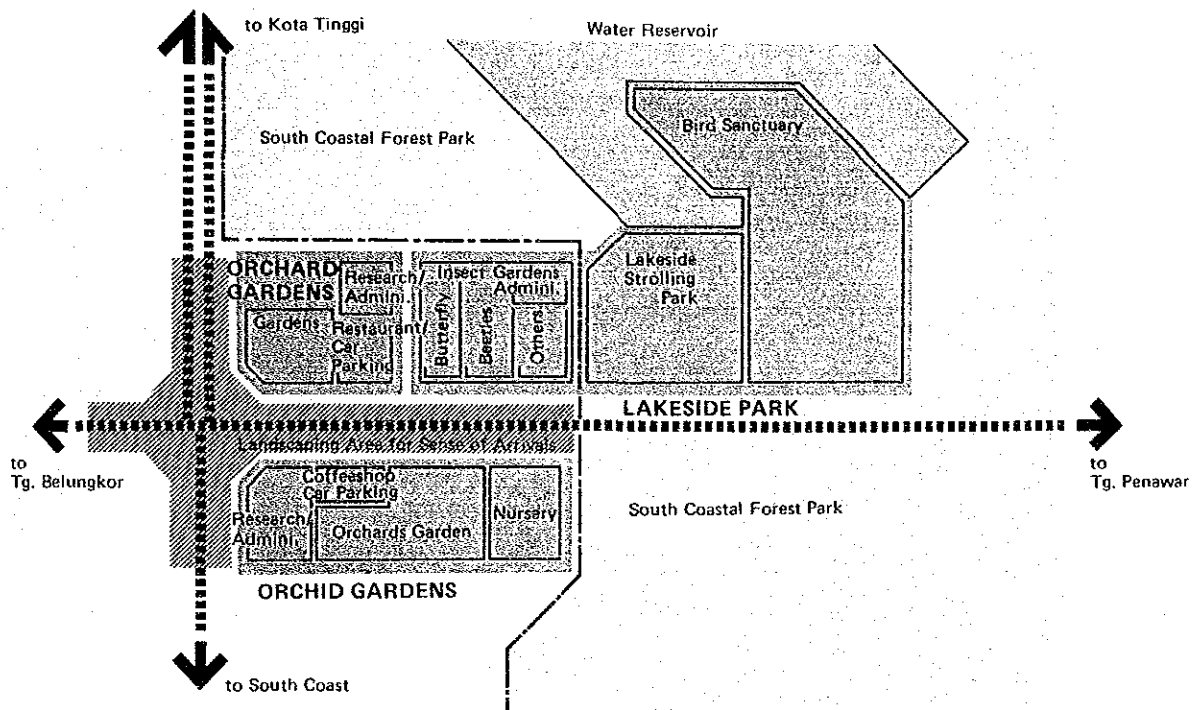


3) Orchard and Orchid Gardens around Lakeside Park

As shown in Fig. 5.3.9, this park is located to the immediate west of Amenity Core. The orchard and orchids are most promising agricultural products in relation to tourism. They can be used as souvenirs for visitors and supplies for hotels, restaurants, and shopping centres with both native fruit and flowers.

The area around the water reservoir has potential for development as a lakeside park. The most promising attractions are the bird sanctuary, strolling paths, and insect gardens in view of the coexistence with nature.

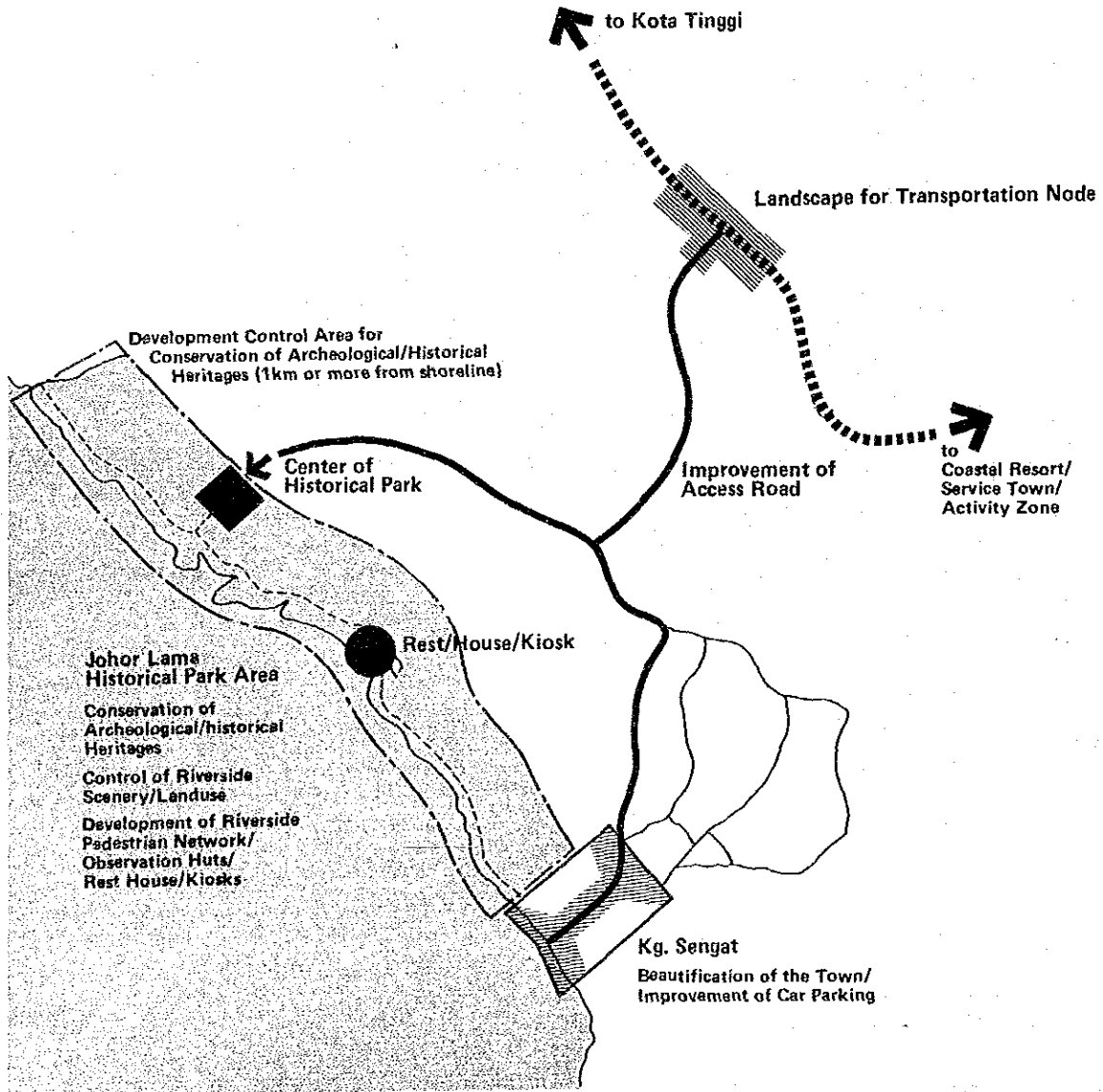
Fig. 5.3.9 Facility Location of Lakeside Park



4) Johor Lama Historical Park

Johor Lama is the location of the ruins of the Johor Empire tomb and fort. The park is intended to preserve the ruins and exhibit them to visitors. The magnificent view of the Johor River provides a scenic background for the park. It is also proposed to develop a local promenade of seafood restaurants by making use of the fishery as well as agricultural products produced in the vicinity. Fig. 5.3.10 illustrates the facility location of the park.

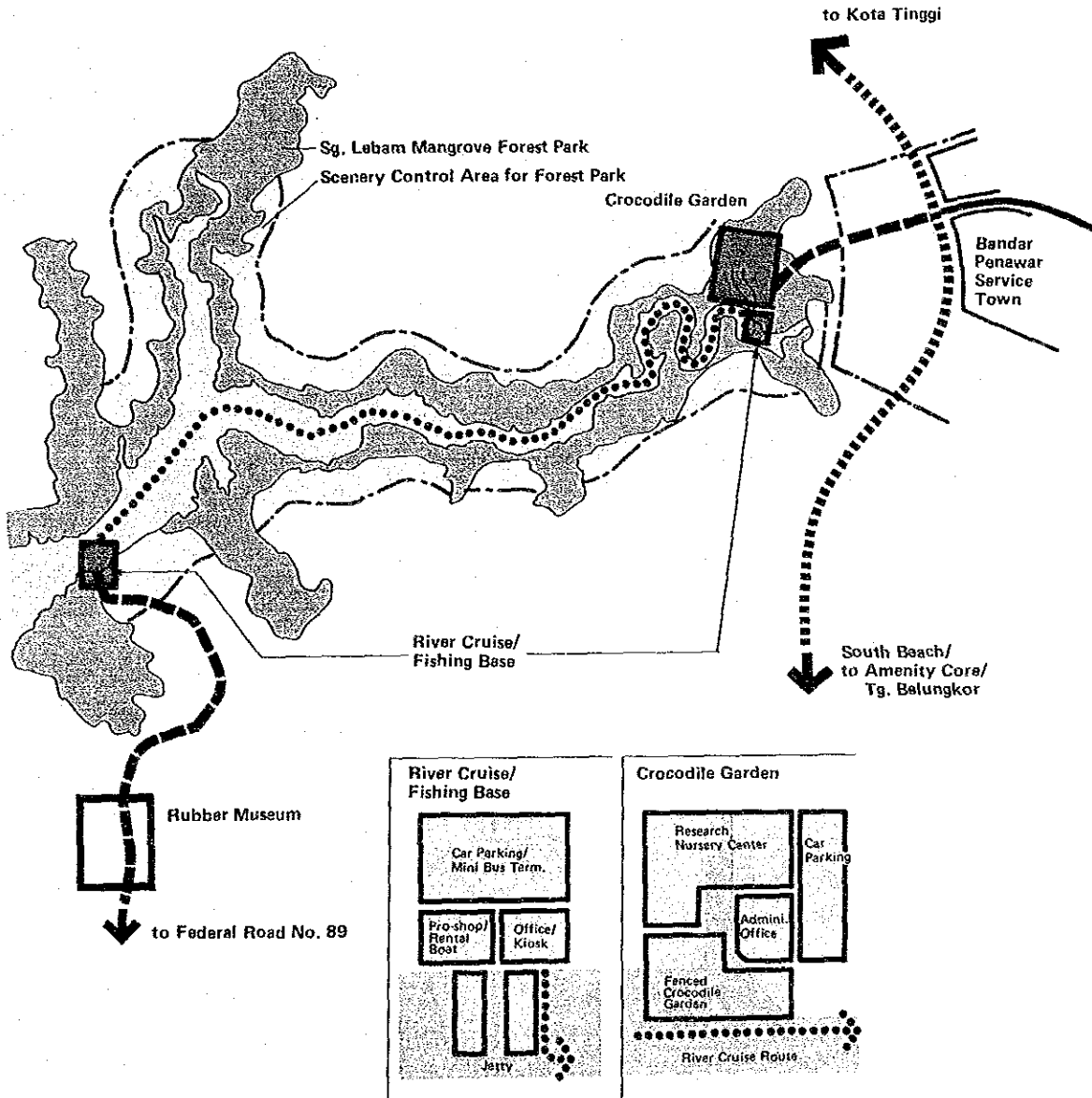
Fig. 5.3.10 Facility Location of Johor Lama Historical Park



5) Sg. Lebam River Cruise Area

Sg. Lebam, a tributary of Johor River, is surrounded with a mangrove forest which is an attraction to international tourists. It is proposed to develop a facility for river cruises and a crocodile garden. Crocodile farming can be a tourist attraction in the tropics as well as a contribution to regional economy in terms of souvenir of leather craft. Fig. 5.3.11 illustrates the facility location of the area.

Fig. 5.3.11 Sg. Lebam River Cruise Area

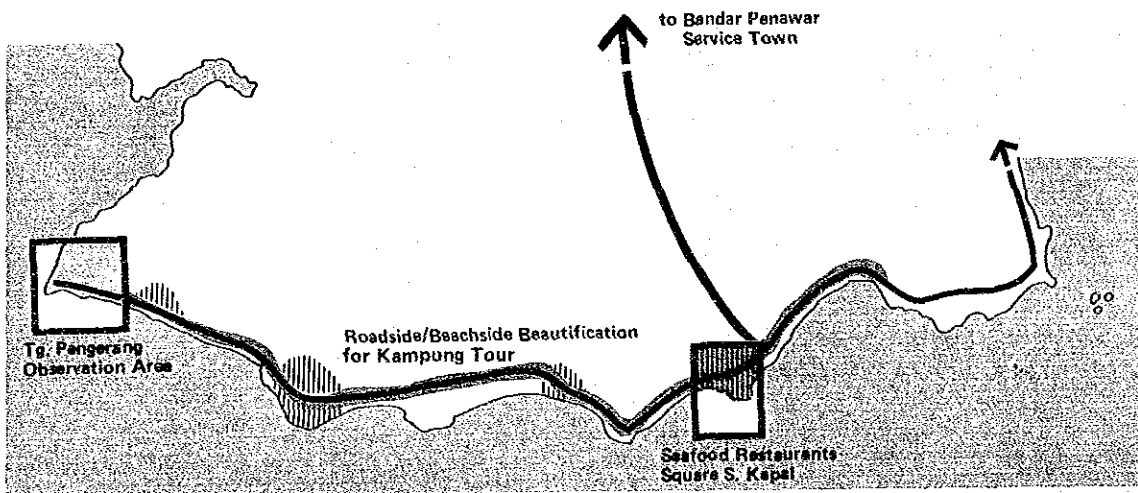


6) Local Street along South Beach

Fig. 5.3.12 shows local street along the south beach. Main attractions are Tg. Pengerang and Kg. Seleng. Tg. Pengerang has some fort on the top of a small hill which has a good view of the Strait of Singapore as well as a distant view of Singapore. It is proposed to develop the area as a small scale observation park.

Traditional Malaysian kampong life is found in the villages along the south coast. Residents are engaged partly in fishing and partly in agriculture. Local shops and restaurants dot the coastal street. It is proposed to improve this area into an optional destination of international tourists.

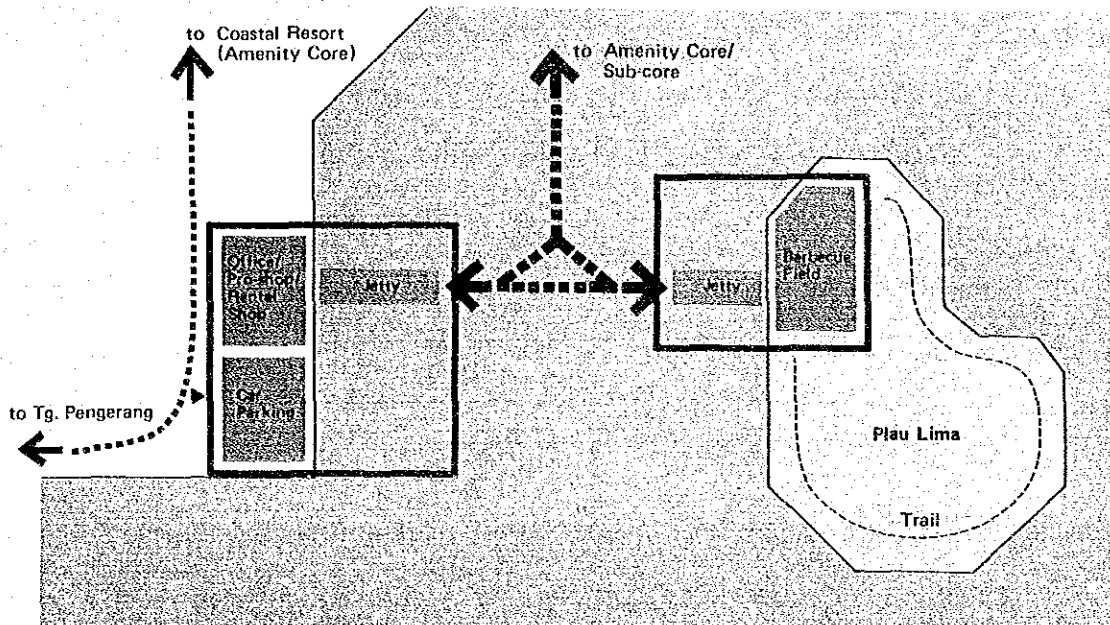
Fig. 5.3.12 Local Street along South Beach



7) Pulau Lima Fishing Island

Pulau Lima is situated at the intersection of the South China Sea and Strait of Singapore. Since the sea around the island is rich in fish, KEJORA is planning to develop the island into a fishing spot as shown in Fig. 5.3.13. The island is so small that facilities to be developed will be confined to a jetty and small scale resting facilities for a day visit.

