4) Beach park framework

	Service Park A	Service Park B
Open Space	1,120 m^2	1,270 m^2
Bicycle Parking Lot	60	50
Bicycle Renting Station	70	45
Snack	40	40
Public Lavatory	20	20
Service Building	50	60
	1,360	1,485

	Satellite Park
Open Space	270 m^2
Bicycle Parking Lot	40
Public Lavatory	15
Stand	7

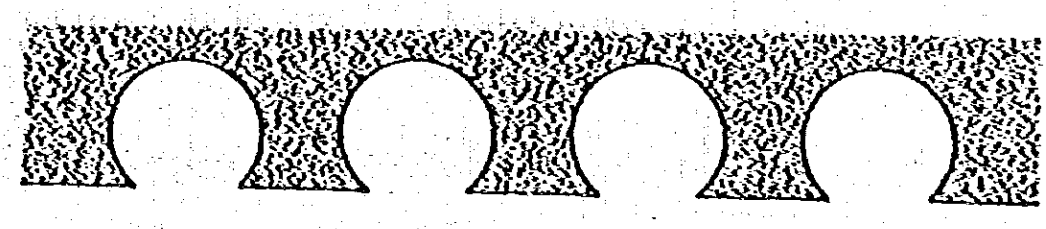
2.6.5 Proposal of Improvement Plan

(a) Planning policy

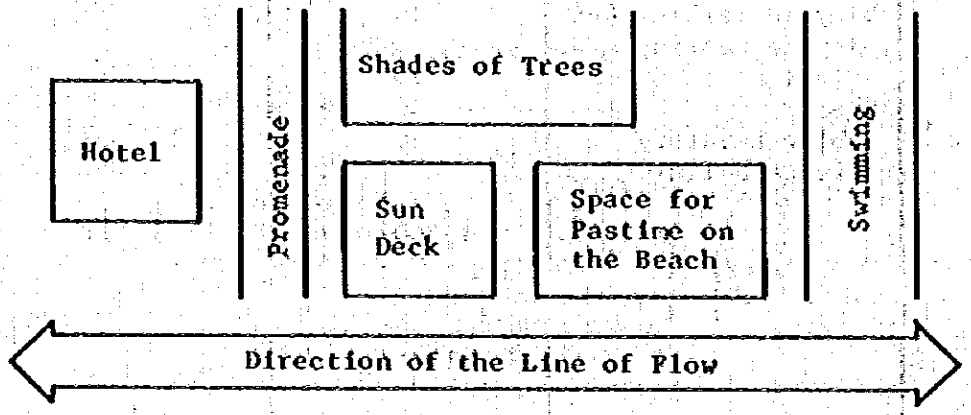
The beach between Orchid Lodge and Nipa Lodge is closely related to the hotels located behind the beach. This beach is occupied by foreigners. Accordingly, planning should be mostly stressed on the beach functions required by foreign tourists.

Concepts : - Calm and quiet private space
- Diversity provided by such things as the shade of trees, sun decks, sandy beaches and so on.
- Creation of a Thai atmosphere

Proposals : - Continuous repetition of open and closed spaces on a comparatively smaller scale.



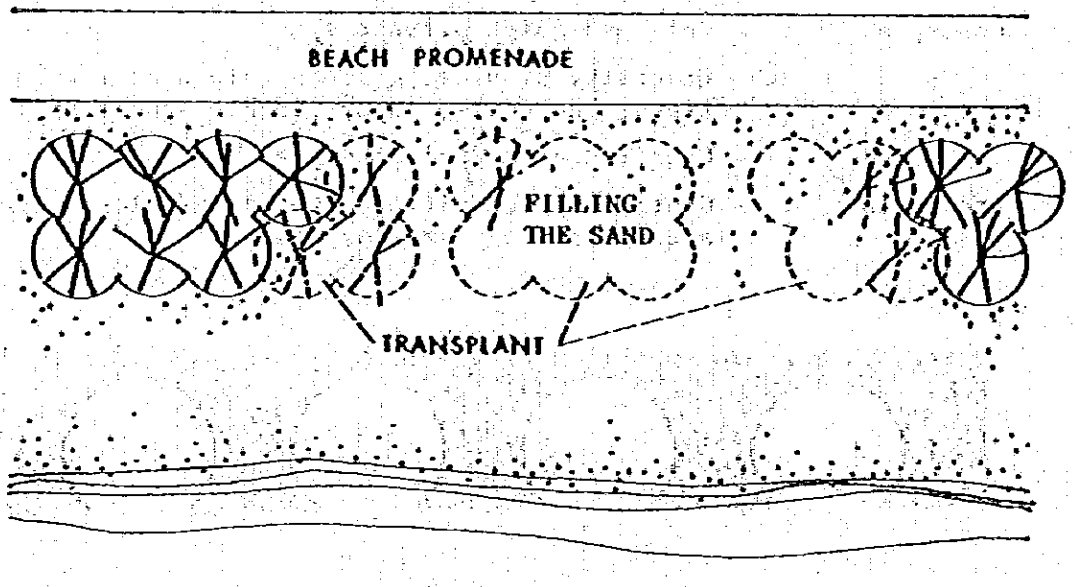
- Planning of beach activities based on the functional requirements of the participants represented by the relationship of hotel-tree shade-sunbathing-pastimes on the sandy beach-swimming.



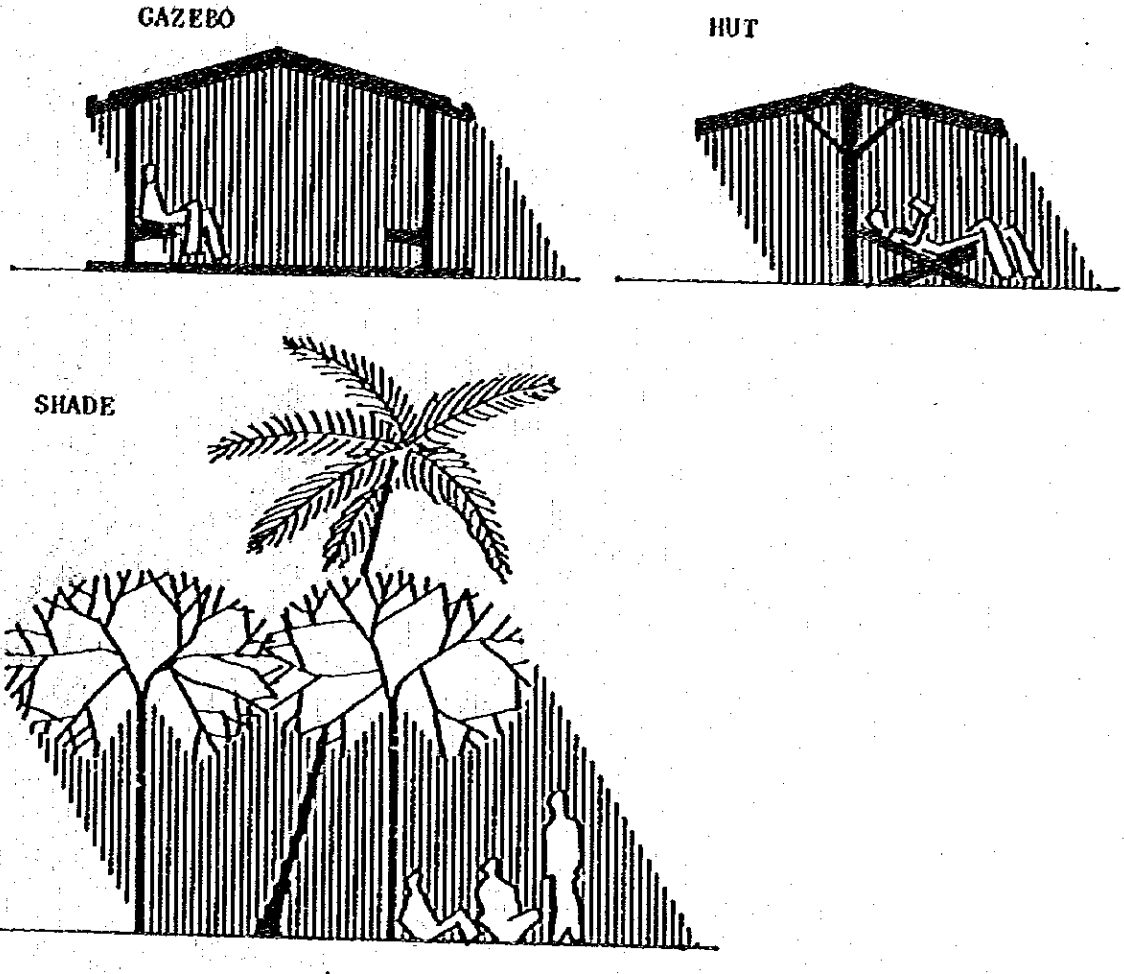
As one-day visitors are expected to use the beach between the Ocean View hotel and the downtown area, arrangement and design of facilities intended for these visitors should be conducted.

Concept : - Dynamic open space
- Space for the shade of trees
- Kinetic open space

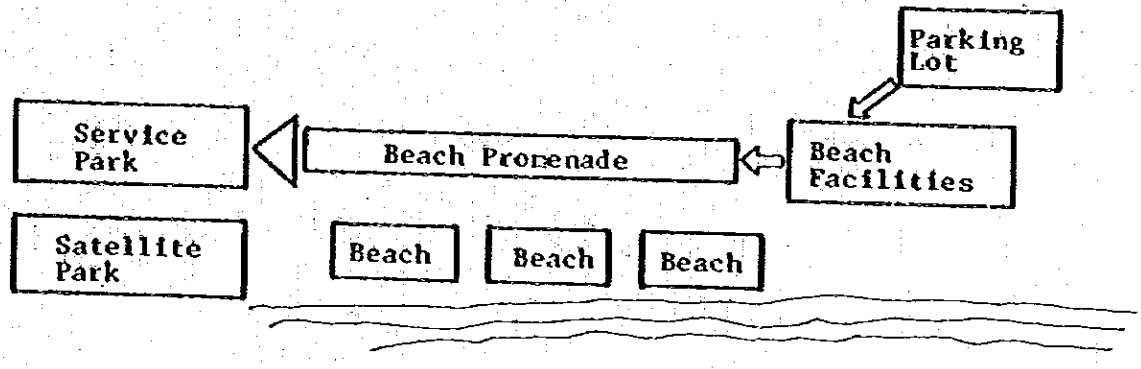
Proposals : - To create an open space for dynamic beach activity by improving the beach space composition such as putting down more sand and new planting or transplanting.



: - The planning of plenty of sun-shade facilities such as gazebos, huts, etc. and creating the shade of trees.



: - Planning based upon the horizontal line of flow along the coast, that is public parking lot-beach facilities - beach promenade - beach or park.



(b) Site Plan

The improvement plan for the main beach is shown in Fig. 2.6.18.