Fig. 5.3.13 Facility Location of Fishing Islands



5.3.3 Landscaping

The Desaru New Tourism Core can be characterised by its complete greenery over a vast land, which is unique for a resort. International tourists who visit Malaysia generally expect to see that Malaysia is rich in natural beauty, rubber plantations, oil palms, and butterflies. It is therefore recommended to design the landscaping for both the regional characteristics and the tourists' expectation to enhance the natural image of Desaru New Tourism Core.

Tropical flowers and trees can be developed as a symbol. Well coordinated landscaping covering the whole area can create a strong visual impression, particularly at the entry points to Desaru New Tourism Core, along the roadside and in the Core itself. From a broad point of view, since Johor Bahru and Kota Tinggi are entry points to the Core for international tourists, it is important to extend the landscaping to them as well.

Fig. 5.3.14 illustrates the points and lines which require landscaping for a unified image.

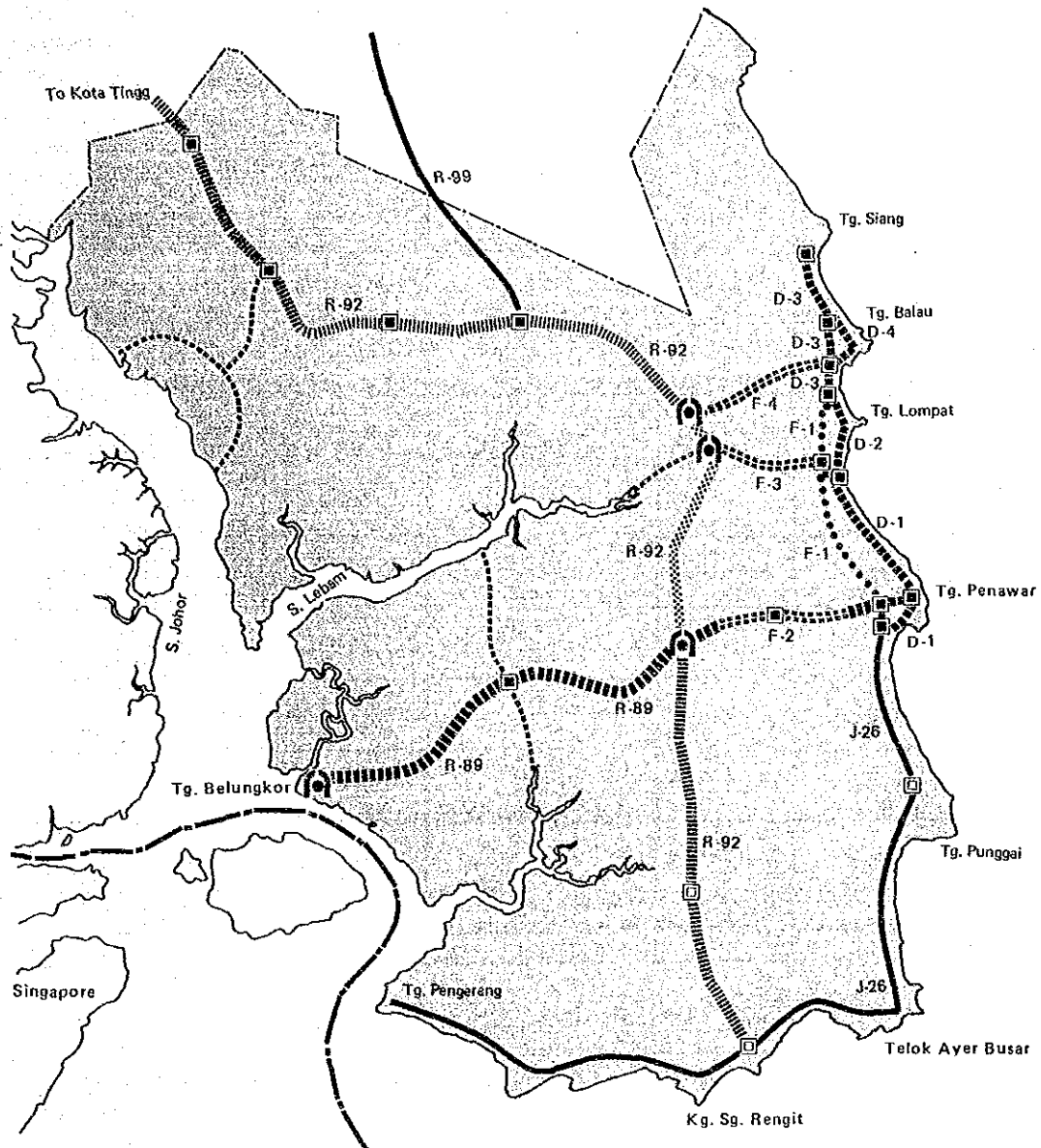
Tg. Belungkor deserves the most careful landscaping as the main entrance to Desaru New Tourism Core. In order to produce a clear difference with urban Singapore, landscaping should focus on nature and tradition. An architectural approach to the landscaping should be applied in addition to tropical flowers and trees. Inner entry points to the Coastal Resort Corridor are important points to arouse a sense of arrival. These points are to be landscaped with fragrant trees and shrubs stretching for a hundred metre on each side of the junction.

Roadside landscaping should take the following points into account:

- Roadside landscaping should have a continuity of appearance with emphasis at intersections, rest areas, and points of interest to break the monotony.
- Roadside landscaping along the Route 92 should conceal power transmission lines.
- Landscaping near the entrance to Coastal Resort Corridor should feature magnificent flowering trees to emphasize the sense of arrival.
- Landscaping in the Coastal Resort Corridor should be flowering shrubs or ground cover to reverse the present barren environment along roads.
- Landscaping on the pedestrian paths along the shoreline should have flowering trees and shrubs. A system of colouring and flowering in the Coastal Resort Corridor would provide tourists with guidance to their destinations.

Table 5.3.1 shows an example of recommended flowers and trees for roadside landscaping in Desaru New Tourism Core.

Fig. 5.3.14 Landscaping Points and Corridors



LEGEND

- Landscaping for sense of arrival
- Landscaping for Scenic or transportation node
- Landscaping for Scenic or transportation node (After 1995)
- Tourist gateway landscape planting
Flowering trees
- Highway landscape planting
Flowering trees at median
- Highway landscape planting
Greenery trees, screen planting
- Tourist corridor landscape planting
Flowering tree/greenery tree mixture
- Receptional access way landscape planting
Access way landscape planting
Flowering trees, shrubs and ground cover plants
- Inner service road landscape planting
Flowering shrubs and ground cover plants
- Flower road
Flowering trees and shrubs
- Flowering shrubs

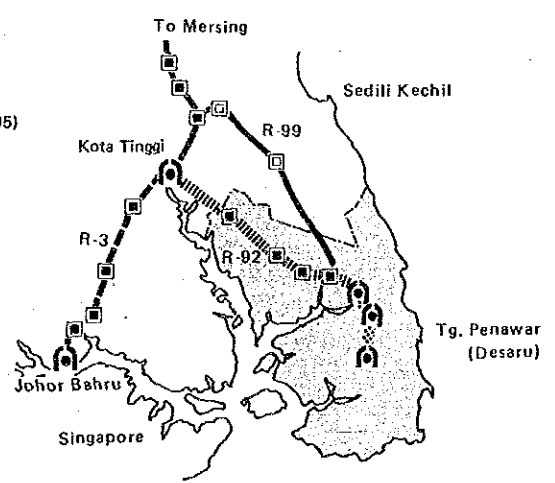


Table 5.3.1 Example of Landscaping

ROAD CODE	LANDSCAPING CONCEPT	BASIC COLOR SCHEME	NAME OF TREE SPECIES	SUPPORTING COLOR SCHEME	NAME OF SHRUB SPECIES
D-1	Flower Road	White	Mimusops Elengi Plumeria Obtusa Barringtonia Asiatica (B. Spesiosa)	White, Yellow	Jasminum Sambac Allamanda Cathartica Barleria Lupulia
D-2	Flower Road	Red, Dark Red	Erythrina SPP. Sesbania Grandiflora	Red, Pink	Acalpha Hisplda Hibiscus Rosa-sinensis
D-3	Flower Road	Yellow	Cassia SPP. Hibiscus Tiliaceus	Orange, Gold, Yellow	Caesalpinia Pulcherrima Thevetia Peruviana
D-4	Flower Road	Pink	Jacaranda Acutifolia Lagestroemia SPP. Samanea Saman	Purple	Lagestroemia Indica Tibouchina Semidecandra Bougainvillea Glabra
D-5	Flower Road	Bright Red	Delonix Regia Spathodia Campanulata	Pink, White	Bougainvillea Glabra Hibiscus Rosa-sinensis
F-1	Inner Service Road	-	-	Yellow	Thevetia Peruviana Allamanda Cathartica
F-2	Receptional Access Way	Bright Red	Spathodia Campanulata Delonix Regia	Pink, White	Nerium Oleander Bougainvillea Glabra Hibiscus Rosa-sinensis
F-3	Access Way	-	-	White	Plumbago Auriculata Hibiscus Rosa-sinensis
F-4	Access Way	-	-	Pink, Purple	Bougainvillea Glabra Lagestroemia SPP.
R-89	Tourist Gate Way	Bright Red	Delonix Regia Spathodia Campanulata	-	-
R-92	Highway (Screening Green)	Green, Yellow	Pterocarpus Indicus Hibiscus Tiliaceus	-	-
R-3	Highway	Red, White	Palmeria Rubra Palmeria Obtusa (for additional planting)	-	-

Source : JICA Study Team

5.3.4 Transportation and Circulation Services

1) Structure of Network

Development of the transportation network is vitally important for tourism development of the Desaru New Tourism Core. The transportation network comprises three major components; the first one between Singapore and Desaru New Tourism Core, the second one in Desaru New Tourism Core, and the third one to and from other tourist destinations in the South East Coast.

The Desaru New Tourism Core can be approached from Singapore by a ferry via Changi Point and by land via the causeway. It is expected that the ferry will be the main route from Singapore to Desaru because of the travelling time of less than one hour in comparison with two and a half hours by land. It is required that the ferry be ready for use by the beginning of 1993 when Desaru New Tourism Core is to be partially opened.

The causeway between Malaysia and Singapore is planned to be improved and enlarged to ensure a smooth traffic flow between them. It is expected that the improvement will have a favourable influence on the Desaru New Tourism Core in that it raises the likelihood of a round trip from Singapore-Johor Bahru-Desaru-Singapore or vice versa. Tourists from Singapore can enjoy the different routes on their way to and back from Desaru.

Fig. 5.3.15 illustrates the proposed road network in the Desaru New Tourism Core.

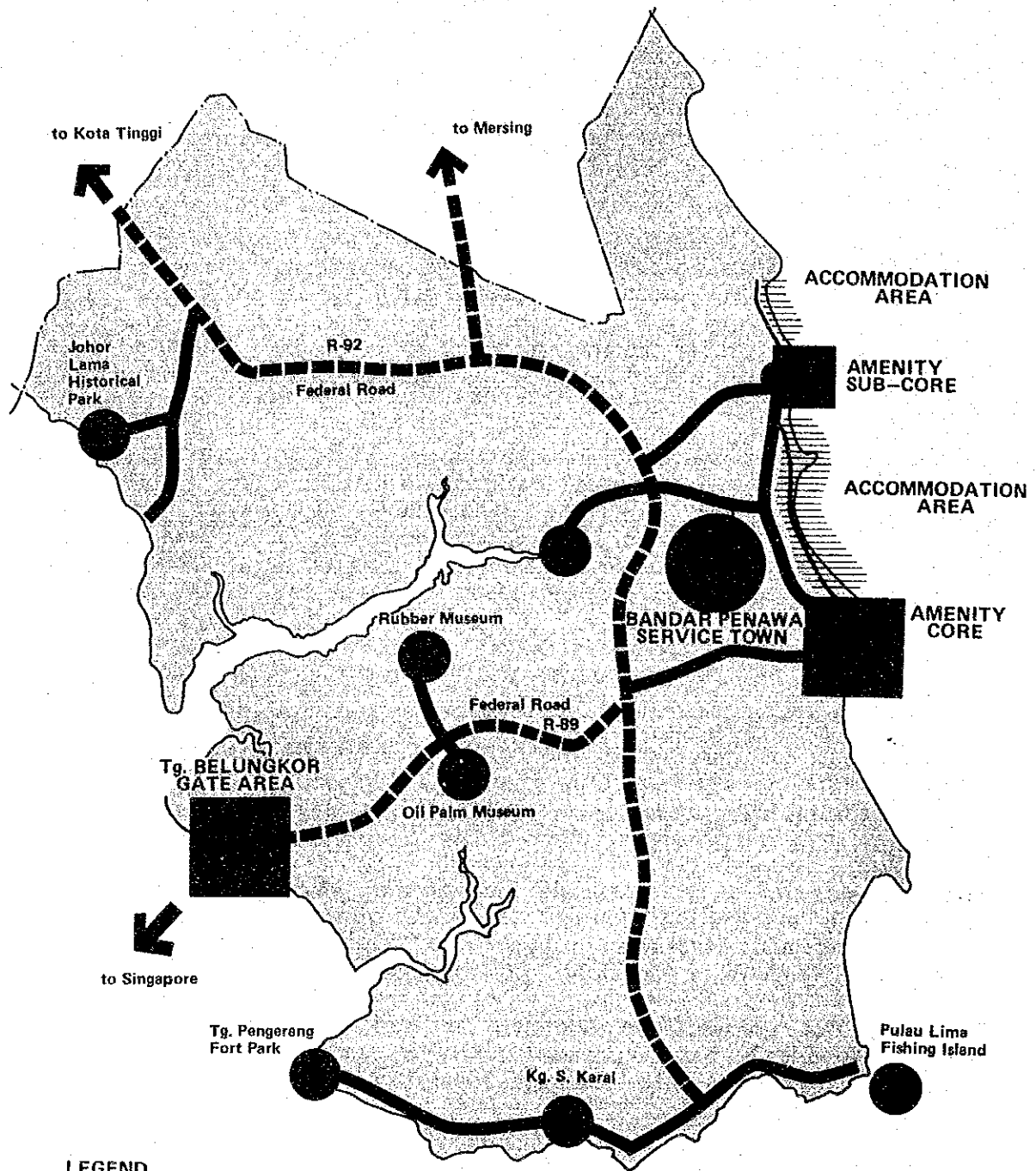
Route 89 is an artery to and from Tg. Belungkor Gate Area; Route 92 is another artery to and from Kota Tinggi. The main function of these roads is to ensure easy access between destinations, and should feature some scenery along the road.

Landscaping for local roads inside each facility should be based more on the needs of strolling tourists than vehicular traffic. Provision of landscaping and pedestrian decks is the minimum requirement for this purpose. Some roads should be open only to pedestrians.






Location of transportation terminals as well as parking lots plays an important role in the environment for hotel guests. A main terminal at the entrance of Amenity Core and some sub-terminals in Accommodation Area are needed.

There is a strong need to improve and develop the transportation network connecting Desaru New Tourism Core with various destinations in the South East Coast, particularly with the offshore islands. The outlet to the South China Sea is one of the important attractions to hotel guests and some day trippers. There are two types of requirements for developing jetties; one for high speed cruises to the offshore islands, especially for Tioman Island, and another for marine sports in the ocean frontage of Desaru beach. It is proposed to develop a jetty at the ocean frontage of Amenity Core for catering these two requirements and another jetty in Amenity Sub-Core for local marine sports.

Fig. 5.3.15 Structure of Transportation Network



LEGEND

-  Federal Road Route 89, 92 and 99
-  Other Major Roads
-  Minor Roads
-  Main Transportation Terminal
-  Sub Transportation Terminal

2) Circulation Services

Circulating transportation services are very important for the successful development of Desaru New Tourism Core, mainly due to the following reasons:

- The Strait of Singapore hinders vehicular traffic from Singapore to Desaru even if a car ferry link is introduced.
- Most international tourists rely on public transit.
- The introduction of many private cars to Desaru New Tourism Core will degrade the quality of the resort in terms of safety of tourists and tranquility of the resort.
- Destinations for tourists as well as day trippers are located over a vast area of land.

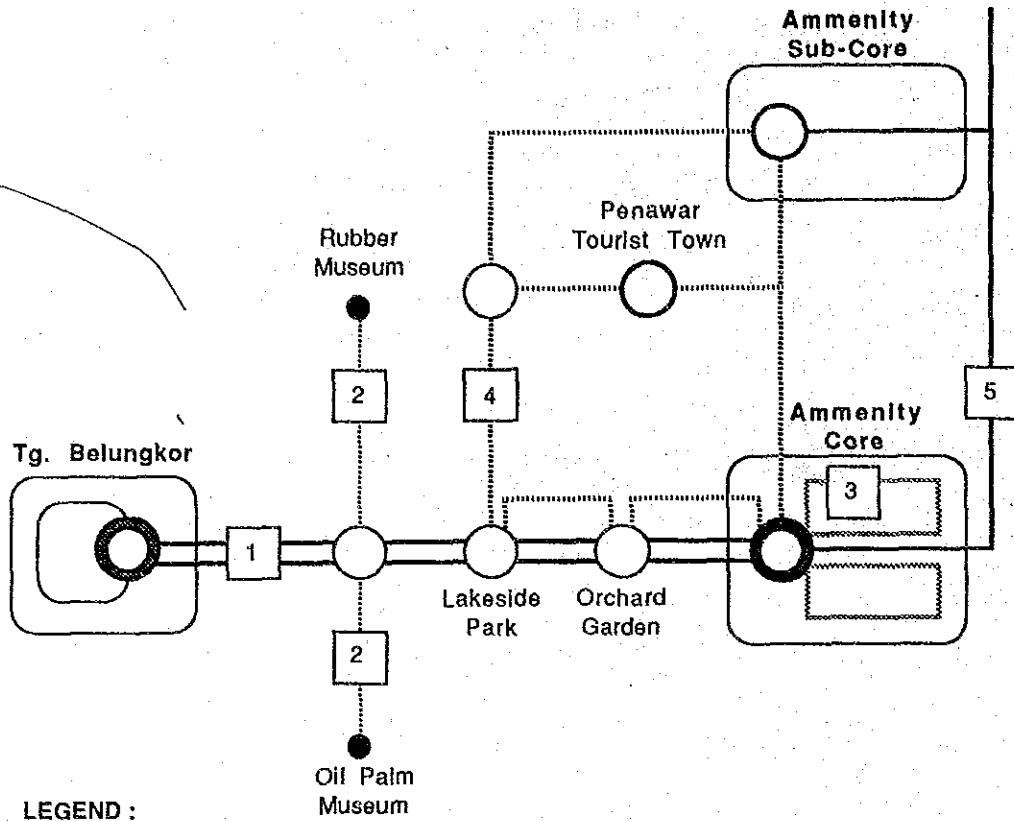
With a view to facilitating travel from Singapore to Desaru, the following three measures should be implemented:

- Convenient public transportation service from the centre of Singapore to Changi Point should be established.
- Parking space at Changi Point to accommodate a considerable number of private cars should be provided.
- Frequent ferry service between Changi Point and Tg. Belungkor is needed.

Fig. 5.3.16 illustrates a circulating transportation service in Desaru New Tourism Core. The main routes of transportation service are as follows:

- Tg. Belungkor Gate Area ~ Amenity Core,
- Rubber Museum ~ Oil Palm Museum,
- Circulation in Amenity Core,
- Circulation in Penawar Area, and
- Shuttle Service between Amenity Core and Accommodation Area.

Fig. 5.3.16 Circulating Transport Service in Desaru New Tourism Core



LEGEND :

- Main Transportation Terminal
- Sub-Transportation Terminal
- Main Bus Stop
- Bus Route
- Tg. Belunkor Gate Area ~ Amenity Core
- Bus Route Rubber Museum ~ Oil Palm Museum
- Circulation in Amenity Core
- Circulation in Penawar Area
- Shuttle Service Amenity Core ~ Accommodation Area

CHAPTER 6

PROJECT COST ESTIMATION

6.1 Total Investment Cost

6.2 Investment Cost for Infrastructure

6.3 Investment Cost of Tourism Facilities

6.4 Implementation Schedule

6.1 Total Investment Cost

6.1.1 Conditions for Cost Estimate

Based on the development plan of Desaru New Tourism Core as described in Chapter 5, a preliminary engineering study was carried out to estimate the total investment cost for the development.

Cost items can be classified into three major categories: basic infrastructure, tourism facilities, and accommodation facilities. Basic infrastructure should be developed not only to cater to the demand by the year 1995, but also for the demand several years afterwards to eliminate the possible duplicate investment. Tourism facilities should also be prepared partly for the increasing demand expected after the year 1995. From this point of view, it is assumed that basic infrastructure and tourism facilities should be capable of managing the demand at the time when the number of hotel rooms is increased to 5,000 rooms, with minimal additional investment to those at about 2,100 rooms.

Accommodation facilities, however, are designed to cater to the estimated demand of 2,100 rooms in the year 1995. Additional investment in accommodation facilities are inevitable after the year 1995 though some part of the increasing demand can be accommodated through improving the occupancy rate of hotels.

As explained in the preceding chapter, development of accommodation facilities by the year 1995 is concentrated on the development of high and middle class hotels, the existing Desaru View Hotel belonging to middle class hotels.

With a view to creating an excellent environment of resort complex, special measures are taken as follows:

- laying cables underground
- roadside landscaping
- waste water treatment of high standard

It is expected that the above factors are combined to increase the total investment cost of Desaru New Tourism Core.

Investment cost consists of the following cost items:

- Construction cost (quantity x unit price)
- Overhead cost
- Detailed design and supervision fee
- Contingency

Unit prices by type, standard, and grade are those prevailing in the country in 1988 though those of some items not produced in the country are estimated based on the market prices in Japan.

6.1.2 Investment Cost

As a rule, the investment cost for developing the Desaru New Tourism Core is confined to the projects in the area specified by Fig. 5.2.1.

As for the infrastructure, however, there will be a discussion on the demarcation between the tourism sector and the region, for instance, water supply to the tourism area and the local villages including Bandar Penawar, waste water treatment, and so forth. In this preliminary study, a considerable portion of the investment which can be demarcated to the region is included in the tourism sector because basic infrastructure is developed more efficiently when it is developed as a unit than when portions are developed separately.

The total investment cost is estimated at 1,183 million ringgit, 205 million ringgit for the infrastructure, and 978 million ringgit for tourism facilities including accommodations as shown in Table 6.1.1. The greatest cost items are accommodation facilities at 445 million ringgit, followed by tourism facilities in the Activity Corridor for day trippers with 246 million ringgit, tourism facilities in Amenity Core at 111 million ringgit, facilities in Bandar Penawar Service Town with 84 million ringgit, and the sewerage system at 72 million ringgit. Investment cost of these five items accounts for more than 80% of the total investment.

The total investment cost is demarcated among public sector, public and private joint venture, and private sector based on the characteristics of projects in Desaru New Tourism Core. The estimation is shown in Table 6.1.1. The investment cost borne by public sector is estimated at 371 million ringgit, accounting for 3% of the total investment cost.

Table 6.1.1 Investment Cost of Infrastructure and Facilities
in Desaru New Tourism Core

Construction Item	Unit : Million Rgt.			
	Public Sector	Joint Venture	Private Sector	Total
Road Network	41.9	0.0	0.0	41.9
Jetties	6.5	0.0	0.0	6.5
Water Supply System	24.0	0.0	0.0	24.0
Sewerage System	71.6	0.0	0.0	71.6
Solid Waste Disposal System	8.3	0.0	0.0	8.3
Electrical System	50.8	0.0	0.0	50.8
Telecommunication System	2.3	0.0	0.0	2.3
Infrastructure Total	205.3	0.0	0.0	205.3
Coastal Resort Corridor (Total)	53.4	135.1	444.7	633.1
<i>Amenity Core Area</i>	<i>18.1</i>	<i>92.8</i>	<i>0.0</i>	<i>110.9</i>
<i>Amenity Sub-Core Area</i>	<i>1.2</i>	<i>42.3</i>	<i>0.0</i>	<i>43.5</i>
<i>Accommodation Area</i>	<i>0.0</i>	<i>0.0</i>	<i>444.7</i>	<i>444.7</i>
<i>Parks in Accommodation Area</i>	<i>34.0</i>	<i>0.0</i>	<i>0.0</i>	<i>34.0</i>
Daytrip./Daily Act. Zone	55.1	85.2	105.6	245.9
Bandar Penawar Service Town	55.0	0.0	29.3	84.3
Other T. Activity Zone	2.2	6.1	6.5	14.8
Tourism Facility Total	165.7	226.4	586.0	978.1
INVESTMENT COST TOTAL	371.0	226.4	586.0	1,183.4

Source : JICA Study Team

6.2 Investment Cost for Infrastructure

6.2.1 Transportation

1) Road Network

Fig. 6.2.1 illustrates the road network in the Desaru New Tourism Core, and Fig. 6.2.2 illustrates typical cross sections.

The road network in the Desaru New Tourism Core is made up of arterials, feeders ("F" in Fig. 6.2.1), and local roads ("D"). The arterials in the area are Federal Route 92 from Kota Tinggi to Kg. Sg. Rengit, and Federal Route 89 from Tg. Belungkor to the Amenity Core.

As shown in Table 6.2.1, the investment cost of the road network amounts to 41.9 million ringgit with the largest outlays in 1990 and 1991. The road network is to be developed by the public sector. In the long run, the cost of investment can partly be recovered through the rental of land.

2) Jetties

Jetties in Desaru New Tourism Core are to be built at Tg. Belungkor, Tg. Penawar in the Amenity Core, Tg. Balau in the Amenity Sub-Core, Sg. Lebam, and Pulau Lima. Tg. Belungkor jetty is not included in the cost estimation because it has already been committed for construction.

The jetty at Tg. Penawar is designed to accept a hydrofoil type of ferry to Tioman Island which has a capacity of 60 passengers and an operation speed of 35 knots. The jetty will also serve as an attraction in the Amenity Core by providing a pedestrian deck 320 metres long.

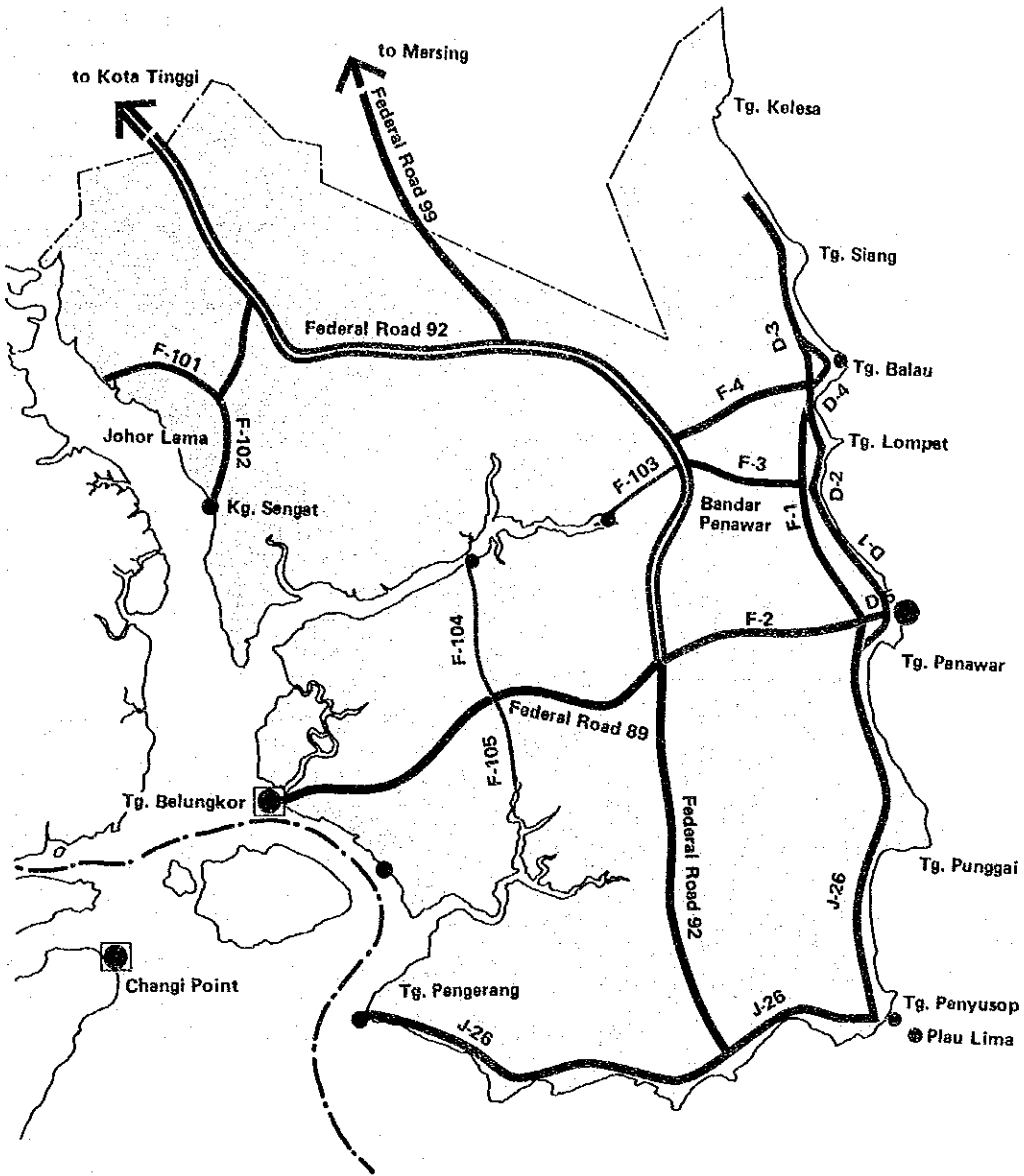
The 100 metre jetty at Tg. Balau is to be designed for marine activities in Amenity Sub-Core by accepting such small boats as sailing dinghies, runabouts, and fishing boats.

Two more jetties are to be provided along the Sg. Lebam for the river cruise boats which are longboats with a shallow draft. The length of one of these jetties is 100 metres, the other 30 metres. The difference in length is due to the width and location of the mangrove swamp. The Pulau Lima Fishing Island is to be equipped with two small jetties, one on the island and another on the peninsular side.

Investment cost for jetties is estimated at 6.5 million ringgit as shown in Table 6.2.2. Disbursement is to be at a maximum in 1992 when the jetty at Tg. Penawar is completed.

Jetties are to be developed by public sector. It is assumed that the investment cost is not recovered.

Fig. 6.2.1 Road Network in 1995



LEGEND

Existing/ Under Const.		up-to 1995	after 1995	
				R-05 4 lanes
				R-05 2 lanes
				R-01 2 lanes
				U-03 2 lanes
				Car Ferry Jetty
				Major/Minor Jetty

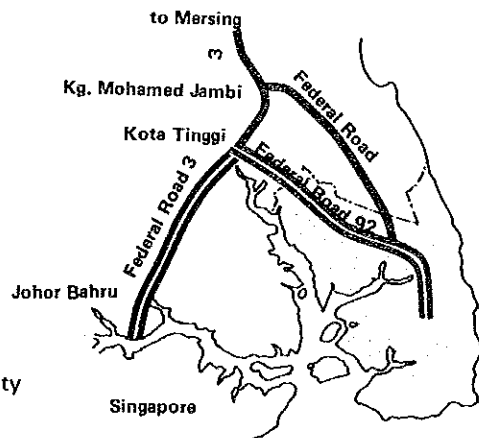
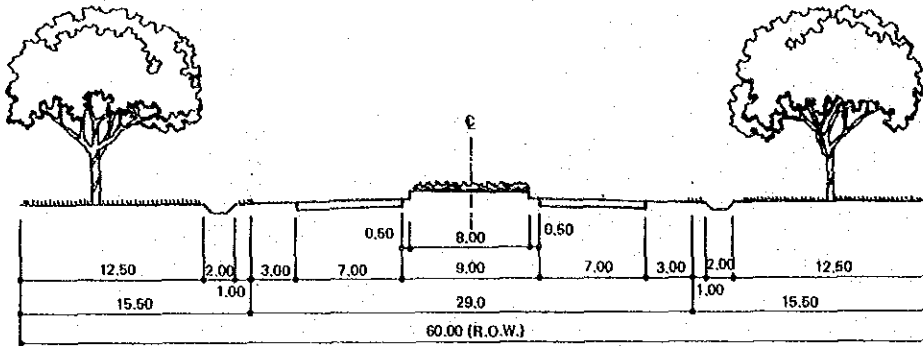
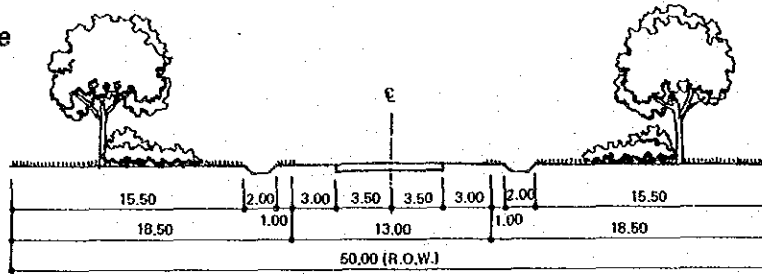


Fig. 6.2.2 Typical Cross Section of Road

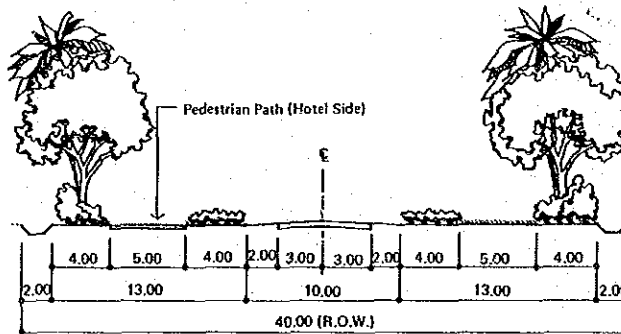
R-05-4 Lane



R-05-2 Lane



U-03-2 Lane



R-01-2 Lane

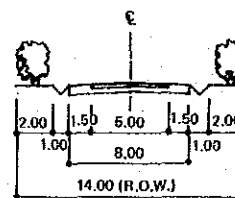


Table 6.2.1 Investment Cost of Road Network

Road Name	Unit : Million Rgt.							TOTAL
	1989	1990	1991	1992	1993	1994	1995	
D-1	0.226	3.031	3.031					6.288
D-2			0.150	2.005	2.005			4.160
D-3	0.160	2.131	2.132					4.423
D-4		0.084	1.117	1.117				2.318
D-5			0.043	1.152				1.195
F-1					0.020	0.548		0.568
F-2	0.339	4.534	4.534					9.407
F-3	0.011	0.096	0.096	0.097				0.300
F-4	0.254	2.268	2.268	2.268				7.058
F'-101	0.050	1.343						1.393
F'-102		0.035	0.960					0.995
F'-103			0.017	0.441				0.458
F'-104			0.040	1.055				1.095
F'105				0.018	0.480			0.498
(Road Side Landscaping)								
R92		0.019	0.281	0.281	0.282			0.863
R89			0.031	0.828				0.859
TOTAL	1.040	13.541	14.700	9.262	2.787	0.548	0.000	41.878

Source : JICA Study Team

Table 6.2.2 Investment Cost of Jetties

Location	Unit : Million Rgt.							TOTAL
	1989	1990	1991	1992	1993	1994	1995	
Tg. Penawar			0.200	5.100				5.300
Tg. Balau						0.593		0.593
Sg. Lebam (2 Jetties)				0.163				0.163
Plau Lima (2 Jetties)						0.483		0.483
TOTAL	0.000	0.000	0.200	5.263	0.000	1.076	0.000	6.539

Source : JICA Study Team

6.2.2 Water Supply

The water supply system will be designed to cover the Desaru New Tourism Core including Coastal Resort Corridor, Activity Corridor, a town, and villages. The average water demand in 1995 is estimated at 14,140 cubic metres per day; 52% for residents, 17% for golf courses, 16% for the Activity Corridor, and 15% for the Accommodation Area.