Regent Pattaya
Ocean View
Holiday Inn
Nipa Lodge
Hyatt Pattaya
Tropicana
Service Park
Service Park
Orchid Lodge
Northern Cone

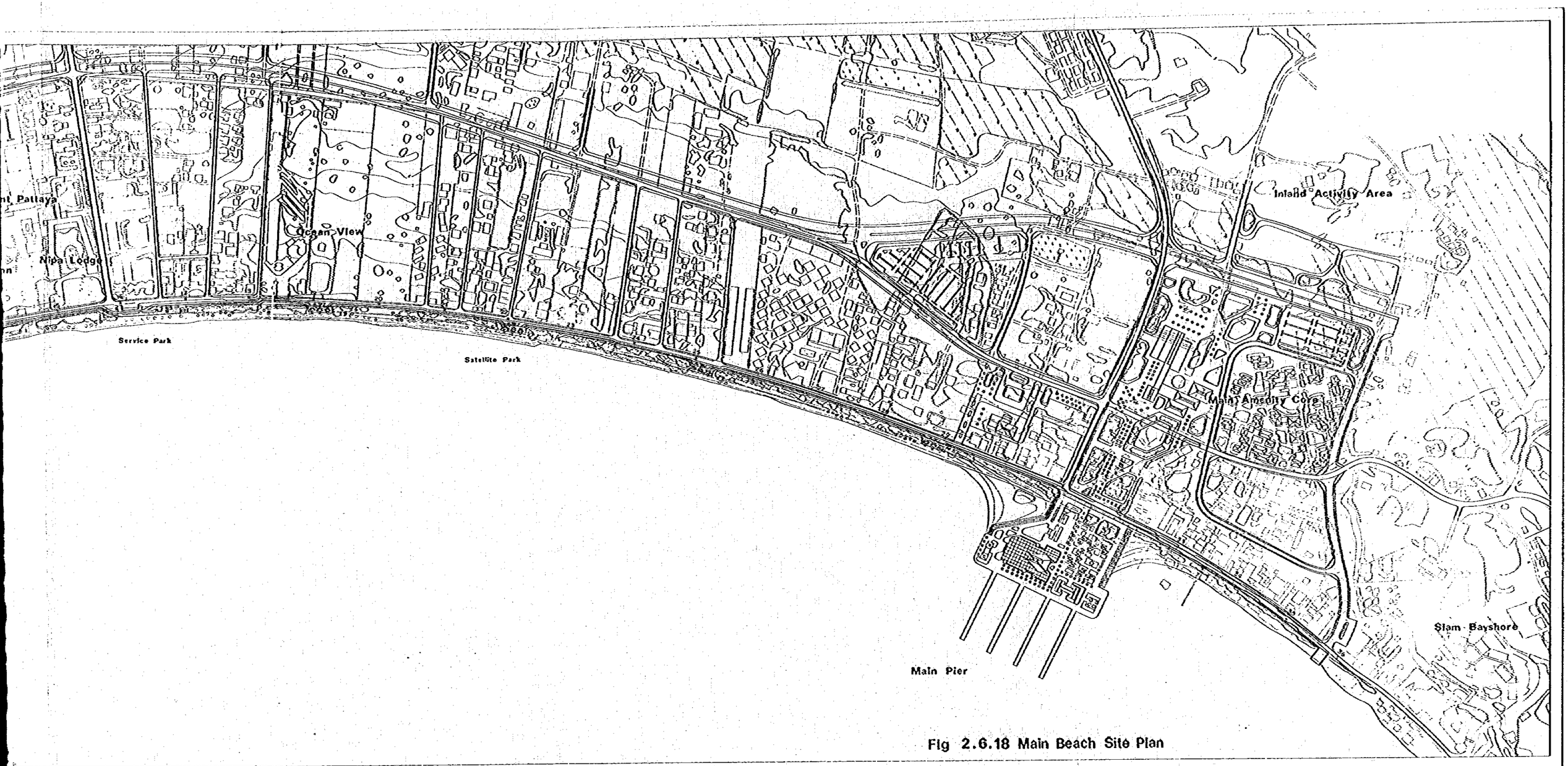
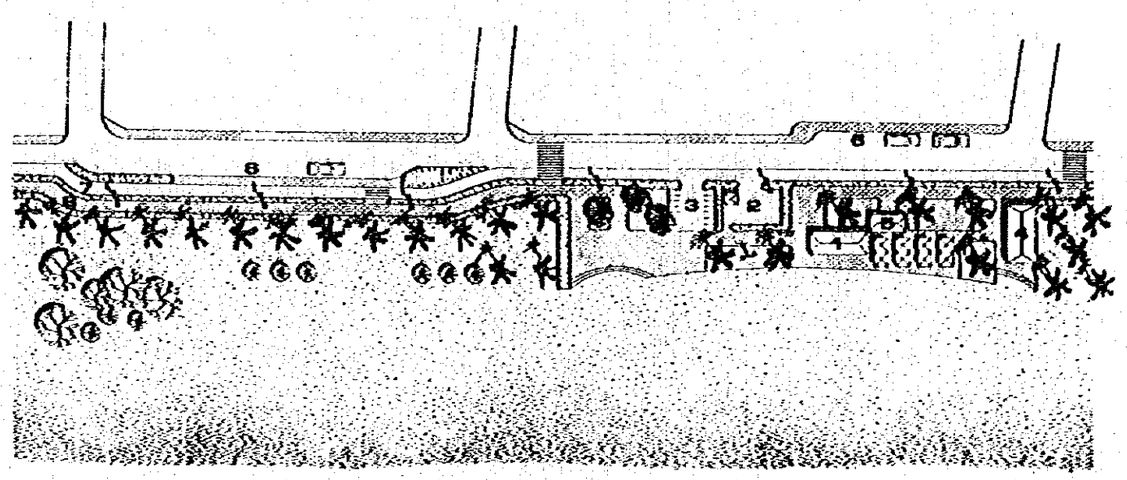


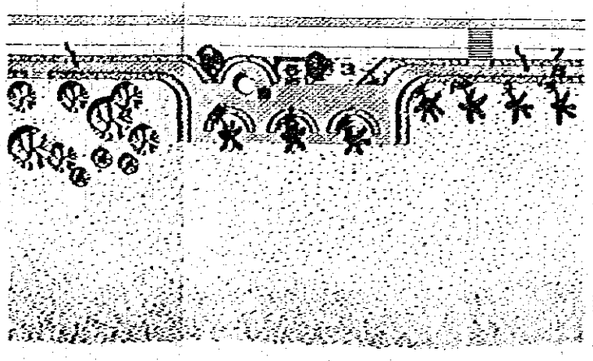
Fig 2.6.18 Main Beach Site Plan

(C) Model Plan

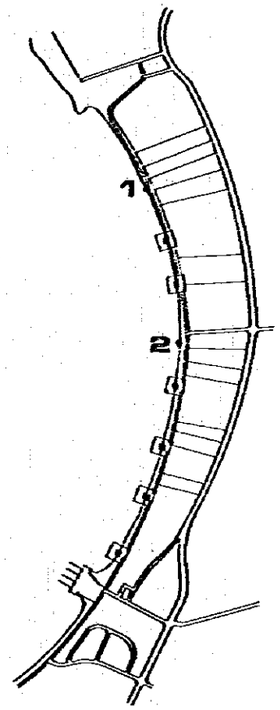
Fig. 2.6.19 Service Park and Satellite Park Plan



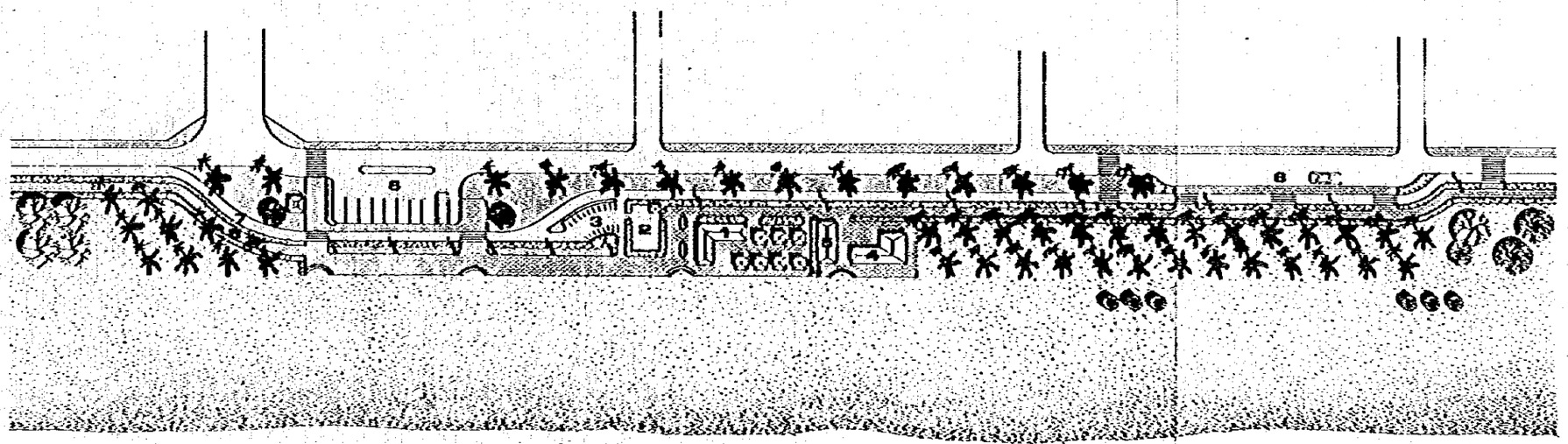
1. SERVICE PARK



SATELLITE PARK



LEGEND
1 SNACK BAR
2 BICYCLE RENTING
3 BICYCLE PARKING
4 SERVICE FACILITIES
5 PUBLIC TOILET
6 TAXI PICK UP STATION
7 BICYCLE WAY
8 PEDESTRIAN WAY
9 VENDING STAND