The water supplying system will also be designed to cater to the increasing future demand in the planning assumption of 5,000 hotel rooms. Increasing demand after the year 1995 can be satisfied by installing additional pumps. Investment cost by 1995 accounts for 92% of the total investment cost required for 5,000 hotel rooms in the future. This implies that a heavy burden is imposed on the beginning stage of the development, with least investment in the later stage.

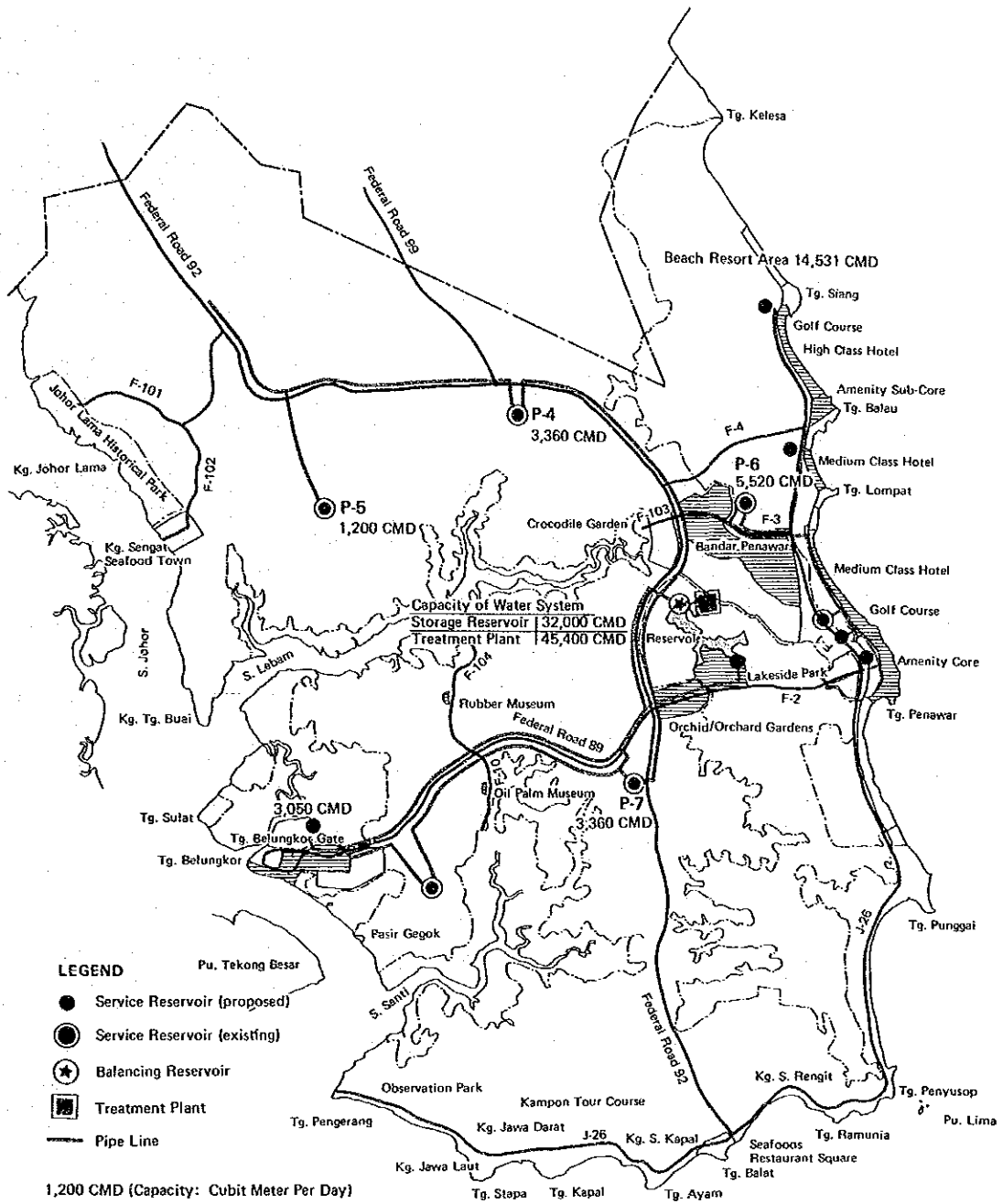
Fig. 6.2.3 illustrates the water supplying system in the Desaru New Tourism Core. Major components of the system are transmission and distribution pipes, service reservoir, and intake and lifting pumps. Total investment cost by the year 1995 amounts to 24.0 million ringgit as shown in Table 6.2.3. Pipeline has the greatest investment cost of 18.9 million ringgit (79%), followed by service reservoir of 4.2 million ringgit (18%). The capacity of pipeline is designed for accepting the future increase of water demand. The whole system is scheduled to be completed in 1993.

Table 6.2.3 Investment Cost of Water Supply System

	Unit : Million Rgt.							
	1989	1990	1991	1992	1993	1994	1995	TOTAL
Pump					0.445			0.465
Reservoir		1.162	1.162	1.162	0.578			4.213
Pipeline		5.214	5.214	5.214	2.586			18.904
Other/Valves		0.114	0.114	0.114	0.051			0.408
TOTAL	0.860	6.490	6.490	6.490	3.660	0.000	0.000	23.990

Source : JICA Study Team

Fig. 6.2.3 Water Supplying System



6.2.3 Sewerage and Solid Waste Disposal System

1) Sewerage System

It is required to introduce a high standard sewerage system in Desaru New Tourism Core for the sake of preserving the excellent marine environment. The biological oxygen demand (BOD) of the effluent from the treatment plant should be kept at or below 20 ppm. For this purpose, it is proposed to introduce Mechanically Aerated Oxidation Ditch Method in consideration of flexibility to load, operation and maintenance, and construction cost.

The sewerage system can be developed more efficiently by introducing some local systems than by an integrated single system covering the whole area. Local sewerage systems cover sewage from Coastal Resort Corridor, Activity Corridor, and ground surface water in the corridors. It is assumed that sewage from villages and factories in the area is to be treated by separate local systems.

Fig. 6.2.4 illustrates the proposed sewerage system. Investment cost by the year 1995 when the number of hotel rooms amounts to 2,100 rooms is estimated at 71.7 million ringgit as shown in Table 6.2.4. Total investment cost required for 5,000 rooms in the further future is estimated at 102.4 million ringgit. This means that the investment cost by the year 1995 accounts for as high as 70% of the investment cost for 5,000 rooms. Top heavy investment is required for the sewerage system as well.

Investment cost for sewerage system can be recovered by levying a consumption charge on the consumers though it will take long time to recover the whole amount.

Table 6.2.4 Investment Cost of Sewage Treatment Plant

	Unit : Million Rgt.							
	1989	1990	1991	1992	1993	1994	1995	TOTAL
Treatment		2.964	5.207	16.784	14.213			40.673
Pump Station		1.209	2.122	10.043	8.923			23.359
Manhole Pump		0.102	0.166	0.843	0.748			1.948
Pipeline		0.443	0.737	0.666	0.321			2.135
Pipeline		0.681	1.189	1.074	0.534			3.434
TOTAL	2.580	5.400	9.420	29.410	24.740	0.000	0.000	71.550

Source : JICA Study Team

2) Solid Waste Disposal System

Solid waste to be generated is estimated at 35,100 cubic metres in 1995 and 56,000 cubic metres at the year of 5,000 hotel rooms. In 1995, solid waste generation is 28% from hotels, 15% from the other facilities, and 57% from residents. In terms of volume, residents are the biggest generator of solid waste in Desaru New Tourism Core.

Solid waste is to be disposed of in a standard sanitary landfill. The landfill is designated at the north of Bandar Penawar Service Town. The required capacity of the fill area is 293,000 cubic metres over 7.8 ha of land when the number of hotel rooms reaches 5,000 rooms. It is required to establish a seepage water treatment plant at the downstream side of the landfill area because the seepage water from the landfill has a high BOD. Fig. 6.2.4 shows the location of the landfill.

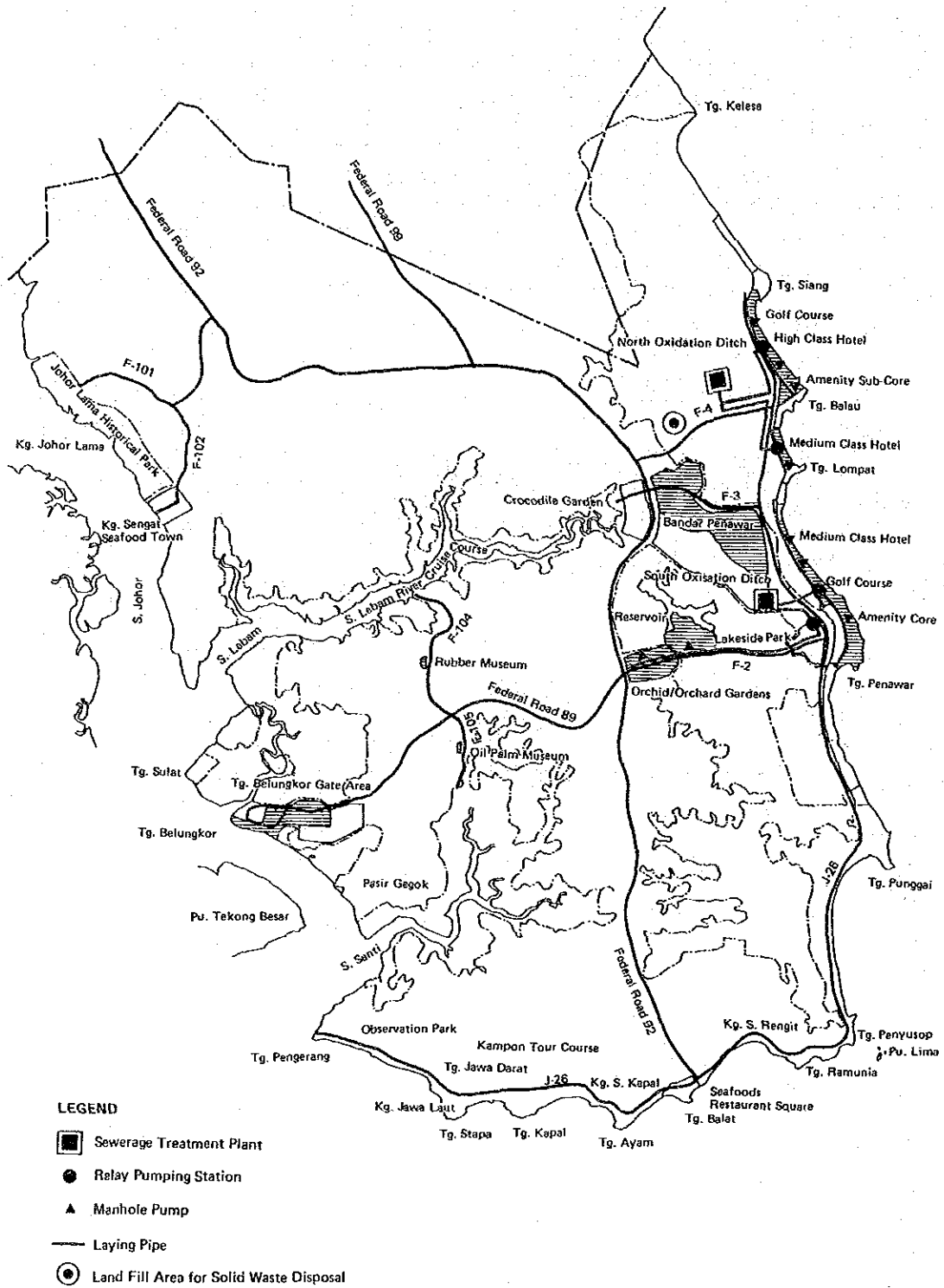
Investment cost for solid waste disposal system is estimated at 8.3 million ringgit by the year 1995 as shown in Table 6.2.5. Total investment cost is estimated to increase to 10.1 million ringgit by the year when hotel rooms are increased to 5,000 rooms. 83% of the investment cost is required to be disbursed by 1995.

Table 6.2.5 Investment Cost of Solid Waste Disposal System

	Unit : Million Rgt.							
	1989	1990	1991	1992	1993	1994	1995	TOTAL
Land Prep.			0.100	0.189	1.371			1.747
Water Treat			1.634	3.082	1.554			6.553
TOTAL	0.000	0.370	1.734	3.271	2.925	0.000	0.000	8.300

Source : JICA Study Team

Fig. 6.2.4 Sewerage System & Solid Waste Disposal



6.2.4 Power Supplying System

The electric power supplying system must be highly reliable because its service area is located far from major cities and must be developed to international standards. Electric power to Desaru New Tourism Core is supplied from the "national grid" through double circuit 132 KV overhead lines.

Electric power is to be supplied to consumers through distribution stations in Desaru. It is proposed to install the distribution cables underground to eliminate the disturbance to the scenery. Cable lanes should be located along the shoulder of roads and streets. Fig. 6.2.5 illustrates the power distribution system in Desaru New Tourism Core. Street lighting is provided especially in the Coastal Resort Corridor.