2. SERVICE PARK

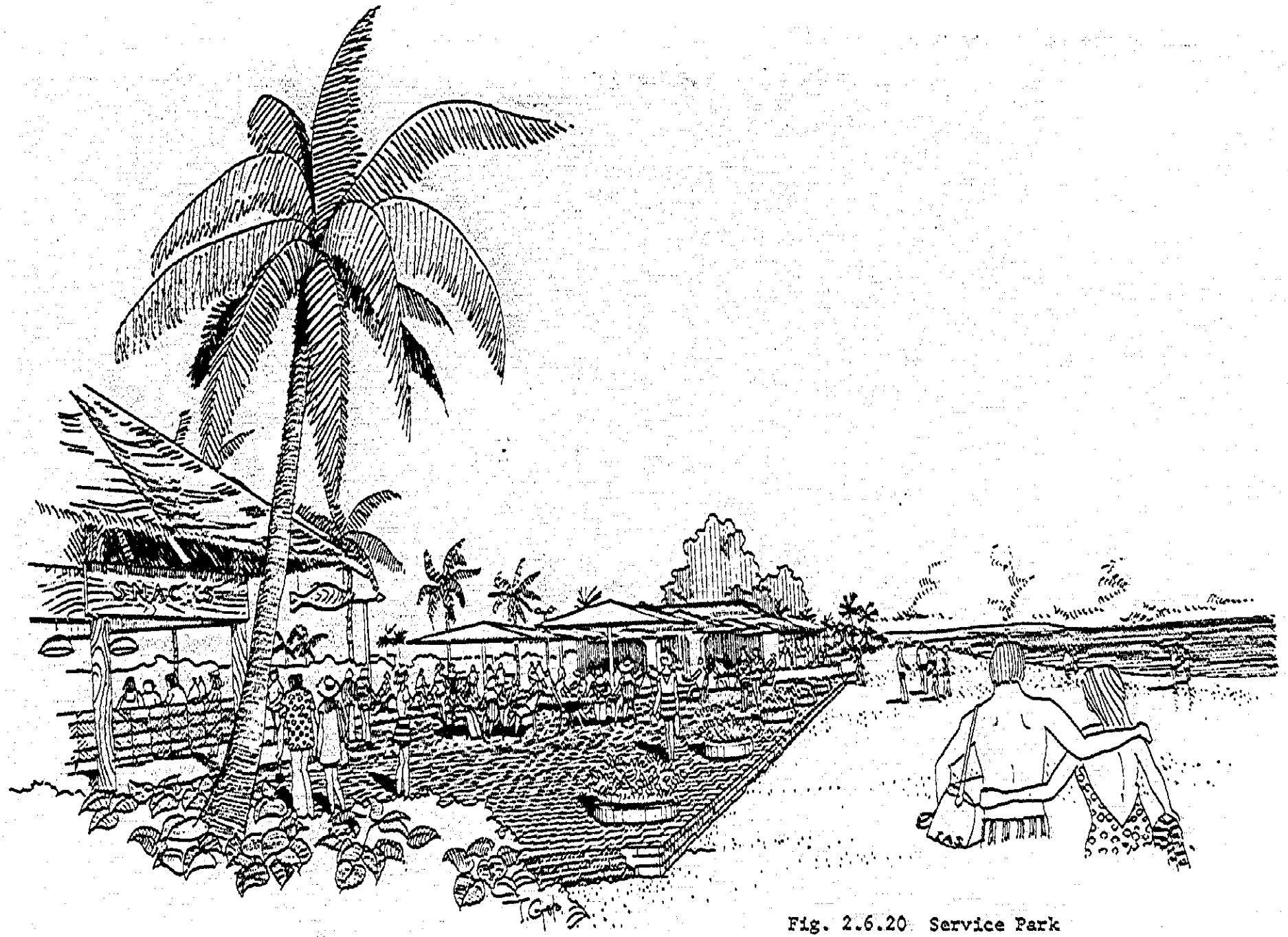


Fig. 2.6.20 Service Park

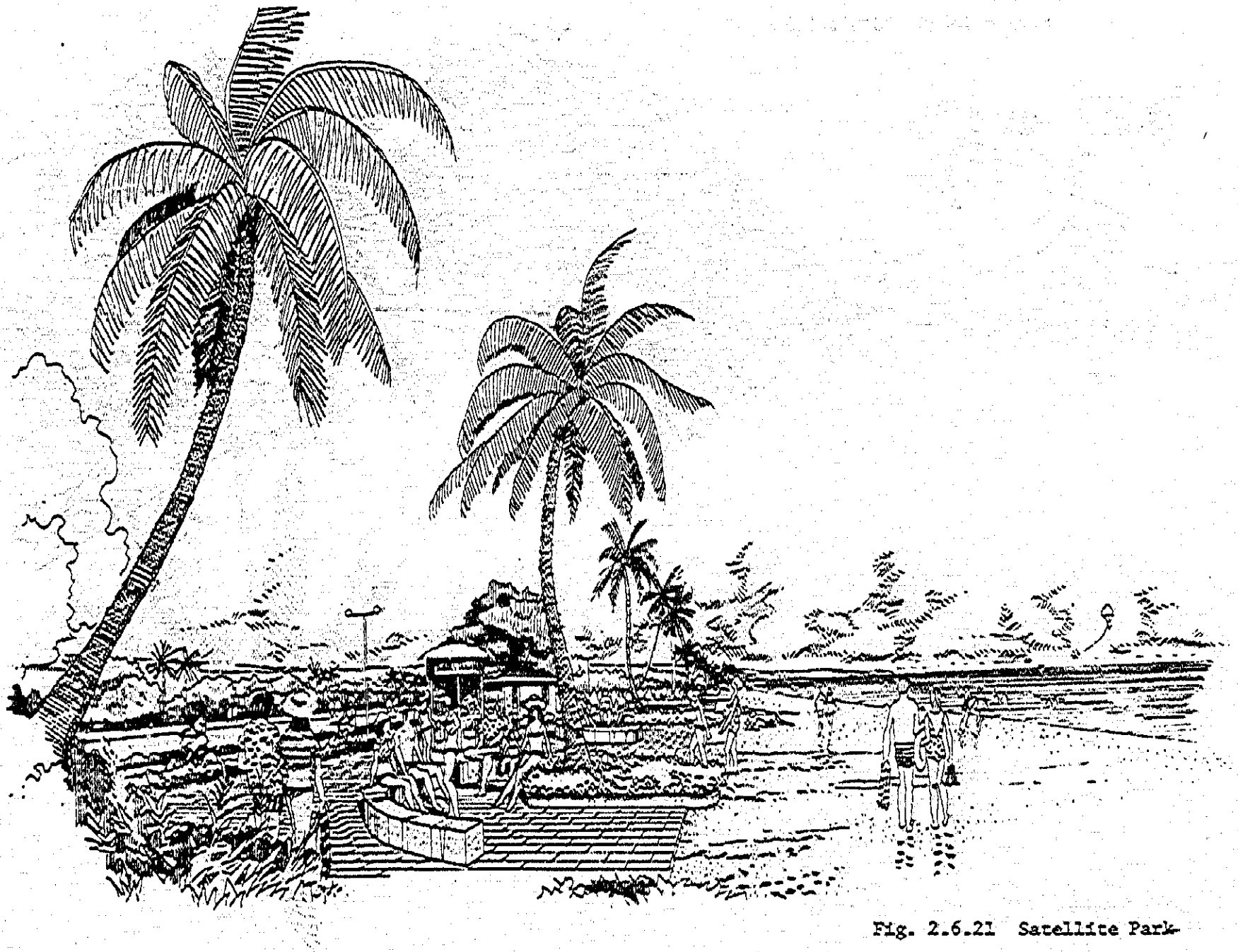
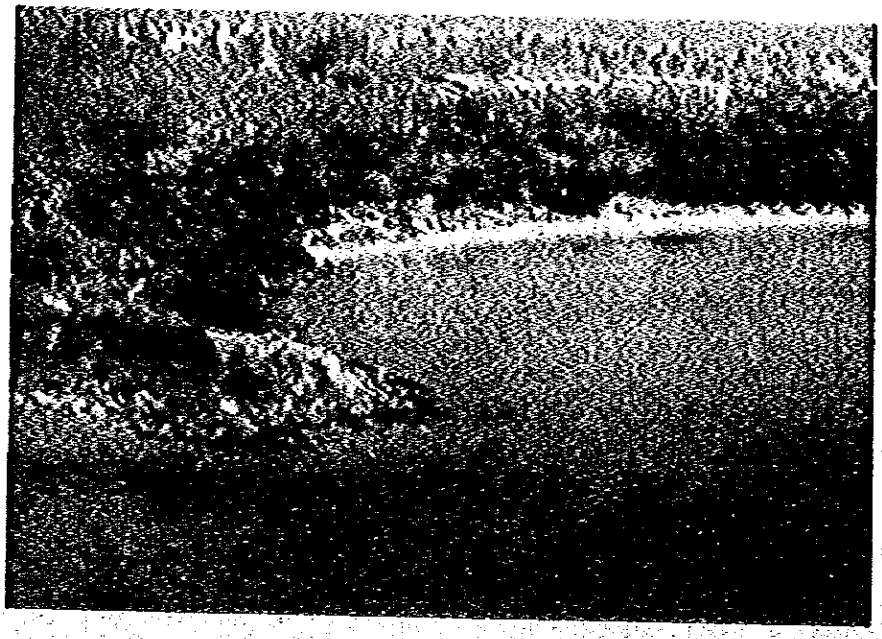


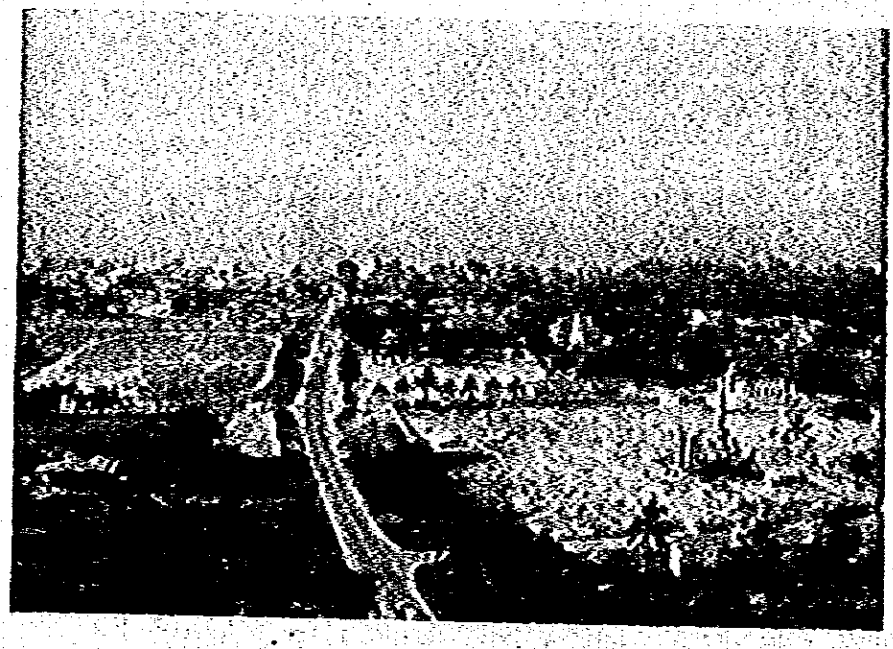
Fig. 2.6.21 Satellite Park

Location of Service Park

Location of Satellite Park



Location of Northern Core



Location of Main Core

2,6,6 Examination of the Execution Method

(a) Improvement plan by stages

- The improvement plan for the beach road will be implemented in stages, giving consideration to the period of construction of the arterial tourism road (T-1), marine facilities, facilities for one day visitors, amenity cores and so on. The improvement proposals, with three steps, are as follows.

Step 1:

Making use of the existing facilities as they are, the improvement of the beach shall be implemented by regulations and minor improvements. Step 1 is expected to be implemented within 5 years.

Concepts :

- To secure the beach activity area by eliminating cars from the beach road by such systems as loops, cul-de-sacs from the back road.
- To ensure safety and security by designating taxi pick-up stations and prohibiting the catching of taxis at other areas.

The above-mentioned restrictions are limited to day-time only.

- To allow car traffic on the beach road during night-time in order to secure convenience for the users and protect tourists from the dangers caused by incomplete lighting facilities or patrolling systems at night.
- To eliminate the confusion on the beach by designating parking spaces on the road and prohibiting parking in other areas.

Proposals :

- Major physical changes will not be made. A traffic zone will be set and traffic will be regulated by markings, signs, etc.
- Traffic regulation during the daytime and the night-time will be performed through markings and movable sign boards.
- Taxi pick up stations will be designated with markings and signs.
- Street parking areas for one day visitors will be put on the downtown side of the back road. Its location will be indicated by markings and signs.
- A possible parking space for 250 cars should be provided.

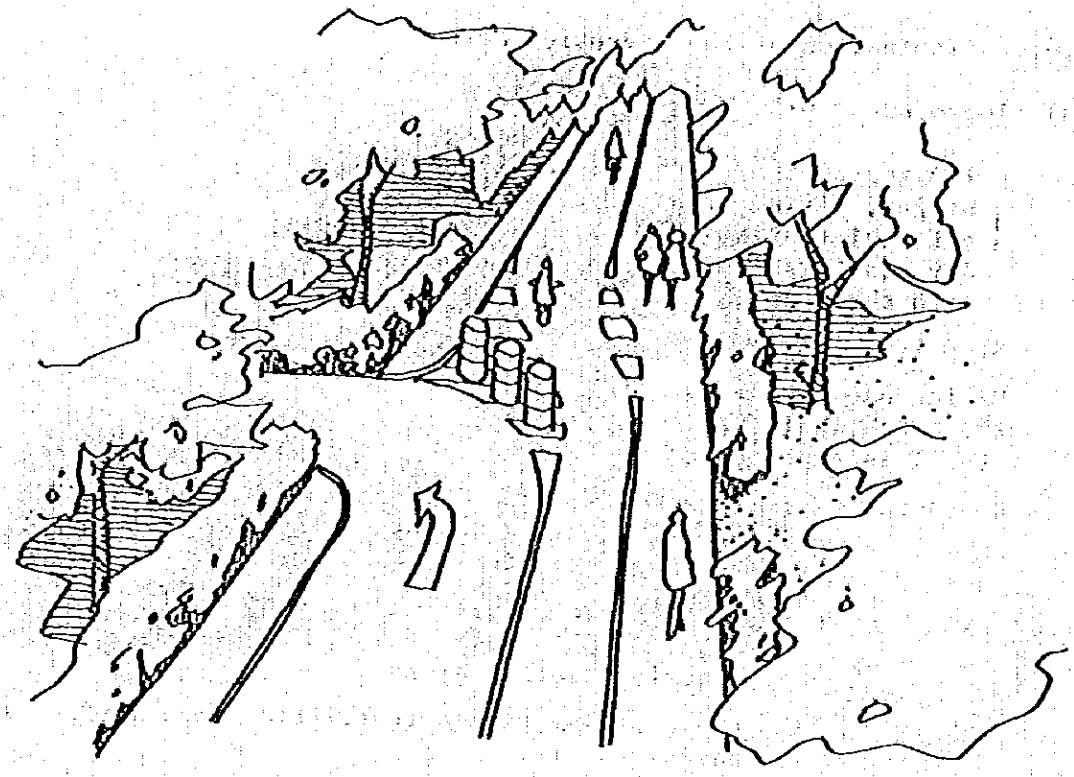
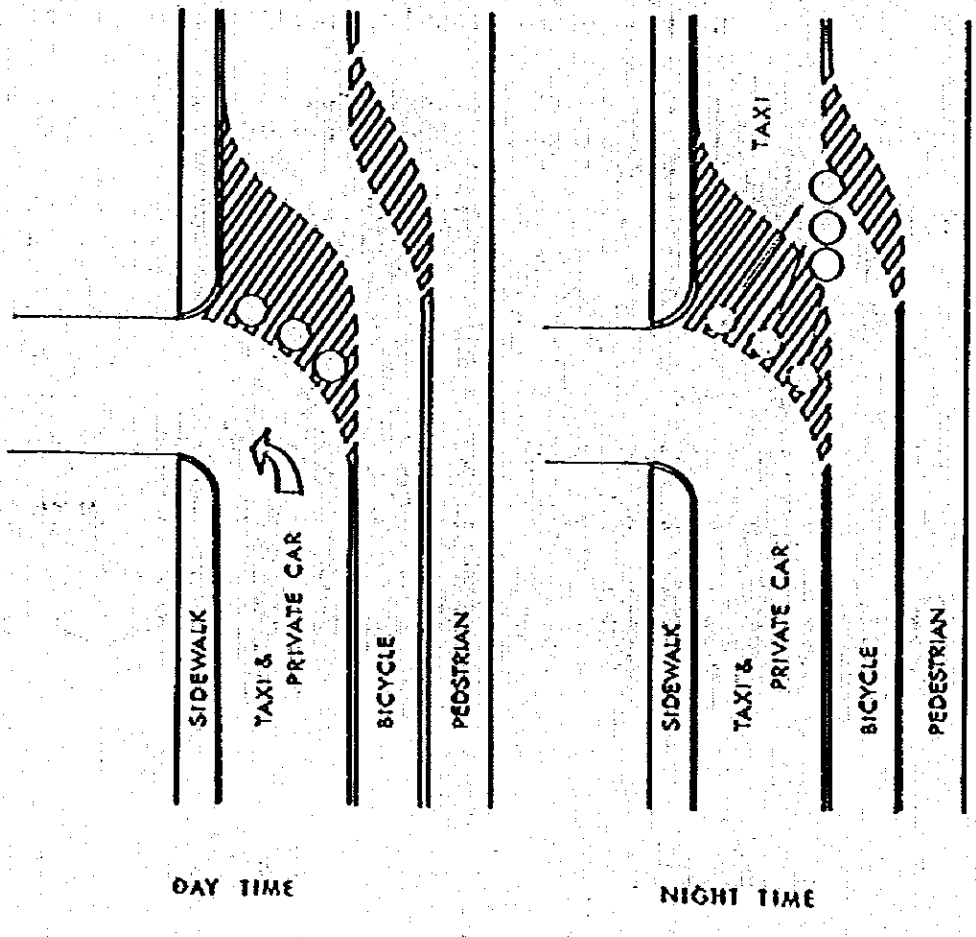