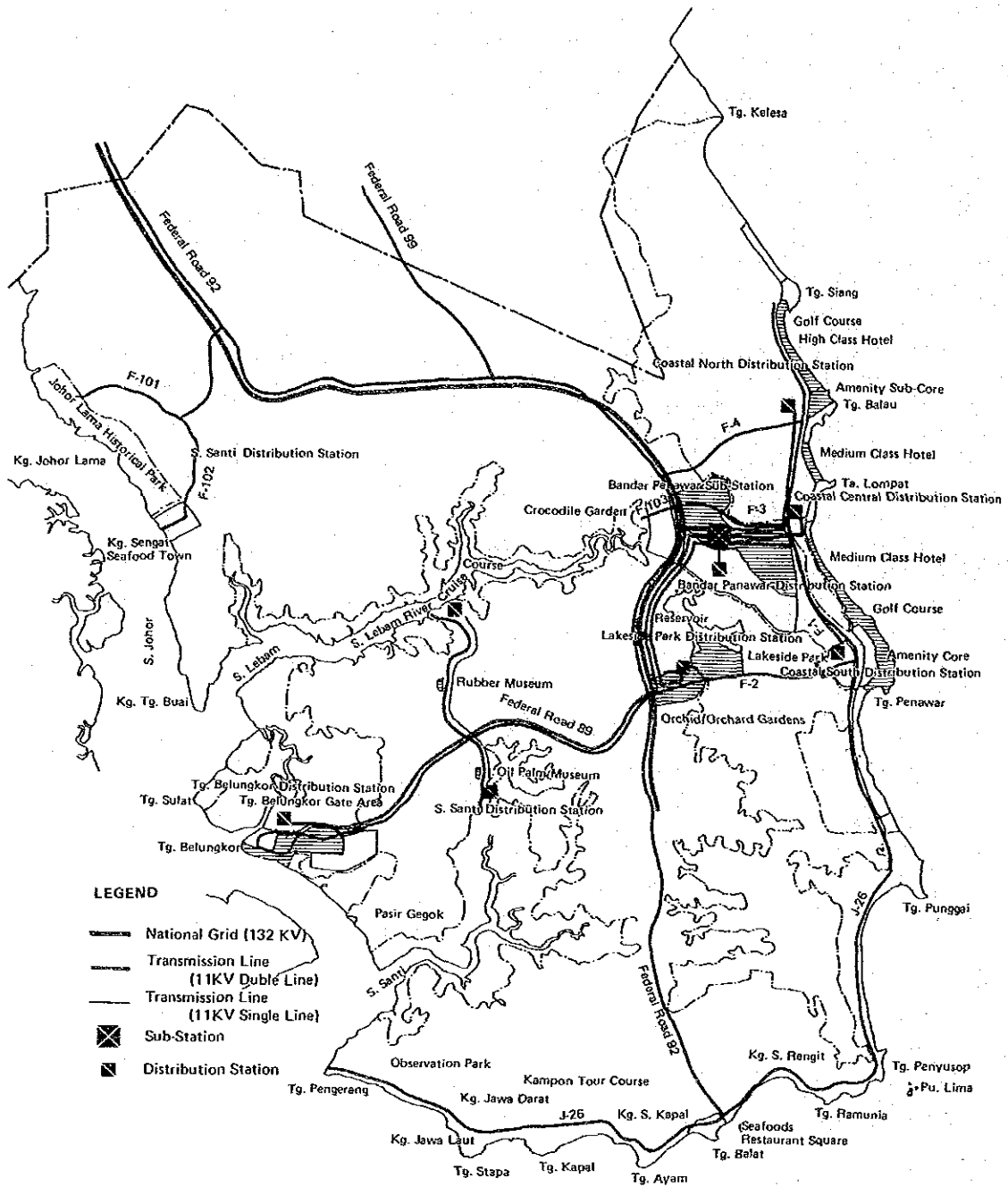
The maximum demand is estimated to be 23 MVA in 1995 and 32 MVA in the year of 5,000 hotel rooms. Investment is extremely concentrated in the initial stage of the development by the year 1995, accounting for as high as 95% of the total investment cost required for catering 5,000 hotel rooms. Investment costs can be recovered in the long run by levying consumption charge on the consumers. Table 6.2.6 shows the contents of the investment cost by 1995.

Table 6.2.6 Investment Cost of Power Supply System

	Unit : Million Rgt.							
	1989	1990	1991	1992	1993	1994	1995	TOTAL
Bandar Penawar S.S	1.133	14.749	9.833					25.715
Bandar Penawar D.S		0.034	2.152					2.186
Tg.Belungkor D.S.		0.105	2.352					2.457
Lebam River D.S.			0.024	0.526				0.550
Lakeside Park D.S.		0.026	0.593					0.619
South River D.S.					0.030	0.677		0.707
Coastal North D.S.			2.228					2.228
Coastal Central D.S.			2.929					2.929
Coastal South D.S.			2.433					2.433
Street Lighting		3.848	3.796	2.098	0.699			10.441
Water/Sewer Plant			0.485					0.485
TOTAL	1.133	18.762	26.824	2.624	0.729	0.677	0.000	50.750

Source : JICA Study Team

Fig. 6.2.5 Power Supply System



6.2.5 Telecommunication

A telephone exchange station is presently located at Banar Penawar with 1,000 subscribers. It is planned by Syrikat Telekom Malaysia that the capacity is to be increased to 2,000 lines by the year 1995.

Telecommunication demand is estimated at 590 lines in 1995 and 1,200 lines in the year when the number of hotel rooms reaches 5,000 rooms. It is expected that the main exchange can accommodate the future increase of the demand. For preserving the scenery, it is also proposed to install the cable underground along roads and streets. Fig. 6.2.6 illustrates the proposed telecommunication network.

The investment cost by the year 1995 is estimated at 2.3 million ringgit as shown in Table 6.2.7. This amount is estimated to be 64% of the total investment cost by the year of 5,000 hotel rooms. It is expected that the investment can be recovered in the long run by issuing bonds and levying charges on the consumers.

Table 6.2.7 Investment Cost of Telecommunication Work

	Unit : Million Rgt.							
	1989	1990	1991	1992	1993	1994	1995	TOTAL
Wiring	0.100	0.885	0.663	0.663				2.311
TOTAL	0.100	0.885	0.663	0.663	0.000	0.000	0.000	2.311

Source : JICA Study Team

6.3 Investment Cost for Tourism Facilities

6.3.1 Accommodation Facilities

The total number of hotel rooms is planned at 2,114 rooms in 1995, and will consist of 1,780 newly built rooms in addition the existing hotels and chalets.

The high class hotels to be constructed are two hotels with 250 rooms and one hotel with 300 rooms. Middle class hotels to be constructed consist of one hotel each with 100, 150, 200, 250, and 280 rooms.

High class hotels which are equivalent in quality to those developed by international hotel chains are designed to have 40 rooms per hectare of land. The average construction cost of high class hotels is assumed at 2,800 ringgit per square metre. Middle class hotels which are better in quality than the existing hotels are designed to have 50 rooms per hectare of land. The average construction cost of middle class hotels is assumed at 2,500 ringgit per square metre.

Construction cost of hotels is made up of building cost and landscaping cost. Building cost is based on the designed floor area and the unit price in 1988. Landscaping cost is estimated based on the land area and the unit price in 1988. The investment cost of hotels is estimated by adding the construction cost, design fee, which is assumed to be 10% of the construction cost, and supervision fee, which is assumed to be 3% of the construction cost.

As shown in Table 6.3.1, the total investment cost of accommodation facilities is estimated at 444.7 million ringgit, comprising 226.6 million ringgit for high class hotels and 218.0 million ringgit for middle class hotels. In terms of yearly disbursement, the year 1992 is the peak year of 123.1 million ringgit, followed by the year 1993 with 108.6 million ringgit.

Table 6.3.1 Investment Cost of Accommodation Facilities

	Unit : 1,000 Rpl.							Total
	1989	1990	1991	1992	1993	1994	1995	
High Class Hotels	0	3,135	41,706	68,358	61,849	25,792	25,790	226,630
Tg. Slang-Balau	0	3,135	41,706	68,358	61,849	25,792	25,790	226,630
250 rooms		3,135	35,436	32,301				70,872
250 rooms			6,270	32,301	32,301			70,872
300 rooms				3,756	29,548	25,792	25,790	84,886
Middle Class Hotels	12,498	18,715	32,701	54,695	46,744	37,750	14,935	218,038
Tg. Balau-Lompat	0	0	0	1,933	21,848	37,750	14,935	76,466
150 rooms						17,836	14,935	32,771
200 rooms				1,933	21,848	19,914		43,695
Tg. Lompat-Penawar	12,498	18,715	32,701	52,762	24,896	0	0	141,572
100 rooms (1)	12,198	10,214						22,412
250 rooms			4,834	24,896	24,896			54,626
280 rooms		5,411	27,867	27,866				61,144
Renovation (2)	300	3,090						3,390
TOTAL	12,498	21,850	74,407	123,053	108,593	63,542	40,725	444,668

Note : (1) Expansion of Desaru View Hotel
(2) Renovation of Golf Course Hotel

Source : JICA Study Team

6.3.2 Other Tourism Facilities in Coastal Resort Corridor

Tourism facilities in Coastal Resort Corridor other than accommodation facilities are the Amenity Core, Amenity Sub-Core, and parks in Accommodation Area.

The construction cost of these facilities comprises building cost, landscaping cost, and the design and supervision fees. Building and landscaping costs are estimated by multiplying the assumed unit prices by the estimated floor area or land area. Unit prices in 1988 are assumed individually for various kinds of facilities in consideration of the prevailing market prices in Malaysia and in Japan. Design and supervision fees are assumed to be 7% and 3%, respectively, of the estimated construction cost.

The Amenity Core comprises various tourism facilities for hotel guests and day trippers such as a water sports complex, parks and gardens, an outdoor sports complex, restaurant plaza, shopping promenade, and exhibition centre. The total site area amounts to 50.3 ha and the floor area to 44.8 thousand square metres.

The Amenity Sub-Core comprises the tourism facilities mainly for the satisfaction of hotel guests such as golf course of 18 holes, theatre, outdoor sports facilities, and marine sports club. Amenity Sub-Core is to be allotted a total of 78.3 ha of site area and 9.1 thousand square metres of floor area.

Parks in Accommodation Area have such features as lagoon parks and beachside promenade. The total area includes 93.0 ha of site area and 0.9 thousand square metres of floor area.

As shown in Table 6.3.2, the total cost of tourism facilities in Coastal Resort Corridor excluding accommodation facilities is estimated to be 188.4 million ringgit, comprising 110.9 million ringgit for Amenity Core, 43.5 million ringgit for Amenity Sub-Core, and 34.0 million ringgit for parks in Accommodation Area.

6.3.3 Tourism Facilities in Activity Corridor and Vicinity

As stated in 5.3.2, major tourism facilities outside the Coastal Resort Corridor are Tg. Belungkor Gate Area, Rubber and Oil Palm Museums, Orchard and Orchid Gardens around Lakeside Park, and others. These facilities are planned to be developed in line with the expected increase of the day trippers mainly from Singapore, and hotel guests in the Coastal Resort Corridor.

Investment cost of these facilities are estimated by following the same method as applied in 6.3.2.

Table 6.3.3 shows the investment cost of major tourism facilities. The total investment cost is estimated to be 345.0 million ringgit. Fun Park in Tg. Belungkor Gate Area is the biggest cost item, amounting to 105.6 million ringgit, followed by Housing for Employees in Bandar Penawar Service Town of 71.8 million ringgit, Transportation Terminal in Tg. Belungkor Gate Area of 49.5 million ringgit, and Marine Sports Complex in Tg. Belungkor Gate Area of 31.6 million ringgit. Total of these four occupies 75% of the total investment.

Table 6.3.2 Investment Cost of Facilities in Coastal Resort Corridor
Excluding Accommodation Facilities

	Unit : 1,000 Rgt.							
	1989	1990	1991	1992	1993	1994	1995	Total
AMENITY CORE AREA	6,921	7,228	18,959	34,806	17,791	25,208	0	110,911
Restaurant Plaza			738	10,860				11,598
Shopping Promenade					465	6,838		7,303
Exhibition Centre				675	9,939			10,614
Indoor Sports Complex					554	8,157		8,711
Outdoor Sports Complex					694	10,213		10,907
Marine Sports Complex		460	7,241	6,783				14,484
Water Recreation Complex		672	10,560	9,888				21,120
Parks and Gardens	6,921	6,094						13,015
Others			420	6,600	6,139			13,159
AMENITY SUB-CORE AREA	0	0	116	2,563	14,471	26,366	0	43,516
Golf Course				745	11,721	10,975		23,441
Shopping/Restaurants					303	4,455		4,758
Theatre					517	7,605		8,122
Others			116	1,818	1,930	3,331		7,195
PARKS IN HOTEL AREA	152	556	1,068	13,544	6,276	12,407	0	34,003
Parks in Tg. Siang-Balau			512	7,525	193	2,847		11,077
Parks in Tg. Balau-Lompat					560	8,240		8,800
Parks in Tg. Lompat-Penawar				4,143	3,647			7,790
Others	152	556	556	1,876	1,876	1,320		6,336
TOTAL	7,073	7,782	20,143	50,913	38,538	63,981	0	188,430

Source : JICA Study Team

Table 6.3.3 Investment Cost of Facilities outside Coastal Resort Corridor

	Unit : 1,000 Rgt.							
	1989	1990	1991	1992	1993	1994	1995	Total
DAY TRIPPER/DAILY ACT. ZONE	10,765	82,773	36,090	58,947	31,773	25,511	0	245,859
TG.BELUNGKOR GATE AREA	3,152	47,852	0	0	0	0	0	51,004
Transportation Terminal	3,152	46,368						49,520
Shopping Promenade		1,484						1,484
TG.BELUNGKOR MARINE SPORTS AREA	893	15,145	14,807	14,808	0	0	0	45,653
Marine Sports Complex		2,013	14,807	14,808				31,628
Hill Restaurants	893	13,132						14,025
RECREATIONAL ACT. AREA (Fun Park)	6,720	19,776	19,776	19,776	19,776	19,776	0	105,600
INLAND SPORTS AREA	0	0	1,219	11,967	11,789	2,669	0	27,644
Golf Course			1,219	8,966	8,966			19,151
Sports Complex				3,001	2,823	2,669		8,493
ORCHARD/ORCHID GARDENS	0	0	142	2,087	208	3,056	0	5,503
LAKE SIDE PARKS	0	0	146	10,309	0	0	0	10,455
BANDAR PENAWAR SERVICE TOWN	627	11,023	37,628	34,997	0	0	0	84,273
Housing for Employees		4,568	33,609	33,609				71,786
Nursery	627	6,270						6,897
Others		185	4,019	1,388				5,592
OTHER TOURISM ACTIVITY ZONES	723	638	562	9,111	194	3,598	0	14,826
TOTAL	12,115	94,434	74,280	103,055	31,967	29,109	0	344,960

Source : JICA Study Team

6.4 Implementation Schedule

The development work schedule of Desaru New Tourism Core starting from 1989 till 1995 is shown in Fig. 6.4.1 in the form of bar chart. This chart includes some of the items necessary for the operation of this tourism core, i.e. jetties in Tioman Island and Mersing. The schedule is prepared in accordance with the following conditions.

- 1) Total number of estimated visitors and facilities to be opened in 1995
 - The number of visitors in 1995 is estimated 330,600 overnight tourists and 772,900 guest nights, and 2.57 million day trippers.
 - The number of rooms available will be 2,114 rooms which include 800 high class hotel rooms, 1,214 middle class hotel rooms, and chalets with 100 rooms.
 - Facilities in Amenity Core, Sub-Core, Activities Corridor, and other areas are also shown in Fig. 6.4.1.
 - The infrastructure is constructed to meet the schedule of facility construction. Capacity and standards to be applied for the infrastructure are set to meet the future expansion of the facilities and increase of visitors.

- 2) Number of hotel rooms available and estimated number of hotel guests are set as shown in Table 6.4.1.

Table 6.4.1 Development Schedule of Hotel Rooms

Year	1989	1990	1991	1992	1993	1994	1995
No. of Hotel Guests(1,000 guests)		61.6	64.7	68.6	215.9	234.4	335.7
Existing Hotel Rooms	334						
<i>Middle class hotel</i>	234						
<i>renobation (rooms)</i>		(234)					
<i>expansion of hotel</i>		100					
<i>Charet</i>	100						
Additional Hotel Rooms					780	550	350
<i>High class hotel</i>					250	550	
<i>Middle class hotel</i>					530		350
Number of Rooms Availal	334	434	434	434	1,214	1,764	2,114
<i>High class hotel</i>					250	800	800
<i>middle class hotel</i>	234	334	334	334	864	864	1214
<i>Charet</i>	100	100	100	100	100	100	100

Source : JICA Study Team

3) Major development works by year

The year of 1989

- Design, engineering and preparation of tender documents of the construction components, mainly of basic infrastructure
- Commencement of 100 rooms extension of the existing 134 room hotel

The year of 1990

- Commencement of construction for basic infrastructure
- Completion of the 100 rooms extension of the existing hotel and also of renovation of 100 rooms existing hotel
- Completion of jetties for ferry between Tg. Belungkor and Changi Point and start of ferry operation

The year of 1991

- Tg. Belungkor Gate Area and Bt. Belungkor hill restaurant in Activity Corridor open to service

The year of 1992

- Completion of major part of basic infrastructure
- Completion of a 250 room high class hotel
- Completion of a 250 room middle class hotel
- Completion of main facilities in Amenity Core
- Completion of jetties in the New Tourism Core and other areas

The year of 1993

- Completion of a high class 250 room hotel and a middle class 250 room hotel

The year of 1994

- Completion of almost all facilities except a 150 room and a 200 room middle class hotels

The year of 1995

- Completion of the remaining two hotels by the middle of the year

In accordance with the schedule shown in Fig. 6.4.1, the required investment cost for infrastructure and tourism facilities are broken down into public, JV, and private sectors as shown in Table 6.4.2 and Fig. 6.4.2.

Fig. 6.4.1 Implementation Schedule by Facility

PROJECT NAME		1989	1990
ROAD	D-1		
	D-2		
	D-3		
	D-4		
	D-5		
	F-1		
	F-2		
	F-3		
	F-4		
	R-92		
	R-89		
	F-101		
	F-102		
	F-103		
	F-104		
	F-105		
WATER SUPPLY			
SEWERAGE SYSTEM			
SOLID WASTE DISPOSAL SYSTEM			
POWER SUPPLY			
TELECOMMUNICATION			
HOTEL	High Class Hotel-1 250 Rooms		
	High Class Hotel-2 250 Rooms		
	High Class Hotel-3 300 Rooms		
	Middle Class Hotel-1 150 Rooms		
	Middle Class Hotel-2 200 Rooms		
	Expansion of Middle Class Hotel-3 100 Rooms		
	Renovation of Golf Hotel		
Middle Class Hotel-4 250 Rooms			
Middle Class Hotel-5 200 Rooms			
TOURIST FACILITIES			
COASTAL RESORT CORRIDOR			
AMENITY CORE	Tourist Center/Restaurant Plaza/Transportation Center		
	Jetty/Marine Sports Comp./Recreational Pool Comp./Aquarium		
	Exhibition Center/Craftsmen's Village		
	Shopping Promenade/Indoor & Outdoor Sports Comp.		
	Park & Garden		
AMENITY SUB CORE	Beach Marine Club		
	Golf Club		
	Shopping Restaurant/Theater/Outdoor Sports Comp./Transportation Sub Terminal		
ACTIVITY CORRIDOR			
GATE AREA	TG. Belungkor Ferry Jetty/Transportation Terminal		
	Shopping Promenade		
TG. BELUNGKOR MARINE SPORTS AREA	Marine Sports Complex		
	BT. Belungkor Hill Restaurant		
RECREATIONAL ACTIVITIES AREA	Major Fun Park		
INLAND SPORTS AREA	Golf Club		
	Indoor Sports Comp./Outdoor Sports Comp.		
ORCHARD/ORCHID GARDENS	Orchard Garden/Orchid Garden		
LAKESIDE PARKS	Lakeside Park/Bird Sanctuary/Insect Garden		
BANDAR PENAWAR TOURIST CENTER			
	Public Facilities		
	Nursery		
BANDAR PENAWAR ART CENTER	Headquarter/Dance & Music Center		
RESIDENTIAL AREA FOR HOTEL EMP.			
OTHER TOURISM ACTIVITY AREA			
LEBAM RIVER TOURISM AREA	Rubber Museum/ River Cruising/Crocodile Garden		
SANTI RIVER TOURISM AREA	Oil Palm Museum		
JOHOR LAMA HISTORICAL PARK	Johor Lama Historical Park Kg. Sengkal Seafood Restaurants		
TG. PENERANG/ SOUTH BEACH	Tg. Penerang Observation Park/Pulau Lima Fishing Island Beautification of South Beach		
JETTY	Tg. Penawar		
	Tg. Belau		
	Pulau Lima		
	River Cruising		
	Tioman		
	Marang		



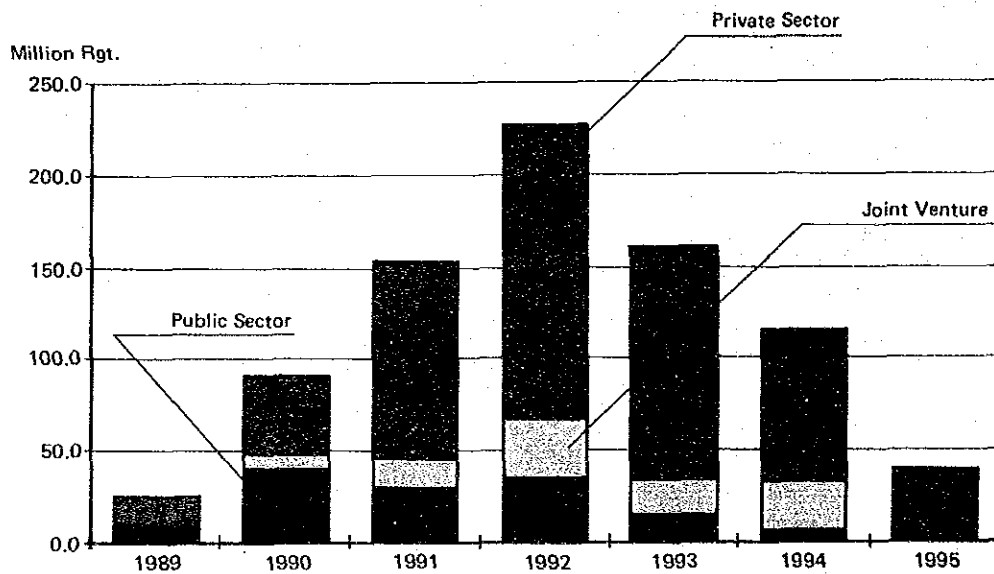
LEGEND :  Design & preparation of contract documents  Construction works

Table 6.4.2 Implementation Schedule by Development bodies

Year	Unit : Million Rgt.							Total
	1989	1990	1991	1992	1993	1994	1995	
Public Sector	5.9	39.6	29.7	35.2	14.0	6.0	0.0	130.3
Joint Venture	0.4	8.0	15.8	31.3	19.9	26.4	0.0	101.9
Private Sector	19.7	43.9	108.0	162.0	128.4	83.3	40.7	586.0
Total	26.0	91.6	153.5	228.5	162.3	115.7	40.7	818.2

Source : JICA Study Team

Fig. 6.4.2 Implementation Schedule by Development Bodies



CHAPTER 7

VIABILITY ANALYSIS

7.1 Financial Outlook

7.2 Economic Impact Analysis

7.1 Financial Outlook

7.1.1 Analytical Framework

Development of Desaru New Tourism Core necessitates the development of the basic infrastructure such as roads, water supply, power supply, as well as tourism facilities in the Amenity Core, Amenity Sub-Core, and the Tg. Belungkor Gate Area. Also needed are accommodation facilities in the Coastal Resort Corridor as explained in Chapter 11.

The development of the Desaru New Tourism Core is expected to continue over a long time, and the work by 1995 covers only the first stage of the entire project. This financial analysis focuses on the planned investment up to the year 1995.

The proposed work includes the following three types of investment:

- Investment which is useful for the region as a whole and can partly be borne by the public sector.
- Investment specific to tourism which can be borne by investors after the year 1995.
- Investment specific to tourism which must be borne before and until investors by the end of 1995.

Based on the above, the following conditions are assumed in the financial analysis.

Demarcation	Region	After 1995	Through 1995
Basic Infrastructure	25%	40%	35%
Tourism Infrastructure	0	55	45
Accommodations	0	0	100

This means that 35% of the investment in basic infrastructure is considered as the cost of tourism by 1995 though 100% of the investment must be implemented. 25% of the investment should be borne by public sector with the expectation of capital recovery through tax collection. 40% of the investment should be borne by private investors after 1995 in the form of land rent.

As for the tourism infrastructure, 45% of the investment should be borne by private investors before 1995, the rest after 1995. All of the investment in accommodation facilities is to be borne by private investors by 1995.

Seven hotels are proposed to be constructed by the year 1995 in addition to the renovation and expansion of existing hotels. This is based on the expectation that the introduction of varied hotel management will contribute to enhance the total attractiveness of accommodations. It is assumed, in this context, that the occupancy of hotel rooms in 1995 will amount to 50% of the total of 2,114 hotel rooms.

The following are the general procedures for financial analysis:

- 1) The period of analysis is thirty years; the period up to 1995 is mainly for construction and the period after 1995 is for operation and maintenance of these facilities.
- 2) Investment costs are those shown in Chapter 6. The basic infrastructure, tourism facilities, and accommodation facilities will be constructed through loans with differing conditions.
- 3) Operation and maintenance costs are estimated for the basic infrastructure, tourism facilities, and accommodation facilities. Depreciation costs are also taken into account.
- 4) Revenues for the Desaru New Tourism Core are assumed as follows:

Private Sector

- revenue from hotel guests inside hotels

Joint Venture

- revenue from hotel guests outside hotels
- revenue from day trippers
- transportation charge

Public Sector

- land rent
- consumption charges on water, sewerage, solid waste disposal, power, and telecommunication
- service tax
- business tax
- income tax

- 5) Inflation is not taken into account
- 6) Financial viability is shown in terms of the following indicators:
 - Financial Internal Rate of Return (FIRR)
 - Net Present Value (NPV)
 - Return on Investment (ROI)
 - Break Even Point in terms of cash flow
- 7) Sensitivity analysis identifies the influence which will be caused by the following items:
 - Change in total cost
 - Change in total return
 - Change in both total cost and return
 - Change in land rent
 - Change in the capacity of hotel accommodations

7.1.2 Financial Outlook of Infrastructure Development

As to be explained in Chapter 8, the Desaru New Tourism Core is to be developed jointly by the public sector (KEJORA being the Implementation Authority), a Joint Venture (J/V) between public and private sectors, and private investors. The public sector is responsible for developing the basic infrastructure as well as a part of the tourism infrastructure, the J/V for operation and maintenance

of the tourism infrastructure and transportation system, and private investors mainly for accommodations. In this section, the financial outlook of public sector will be studied.

Investment cost of public sector includes the items as shown in Table 7.1.1.

Table 7.1.1 Investment Cost for Analysis; Public Sector

Cost Items	Total Cost of Basic Infrastructure Development	Investment Burden of the Public Sector through 1995	Percent Completed through 1995
<u>Basic Infrastructure</u>			
Road	41.9	14.8	35%
Jetty	6.5	2.3	35%
Water Supply	24.0	8.5	35%
Sewerage Disposal	71.6	25.2	35%
Solid Waste	8.3	2.9	35%
Power	50.7	17.8	35%
Telecommunication	2.3	0.8	35%
Sub-total	205.3	72.3	
<u>Tourism Infrastructure</u>			
Coastal Resort Corridor	53.4	18.8	35%
Day Tripper/Daily Activity Zone	55.1	19.4	35%
Bandar Penawar Service Town	55.0	19.1	35%
Other Tourist Activity Zone	2.2	0.8	35%
Sub-total	165.7	58.1	
Total	371.0	130.4	

Source: JICA Study Team

Total investment cost amounts to 371.0 million ringgit, but the cost for analysis is 130.4 million ringgit which is equal to 35% of the total cost. The remaining 65% is to be borne partly by the region as a whole and partly by the investors and beneficiaries after 1995.

The annual operation and maintenance costs are estimated for each type of public service in association with its implementation schedule. It is assumed for the basic infrastructure that the participants involved by 1995 are responsible for operating and maintaining 100% of the total investment cost in Table 7.1.1 by 1995 and 35% of the total investment cost after 1995. As for the tourism infrastructure, it is assumed that the participants involved by 1995 are responsible for operating and maintaining 100% of the total investment cost by 1995 and 45% after 1995.

The revenue is composed of four major items: First, land rent is set at 3% of total sales of hotels and tourism facilities, while service tax is set equal to 5% of total sales of them. And thirdly business tax is imposed on the profit after pay-back 65% of capital, of which rate is set 45% of the profit. The last is the consumption charge levied on basic services as electricity, water supply and telecommunications.

Table 7.1.2 shows the estimated stream of cost and revenue of the Implementation Authority. The total cost and revenue in 30 years are calculated to be 548.6 and 1,857.3 million ringgit, surplus amounting to 1,308.7 million ringgit.

Revenue accruing to land rent and service tax reach at 6.0 and 10.7 million in 1995 respectively. In 2000, they increase to be 8,7 and 11,2 million, and business tax of 32 million is generated.

Last, revenue from utility user charges consists of the following items:

- Water consumption charge	1.89	ringgit/c.metre
- Sewerage treatment charge	5.48	ringgit/c.metre
- Solid waste disposal charge	137.52	ringgit/ton
- Power supply charge	0.3	ringgit/kWh
- Telecommunication charge (domestic)	1.0	ringgit/call
(international)	60.0	ringgit/call

Total consumption charges amount to 11.2 and 11.2 million in 1995 and 2000 respectively, accounting for 40.1 and 16.6% of the total revenue.

The payback year is clarified in cash flow analysis. In preparing these flows, loan conditions are assumed as follows:

- Interest rate	4%
- Loan period	25 years
- Grace period	7 years

Depreciation is calculated according to three different period of 30, 15 and 5 years.

The results of the financial analysis are summarised as follows:

- Financial internal rate of return	20.7%
- Net present value	247.6 million ringgit
- Return on investment	23.8%
- Cash flow:	
Year of profit in single year	7 years
Year of profit in cumulation	14 years

The financial internal rate of return (FIRR) is 20.6%, with a net present value of 247.6 million ringgit at an 8% discount rate. Since the opportunity cost of capital is about 8%, this FIRR shows a high investment efficiency for the public sector. Profitability of the project is also calculated at 23.8% in terms of return on investment (ROI).

In the cash flow analysis, net profit is attained on the 7th year, and total investment cost is paid back on the 14th year.

Table 7.1.2 Estimated Stream of Cost and Revenue of Implementation Authority

YEAR	INVESTMENT COST	O/M COST	LAND RENT	CHARGE ON INFRA.	TAX	BALANCE
1989	5.910	0.403	0.000	0.000	0.000	-6.313
1990	39.635	1.664	0.821	1.206	1.398	-37.874
1991	29.659	2.821	1.073	2.135	1.933	-27.339
1992	35.208	3.347	1.216	2.589	2.222	-32.528
1993	14.015	7.392	3.762	7.061	6.747	-3.837
1994	5.973	7.977	4.169	8.547	7.508	6.273
1995	0.000	9.156	5.956	11.224	10.697	18.721
1996	0.000	11.749	7.057	11.224	12.667	19.199
1997	0.000	11.897	7.604	11.224	13.604	20.535
1998	0.000	15.106	8.226	11.224	45.068	49.412
1999	0.000	15.246	8.439	11.224	46.261	50.677
2000	0.000	15.387	8.652	11.224	47.454	51.943
2001	0.000	15.881	9.329	11.224	51.715	56.386
2002	0.000	15.889	9.356	11.224	51.775	56.465
2003	0.000	15.898	9.384	11.224	51.837	56.546
2004	0.000	15.908	9.413	11.224	51.899	56.628
2005	0.000	15.917	9.442	11.224	51.963	56.712
2006	0.000	16.411	10.121	11.224	56.230	61.163
2007	0.000	16.421	10.151	11.224	56.296	61.250
2008	0.000	16.431	10.182	11.224	56.364	61.339
2009	0.000	16.441	10.213	11.224	56.434	61.429
2010	0.000	16.451	10.246	11.224	56.504	61.522
2011	0.000	16.936	10.895	11.224	60.705	65.888
2012	0.000	16.936	10.895	11.224	60.705	65.888
2013	0.000	16.936	10.895	11.224	60.705	65.888
2014	0.000	16.936	10.895	11.224	60.705	65.888
2015	0.000	16.936	10.895	11.224	60.705	65.888
2016	0.000	17.422	11.545	11.224	64.907	70.254
2017	0.000	17.422	11.545	11.224	64.907	70.254
2018	0.000	17.422	11.545	11.224	64.907	70.254
2019	0.000	17.422	11.545	11.224	64.907	70.254
TOTAL	130.400	418.161	255.467	302.126	1,299.731	1,308.763
						IRR =
						20.67%
						NPV =
						247.6

Sensitivity tests are conducted to measure the magnitude of change in costs and sales on the total project assessment as shown in Table 7.1.3. For this purpose, cost and benefit ranges of minus 20% to plus 20% of the original case are tested. Also tested is how the government policy in terms of land rent and service tax affect the total assessment of the project. Results are summarised below:

Table 7.1.3 Sensitivity Test on Public Sector Investment

Subject of Change	Degree	IRR (%)	First Year of Black in Single Year Base	First Year of Black in Cumulation
Investment cost	-20%	23.8	6	14
	+20%	18.3	7	15
Revenue	-20%	17.0	7	16
	+20%	23.9	6	13
Land Rent	1%	18.7	7	15
	5%	22.5	7	13

This sensitivity test shows validity of the project investment both on the expanded construction cost and on the reduced return. In the worst case, the IRR is 17.0%, much higher than the opportunity cost of 8%. The first year to go into the black both on the single and cumulative base is less sensitive. The former is in the 6th to 7th year, while the latter in the 13th to 16th year. These are sound indications for the public sector to implement this project.

7.1.3 Financial Outlook of Joint Venture

A Joint Venture (JV) is proposed to be established by the public and private sectors, aiming at reducing the initial financial burden on the private investor and consequently encouraging private sector to join in the development of the Desaru New Tourism Core. Investment fields every development of major tourism facilities and the transportation system.

The investment cost of the JV includes the items shown in Table 7.1.4.

Table 7.1.4 Investment Cost for Analysis: Joint Venture

Cost Items	Total Cost of JV	Investment Burden of JV Through 1995	Percent Completed Through 1995
<u>Tourist Facilities</u>			
Coastal Resort Corridor	135.1	60.9	45%
Day Tripper/Daily Activity Zone	85.2	38.5	45%
Bandor Penawar Service Town	0	0	-
Other Tourist Activity Zone	6.1	2.8	45%
Sub-total	226.4	102.3	-
<u>Others</u>			
Bus/Ferry	52.0	23.4	45%
Total	278.4	135.7	

In addition to these construction and vessel/vehicle purchasing cost, land rent and service tax are imposed on JV, which amount to 5.0 to 8.4 million ringgit in 1995 respectively and account for 4.7% and 7.6% of the total cost of JV. Management cost equivalent to 10% of the whole sales is also incorporated into the analysis.

Total investment cost amounts to 278.4 million ringgit, of which the cost subject to this financial analysis is limited at 125.7 million ringgit, accounting for 45% of the total cost. As explained in 7.1.1, the remaining portion is borne by the investors who will join after 1995. As for the cost of annual operation and maintenance, the whole amount is borne by JV up to 1995 and 45% in the subsequent years.

The revenue consists of three items, of which first two items are due to hotel guests' and daytrippers' expenditures. These are estimated by multiplying the target hotel guests and daytrippers by the average expenditure of 100 and 35 ringgit per day respectively. This expenditure includes such expenses as admission fees to the museum and theatre, and expenditure on food, beverage, etc.

The third item, transportation revenue, is estimated for each type of service and route, setting 15 ringgit per one round trip to Desaru by ferry or bus, and 1 to 2 ringgit/time for bus service inside the Desaru New Tourism Core.

Total revenue amounts to 102.4 and 118.0 million ringgit in 1996 and 2000. Of the total revenue, 79.2% is attributable to the tourists' expenditure outside the hotel boundary, the remaining to the transportation services.

Table 7.1.5 shows the estimated stream and revenue of the JV. The total cost and revenue in 30 years are calculated to be 2,006.7 and 3,267.3 million ringgit, with the surplus amounting to 1,260.6 million ringgit.

In cash flow analysis, investment pay-back year is calculated under the conditions of loan and depreciation shown below:

Loan conditions

- Interest rate 4%
- Loan period 25 years
- Grace period 7 years

Depreciation period

It is set at 30, 15 and 5 years, and 70%, 20% and 10% of the total investment cost are allocated to each category.

The results of the financial analysis are summarised as follows:

- Financial rate of return 19.3%
- Net present value 225.6 million ringgit
- Return on investment 21.6%
- Cash flow
 - Year to go into the black 7th Year
 - Year to go into the black on the accumulated basis 11th Year

Table 7.1.5 Cost and Revenue Flows for the Joint Venture

(unit: million Rgt.)					
YEAR	INVESTMENT COST	O/M COST	GENERAL ADMINI. COST	REVENUE	BALANCE
1989	0.402	0.000	0.000	0.000	-0.402
1990	10.872	6.495	1.974	7.511	-11.830
1991	20.404	19.411	4.324	17.918	-26.222
1992	34.248	21.239	5.427	22.750	-38.164
1993	24.790	60.346	14.306	59.237	-40.205
1994	29.326	66.346	16.378	68.086	-43.965
1995	4.781	78.346	22.868	94.860	-11.136
1996	0.000	35.256	24.489	102.468	42.723
1997	0.000	35.256	25.744	107.356	46.357
1998	0.000	35.256	27.144	112.796	50.396
1999	0.000	35.256	27.773	115.346	52.317
2000	0.000	35.256	28.406	117.920	54.257
2001	0.000	35.256	28.693	119.198	55.249
2002	0.000	35.256	28.986	120.501	56.260
2003	0.000	35.256	29.284	121.831	57.291
2004	0.000	35.256	29.589	123.187	58.343
2005	0.000	35.256	29.899	124.570	59.415
2006	0.000	35.256	30.216	125.981	60.510
2007	0.000	35.256	30.539	127.421	61.626
2008	0.000	35.256	30.868	128.889	62.765
2009	0.000	35.256	31.204	130.386	63.926
2010	0.000	35.256	31.547	131.913	65.110
2011	0.000	35.256	31.547	131.913	65.110
2012	0.000	35.256	31.547	131.913	65.110
2013	0.000	35.256	31.547	131.913	65.110
2014	0.000	35.256	31.547	131.913	65.110
2015	0.000	35.256	31.547	131.913	65.110
2016	0.000	35.256	31.547	131.913	65.110
2017	0.000	35.256	31.547	131.913	65.110
2018	0.000	35.256	31.547	131.913	65.110
2019	0.000	35.256	31.547	131.913	65.110
TOTAL	124.824	1,098.319	783.584	3,267.342	1,260.615
					IRR =
					19.34%
					NPV(8%) =
					225.6

A sensitivity analysis was conducted to measure a magnitude of change in investment amount before 1995, and others. They are:

- Change in total cost
- Change in total revenue
- Change in total cost and revenue
- Change in land rent

The results are summarised in Table 7.1.6.

Table 7.1.6 Sensitivity Test on Joint Venture Investment

Subject of Change	Degree	IRR (%)	First Year of Black in Single Year Base	First Year of Black in Cumulation
Investment Cost	-20%	23.6	2	10
	+20%	15.7	8	12
Revenue	-20%	2.5	11	26
	+20%	43.1	4	7
Land Rent	1%	21.0	7	10
	5%	17.7	8	11

Results show that project profitability and investment efficiency are valid against increase in investment cost and land rent. Increase of cost by 20% lowered IRR to 15.7, but high enough to approve this project in terms of investment efficiency.

However, change in the return has a significant impact on total investment assessment for JV. Reduction of return by 20% leads IRR into far below than that of opportunity cost of capital (8%). This cannot be well compensated by reduction of land rent since its impact attributable to reduction of land rent from 3% to 1% causes to raise IRR by only 1.7%. This implies that well organised promotional activities are indispensable to lead the tourism development successfully.

7.1.4 Financial Outlook of Hotel Development

As explained in Chapter 11, it is proposed to construct several high and middle class hotels in Coastal Resort Corridor. Financial analysis was carried out to estimate the financial outlook of hotel development, by examining a middle class hotel of 250 rooms as an example.

It is assumed that a typical middle class hotel has a site area of 7.0 ha and a floor area of 17,500 square metres. An average expenditure per guest night is assumed to be 180 ringgit in hotel facilities with additional 100 ringgit outside.

Total construction cost of the middle class hotel with 250 rooms reaches to 54.6 million ringgit, and other items are shown below:

- Material cost 27% of the whole hotel sales
- General administration cost 28% of the whole hotel sales
- Land rent 3% of the whole hotel sales
- Service tax 5% of the whole hotel tax

Investment will start in 1991 and ends in 1993. In the same year, the hotel will be open to the public and generate returns.

In 1995, the material cost and general administration cost will reach 4.6 and 4.8 million ringgit, respectively. Land rent will reach 0.5 million ringgit in the same year, and service tax marks 0.9 million ringgit while business tax will not be imposed yet.

Revenue items are limited to room rentals and restaurant sales.

The revenue is estimated by multiplying the target guest nights by the average expenditure of 180 ringgit per guest night. The room occupancy rate of two guests per room is assumed to be 45% in 1993, 52% in 1995, and 70% in 1998 and afterwards. The revenue in 1995 is estimated at about 17.1 million ringgit.

Table 7.1.7 shows the estimated stream of costs and revenues for middle class hotels. The total cost and revenue in 30 years are calculated to be 612.8 and 86.0 million ringgit, respectively, the surplus amounting to 273.2 million ringgit.

Cash flow is also analysed. In preparing cash flow, loan conditions are assumed as follows for the calculation of cash flow:

- Interest rate 7%
- Loan period 15 years
- Grace period 3 years

Table 7.1.7 Cost and Revenue Flows for the Middle Class Hotel

(unit: million Rgt.)

YEAR	INVESTMENT COST	MATERIAL COST (FOOD, ETC.)	GENERAL ADMINI. EXPENSE	LAND LEASE EXPENDI.	SERVICE TAX	TOTAL COST	TOTAL SALES OF HOTEL	BALANCE
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	4.8	0.0	0.0	0.0	0.0	4.8	0.0	-4.8
1992	24.9	0.0	0.0	0.0	0.0	24.9	0.0	-24.9
1993	24.9	4.0	4.1	0.4	0.7	34.2	14.8	-19.4
1994	0.0	4.4	4.6	0.5	0.8	10.3	16.4	6.1
1995	0.0	4.6	4.8	0.5	0.9	10.8	17.1	6.3
1996		5.9	6.1	0.7	1.1	13.8	21.9	8.1
1997		6.4	6.6	0.7	1.2	14.9	23.7	8.8
1998		6.9	7.2	0.8	1.3	16.1	25.6	9.5
1999		6.9	7.2	0.8	1.3	16.1	25.6	9.5
2000		6.9	7.2	0.8	1.3	16.1	25.6	9.5
2001		7.6	7.9	0.8	1.4	17.7	28.1	10.4
2002		7.6	7.9	0.8	1.4	17.7	28.1	10.4
2003		7.6	7.9	0.8	1.4	17.7	28.1	10.4
2004		7.6	7.9	0.8	1.4	17.7	28.1	10.4
2005		7.6	7.9	0.8	1.4	17.7	28.1	10.4
2006		8.3	8.6	0.9	1.5	19.3	30.7	11.3
2007		8.3	8.6	0.9	1.5	19.3	30.7	11.3
2008		8.3	8.6	0.9	1.5	19.3	30.7	11.3
2009		8.3	8.6	0.9	1.5	19.3	30.7	11.3
2010		8.3	8.6	0.9	1.5	19.3	30.7	11.3
2011		9.0	9.3	1.0	1.7	20.9	33.2	12.3
2012		9.0	9.3	1.0	1.7	20.9	33.2	12.3
2013		9.0	9.3	1.0	1.7	20.9	33.2	12.3
2014		9.0	9.3	1.0	1.7	20.9	33.2	12.3
2015		9.0	9.3	1.0	1.7	20.9	33.2	12.3
2016		9.7	10.0	1.1	1.8	22.5	35.8	13.2
2017		9.7	10.0	1.1	1.8	22.5	35.8	13.2
2018		9.7	10.0	1.1	1.8	22.5	35.8	13.2
2019		9.7	10.0	1.1	1.8	22.5	35.8	13.2
2020		9.7	10.0	1.1	1.8	22.5	35.8	13.2
2021		10.3	10.7	1.1	1.9	24.1	38.3	14.2
2022		10.3	10.7	1.1	1.9	24.1	38.3	14.2
TOTAL	54.6	239.2	248.1	26.6		612.8 513.9	866.0	273.2

IRR = 16.12%
NPV = 39.6

In cash flow analysis, depreciation is also taken into account. Its period are categorised into 31, 15 and 5 years. 60%, 30% and 10% of the total investment cost are allocated to each category.

The results of the financial analysis are summarised as follows:

- Financial internal rate of return	16.1%
- Net present value	39.6 million ringgit
- Return on investment	17.5%
- Cash flow:	
Year of profit in single year	1st year
Year of profit in cumulation	7th year

The sensitivity test was conducted based on the different assumptions as shown below:

- Change in accommodation capacity
- Change in total cost and benefit
- Change in land rent
- Change in service tax

Change in accommodation capacity is induced by attributable to the reduction of new hotel construction by one (one middle class hotel with 250 rooms is assumed not to be constructed). Due to this reduction, average occupancy ratio of the hotel concerned is leveled up to 0.73 and 0.79 from the original figures of 0.70 and 0.70 in 1998 and 2000 respectively, and this incremental margin kept same after 2000.

Table 7.1.8 Sensitivity Test on Private Sector Investment

Subject of Change	Degree	IRR (%)	First Year of Black in Single Year Base	First Year of Black in Cumulation
Accommodation	Less one middle class with 250 rooms	17.2	1	7
Investment Cost	-20%	17.7	1	6
	+20%	13.6	1	7
Revenue	-20%	12.7	1	7
	+20%	19.4	1	6
Land Rent	1%	16.9	1	6
	5%	15.3	1	7

Hotel investment results in the high internal rate of return (16.1%) and this original conclusion is confirmed by the sensitivity test. Soundness of the project investment is kept valid in the more severe circumstances. In the worst case (reduction of return by 20%), IRR is 12.7%, being higher than the opportunity cost of capital (8%).

Reduction of hotel capacity results in a slightly higher figure of IRR, 17.2%, compared with original 16.1%. Other two evaluation indicators are kept same regardless the increase of occupancy rate. In fact, the years to go into black based on both single year and accumulated basis are 1st year and the 7th year.

Government policy on the land rent has a light impact on the total assessment of the project. IRR shows a slight decrease from 16.9% to 15.3% according to change in rent from 1% of the total sales to 5%.

7.1.5 Implications of Financial Analysis

Three kinds of investments has a high investment efficiency and indicate highly promising returns. In this section, policy implications are investigated.

The public sector is expected to produce the highest return from this Desaru New Tourism Core Development among the three entities. The major contributor is the fact that the basic infrastructure. The infrastructure development done by the State and the Federal Government up to 1988, contributes to lessen the initial investment burden for the tourism development in Desaru.

Recovery of the investment cost in 14 years is attributable to a soft loan at a 4% interest rate with a grace period of 7 years and repayment period of 25 years. This concessional soft loan is one of the indispensable elements to lead to success in this project.

Revenue items such as land rents and service taxes can be subjects of reduction since other two entities, i.e. Joint Venture and Hotelier have less FIRR than public sector. For the purpose of improving their investment returns, it is advisable that rates of taxation or charges be kept as low as possible.

The Joint Venture is expected to produce an FIRR of 19.3%. It is required, however, to note that the reduction of revenue by 20% results in an FIRR of 2.5%, for below the level of opportunity cost of capital (8%). In order to guarantee financial soundness of J.V., international marketing promotion shall be emphasised with the concerted efforts of the Government, J.V. and private sector. For the purpose of luring as many international tourists and day trippers as possible, it is advisable to develop the various types of tourism facilities as proposed in the study, instead of relying on some limited facilities in a small scale.

Investment pay-back year of J.V. is forecast to be 14th year. For the private sector of J.V., this investment pay-back year is not early enough. A most effective policy device can be an exemption or reduction of the business tax. At present, it is set 45% of profit after revulsion of 65% of capital. Annual expenditure of this item is estimated 19.4 million ringgit while profit after tax marks 23.7 million ringgit in 2000. This policy device can assure an improvement of investment pay-back year.

Hotels are expected to produce an FIRR of 16.1%, which is high enough compared with opportunity cost of capital (8%). Net annual profit is expected to be generated on the first year the hotel is open to the public. Further improvement of FIRR can be attained only by managerial efforts. However the government can also contribute to raise hoteliers' FIRR by reducing the land rent or service tax or both. In 2000 when the occupancy rate is expected to reach 70%, these two items accounted for 13.0% of total cost. Since the public sector remarks high profitability, it is judged that these reductions can be attainable.

In the total view of the Desaru New Tourism Core Development, the project has potential for high profitability and is viable for implementation.

Two points should receive attention. The point is redistribution of revenue among the public, J.V. and hoteliers. Under the present analytical conditions, the public sector is expected to be rewarded best and hotelier least. In order to introduce new capital from domestic and world market, redistribution of revenue should be induced by means of change in land rent, service tax rate.

The second point is a role of the concessional soft loan which contributes to heighten the FIRR for the public and J.V. Introduction of this kind of loan can be a pre-requisite for the project, and all entities should make an effort to gain capital on advantageous conditions.

7.2 Economic Impact Analysis

7.2.1 Analytical Framework

Tourism development of the Desaru New Tourism Core is expected to have a positive economic impact to the country, particularly in the State of Johor. The economy of the state has mainly relied on agriculture and other primary industries for economic growth. A basic problem with a reliance on agriculture is that the economy tends to be unstable due to weather, disease, and international market price. Introduction of large scale tourism to the region will accelerate the growth and diversity of economic activities.

This section aims at assessing the viability of tourism development of the Desaru New Tourism Core in terms of regional economy. The assessment is performed in the following procedures:

- Identification of economic benefit accruing to the project of Desaru New Tourism Core
- Estimation of economic cost incurred by the project
- Assessment of economic viability in terms of the regional economy

7.2.2 Economic Benefit

Major economic benefits accruing to the tourism development can be enumerated as follows:

- increase of foreign exchange earning,
- increase of regional products, and
- increase of job opportunities.

1) Foreign Exchange Earnings

Foreign exchange earnings will be increased by the project through investment by overseas investors and expenditure by international tourists who visit the Desaru New Tourism Core. The foreign exchange earnings, however, must be adjusted to calculate the net earnings to allow for leakage to foreign countries for the purchase of goods and services.

The portion of the investment by overseas investors, however, is quite uncertain at the moment though active participation of overseas investors are required. In view of this, foreign exchange earnings related to overseas investors are excluded from the benefit calculation to estimate the benefit conservatively.

Foreign currency expenditures by international tourist to the Desaru New Tourism Core consist of the following items:

- expenditures by hotel guests within hotels,
- expenditures by hotel guests outside hotels,
- expenditures by day trippers from Singapore, and
- transportation expenditures.

Average daily expenditure per hotel guest within hotels is assumed to be 170 - 200 ringgit depending on class of hotels. Total expenditure of this category is estimated at 143.0 million ringgit in 1995. Average daily expenditure per hotel guest outside hotels is assumed to be 100 ringgit excluding transportation expenditure. This expenditure amounts to 33.1 million ringgit. Average daily expenditure of day trippers is assumed to be 35 ringgit in the Desaru New Tourism Core excluding transportation expenditure. This expenditure amounts to 90.0 million ringgit.

2) Regional Product (GRDP)

A tourist makes an initial expenditure into the Desaru New Tourism Core. This expenditure is received as income by hoteliers, local tour operators, handicraft store owners, and taxi drivers. In the first round of transactions, a hotelier may use some money received to buy some supplies, pay some wages, and retain some profits. The income in the second round may be spent or saved, while the employee who has received payment for services rendered may spend some of that on rent and some on food, and may put some into savings. The money spent on supplies in the third round of spending goes for things such as seed, fertilizer, and imported raw materials. Any income spent on imports leaks out of the local economy. This process continues until the additional income generated by a new round of spending essentially becomes zero.

The size of the multiplier depends upon the extent of which the various sectors of the economy are linked to one another. This is largely a function of the diversity of activities within the region. It is, however, very difficult to estimate the size of the multiplier because of the fact that the tourism industry is comprised of many different sectors of the economy and the involvement of many small businesses. It is reported that most island economies have an income multiplier range between 0.6 and 1.2, while developed economies have a range between 1.7 and 2.0.

The multiplier of tourism industry of the country is estimated to be 0.87 based on the input-output table compiled in 1978. Taking account of the economic situation of the South East Coast, the estimated multiplier is considered to be applicable to this analysis because the figure is between 0.6 and 1.2 mentioned above.

The increase of regional product is estimated to be 124.4 million ringgit in 1995 and continue to increase to 193.6 million ringgit in 2000.

3) Job Opportunities

Tourism creates primary or direct employment in such areas as lodging, restaurants, and sightseeing operations. Indirect employment can also be created in construction, agriculture, and manufacturing industries. The amount of indirect or secondary employment generated depends upon the extent to which the tourism sector is integrated with the rest of the local economy.

Direct employment in the Desaru New Tourism Core is estimated to be 5,680 persons in 1995 based on the aggregation of labour requirement in each facility.

It is rather difficult to estimate the amount of indirect employment to be generated by direct employment. It is assumed in consideration of several examples of the developing countries that indirect employment amounts to 1.4 times of direct employment. The amount of indirect employment is estimated to be about 8,000 persons in 1995.

Employment generated during the construction period is estimated to be about 2,400 persons by the end of 1995 based on the aggregation of labour required for constructing infrastructure and tourism facilities.

The monetary value of the estimated employment is closely related with the increase of GRDP. For avoiding the possible double count of the benefit, increased job opportunities is not included in the total benefit calculation.

Table 7.2.1 summarizes the estimated economic benefits. Total benefit in 1995 is estimated to be 254.1 million ringgit.

Table 7.2.1 Economic Benefit in 1995

Unit: million ringgit	
Benefit	
Foreign Exchange Earnings	179.4
Regional Product	74.7
Total	254.1

7.2.3 Economic Cost

Economic cost of the project is defined as an aggregation of opportunity cost of all the materials involved in the project, which is equivalent to the value that the material can produce in other possible projects.

It is required to convert the market prices used in the financial analysis into economic prices which represent the actual cost of input, net of such transfer payment as tax, subsidy, and interest.

For estimating the economic process of the project, conversion factors are quoted from the report titled "National Parameters for the Project Appraisal" which is compiled by the Economic Planning Unit, Prime Minister's Office, 1986) Table 7.2.2 shows the conversion factors.

The economic cost of the project is estimated to be 1,023.3 million ringgit in 1988 prices as shown in Table 7.2.3.

Table 7.2.2 National Parameters Used in the Project

Items	Conversion Ratio
Detail Design and Supervision	0.770
Fuel	0.880
Cement	0.870
Plank	0.770
Planting	0.770
Steel	0.770
Equipment	0.830
Tack	0.820
Labour	
Skilled	1.000
Unskilled	0.820
Overhead	0.770

Source; National Parameters for the Project Appraisal, Economic Planning Unit, Prime Minister's Department, 1986.

Table 7.2.3 Economic Cost of the Project

(Unit: million Rgt. in 1988 prices)

	Construction Cost
Tourist Facility	
Coastal Resort Corridor	510.1
Daytrip/Daily Act Zone	198.2
Bandar Penawar S. Town	68.0
Other T. Activity zone	12.0
Sub-total	788.3
Infrastructure	
Road	34.1
Jetty	5.7
Water Supply	22.4
Sewage Water	66.3
Solid Waste Disposal	7.1
Electric System	52.6
Telecommunication	0.9
Sub-total	189.1
Buses	2.1
Ferry Vessels	43.7
Total	1,023.2

Source: The Study Team

7.2.4 Benefit and Cost Analysis

Benefit and cost estimated in the preceding sections are used for benefit cost analysis. In consideration of the possible leakage of foreign currency earnings overseas, however, 60% of the estimated foreign currency earnings is taken into account for the benefit cost analysis. 60% is the average of the leakage studied in the tourism sector of Thailand and Indonesia. For the analytical purpose, benefit and cost stream is assumed for the period of 30 years as shown in Table 7.2.4.

The following three indicators are calculated to test the viability of the project:

- net present value (NPV),
- benefit-cost ratio (B/C), and
- economic internal rate of return (EIRR)

The results are shown in Table 7.2.5. At the discount rate of 8%, NPV and B/C are calculated to be 1,104.0 million ringgit and 1.6, respectively. EIRR is calculated to be 18.8%, which is considerably higher than the opportunity capital cost of 8% in 1988.

The table also shows the results of sensitivity analysis. In case of cost up by 20%, EIRR is decreased to 14.5%, and in case of benefit decline by 20%, it is decreased to 13.6%. The project is more sensitive to the change of benefit. In the combined case of cost up and benefit decline by 20% each, EIRR is decreased to 9.8%, remaining still higher than the opportunity cost of capital (8%).

Judging from the above results, it is concluded that the project is viable from the view point of regional economy.

Table 7.2.4 Results of Economic Analysis

		NPV (mil. Rgt)	B/C	EIRR (%)
Base Case				
Discount Rate	8%	1,104.0	1.6	18.8
Discount Rate	12%	443.4	1.3	-
Sensitivity (Discount 8%)				
Cost up by 20%		757.5	1.4	14.5
Benefit Decline by 20%		536.7	1.3	13.6
Combination of Above		190.1	1.1	9.8

Table 7.2.5 Economic Cost and Benefit Flows of the Project

(UNIT: MILLION RGT.)

YEAR	INVESTMENT COST		OM/COST		INFRASTRUC. TURE	TRANSPORT- ATION	TOURIST FACILITY	OM/COST	INFRASTRUC. TURE	TRANSPORT- ATION	TOTAL ECONOMIC COST	FOREIGN EXCHANGE EARNING	GROP INCREASE	TOTAL ECONOMIC BENEFIT	NET BALANCE
	TOURIST FACILITY	INFRASTRUC. TURE	INFRASTRUC. TURE	TOURIST FACILITY											
1989	25,056	4,925	0	0	0	0	0	0	0.403	0	30,384	0	0	0	-30,384
1990	99,714	45,072	5,74	2,112	1,321	1,321	2,112	1,321	1,321	6,409	153,959	18,818	12,572	31,39	-122,569
1991	135,403	53,464	9,24	11,285	2,307	2,307	11,285	2,307	2,307	6,409	218,088	29,569	13,205	43,174	-174,914
1992	224,128	50,252	5,775	23,235	2,744	2,744	23,235	2,744	2,744	12,613	318,747	40,024	13,994	54,018	-264,729
1993	144,448	31,969	9,643	42,949	5,635	5,635	42,949	5,635	5,635	25,022	259,666	107,997	47,44	155,437	-104,229
1994	126,572	2,081	5,845	56,327	5,955	5,955	56,327	5,955	5,955	37,854	234,634	129,662	51,596	181,258	-53,376
1995	32,94		9,538	67,593	6,368	6,368	67,593	6,368	6,368	44,497	160,936	179,397	74,657	254,054	93,118
1996				70,409	6,773	6,773	70,409	6,773	6,773	44,497	121,679	210,679	92,419	303,098	181,419
1997				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	228,904	100,715	329,619	206,059
1998				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	244,009	110,2	354,209	230,649
1999				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	250,118	113,171	363,289	239,729
2000				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	256,02	116,142	372,162	248,602
2001				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	270,816	127,447	398,263	274,703
2002				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	272,544	127,447	399,991	276,431
2003				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	274,306	127,447	401,753	278,193
2004				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	276,104	127,447	403,551	279,991
2005				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	277,937	127,447	405,384	281,824
2006				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	292,301	127,447	420,248	296,688
2007				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	294,709	127,447	423,156	298,596
2008				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	296,655	127,447	424,102	300,542
2009				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	299,64	127,447	426,087	302,527
2010				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	300,664	127,447	428,111	304,551
2011				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	301,275	127,447	428,722	305,162
2012				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	301,275	127,447	428,722	305,162
2013				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	301,275	127,447	428,722	305,162
2014				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	301,275	127,447	428,722	305,162
2015				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	301,275	127,447	428,722	305,162
2016				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	301,275	127,447	428,722	305,162
2017				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	301,275	127,447	428,722	305,162
2018				70,409	8,654	8,654	70,409	8,654	8,654	44,497	123,56	301,275	127,447	428,722	305,162
TOTAL	788,261	187,763	45,781	1622,898	221,894	1149,826	4216,413	6960,973	3040,157	10001,13	5784,717				

IRR = 18.82%
 NPV = 1104
 B/C = 1.649

7.2.5 Implication of Economic Impact Analysis

As discussed in the above section, the economic viability of tourism development of Desaru New Tourism Core is more dependent on benefit increase than on cost saving. Benefit increase will be attained through introducing measures to keep the leakage to benefit to the minimum.

In view of this, it is very important to further develop and diversify the economic activities of Johor Bahru and to organise an effective economic linkage between Johor Bahru and Bandar Penawar Service Town. Kota Tinggi. Without such efforts, it might happen that some part of foreign exchange earnings and multiplier effects on regional product will leak out to Singapore or importing secondary materials and services. Development of Bandar Penawar Service Town is an important issue in this respect.

It is also required to take measures for facilitating local farmers to move into secondary and tertiary industries for supporting tourism industry. Manpower training is essential for this purpose. Without these measures, job opportunities generated by the tourism development might leak out to other regions, or in extreme case, to Singapore.

With a view to further improving economic indicators, it is necessary to make an effort to generate the benefits in the earlier stage of development. This can be achieved by effective promotional activities to the major target countries.

CHAPTER 8

REQUIREMENTS FOR DEVELOPING DESARU NEW TOURISM CORE

8.1 Machinery for Developing Desaru New Tourism Core

8.2 Manpower Development

8.3 Public and Private Sector Cooperation

8.4 Tourist Promotion to Desaru

8.1 Machinery for Developing Desaru New Tourism Core

8.1.1 Requirements for the Machinery

The main objective of developing the Desaru New Tourism Core is to increase the international tourist arrivals to the country, thereby attaining increasing foreign currency earnings in accordance with the national target. As explained in the preceding chapters, development of the Desaru New Tourism Core is considerably different from those in the past, in that it is a large scale tourism development extending over a long period of time. It is required, in consequence, that all possible participants work together for its successful realisation.

The specific features of the development can be enumerated as follows;

- 1) It requires full participation of the federal government in terms of policy making on tourism development of the country, establishing a guideline and/or policy for the development of the Desaru New Tourism Core, organizing systems for development, and raising a large amount of development fund.
- 2) It requires the full cooperation of various participants on many levels of various public agencies.
- 3) It requires the active participation of private sector in close coordination with the public sector.
- 4) It requires the invitation of foreign investors in the development, particularly in terms of technology, quality of service, and funding.
- 5) It requires that citizens are well aware of the importance of tourism development of the country and prepared to accept foreign tourists.

8.1.2 Outline of Development Organizational Structure

Development of Desaru New Tourism Core requires participation of the cabinet at the level of policy decision making and participation of private business at the opposite level of daily operations of hotels, shops, restaurants, and so on. In order to coordinate and integrate different types of participants, it is very important to develop a plan appropriate to the development.

Special attention must be paid that the existing organisations are fully utilised in order to establish new organisations and to also avoid multiplication of functions and responsibilities.

Fig. 8.1.1 illustrates the development machinery of the Desaru New Tourism Core. The following points are taken into account in proposing the development machinery.

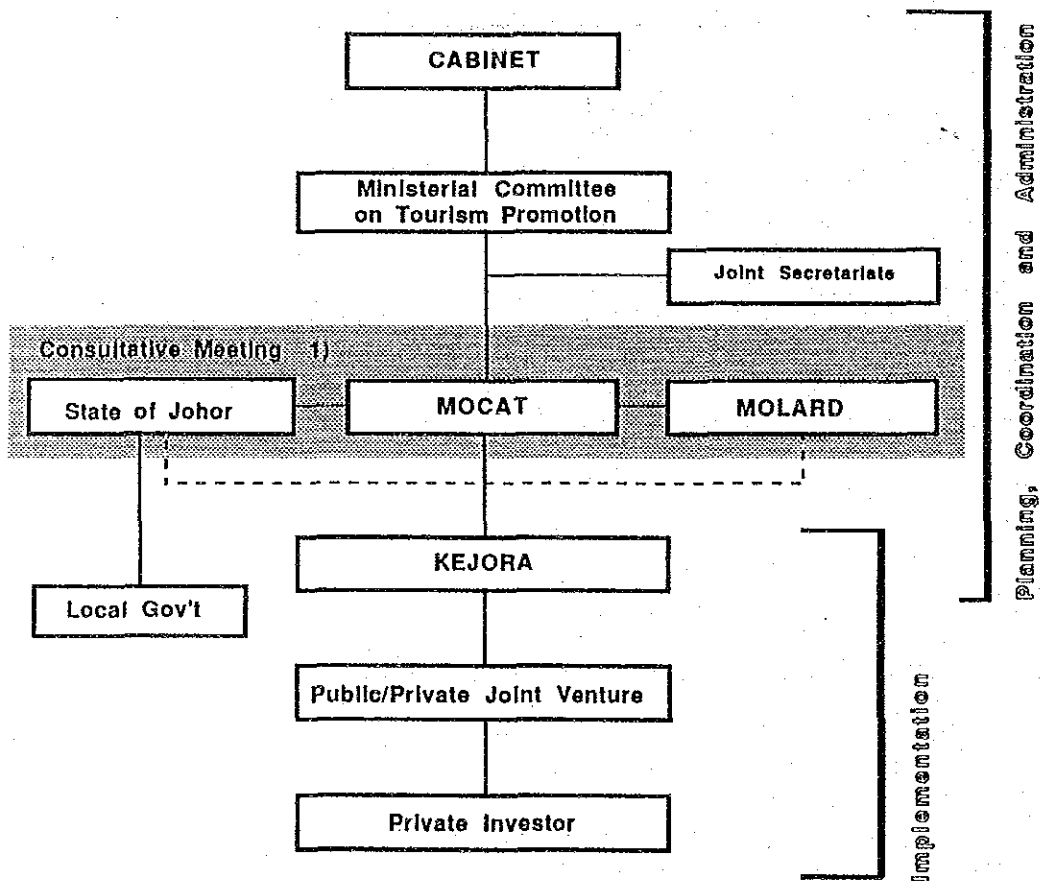
- Ministry of Culture and Tourism (MOCAT) including Tourism Development Corporation of Malaysia (TDC) plays a central role for the development in the administrative aspects of setting policy and guidelines, inter-ministerial coordination, horizontal coordination, guidance with the various implementation agencies, and overall administration.

The Ministry of Land and Regional Development (MOLARD) and the Johor State Government shall be collaborators of MOCAT in equal administrative level for the implementation. In order to realise the smooth collaboration among MOCAT, MOLARD and Johor State, it is necessary to organise the consultative meeting on regular basis and the meeting shall involve EPU and ICU of Prime Minister's Department.

- Committees and sub-committees already established for tourism development will be maintained and partly tailored for the development of Desaru New Tourism Core.
- Johor Tenggara Development Authority (KEJORA) is expected to take an active role in implementing the development of Desaru New Tourism Core in accordance with the policy and guidelines issued by the higher authorities in administration and in close cooperation with ministries, state governments and private investors, particularly with MOLARD and the Johor State Government.

In the following sections, the development machinery is explained in some detail. Development is divided into the two categories of policy/planning and project implementation.

Fig. 8.1.1 Outline of Development Machinery of Desaru New Tourism Core



1) The meeting involves EPU & ICU