Fig. 2.6.22 Beach Improvement Plan (step 1)



DAY TIME

NIGHT TIME

Fig. 2.6.23 Beach Improvement Plan

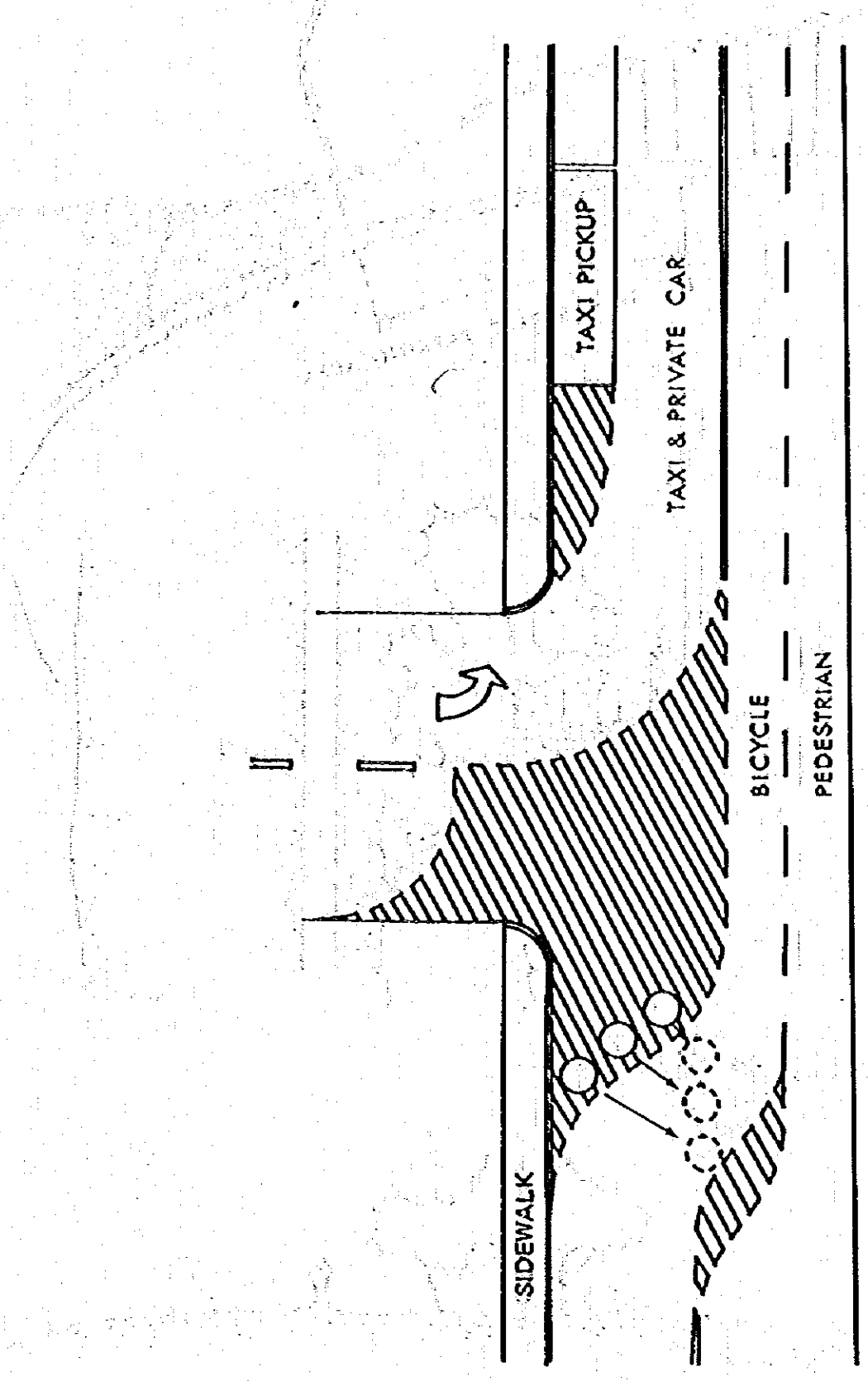
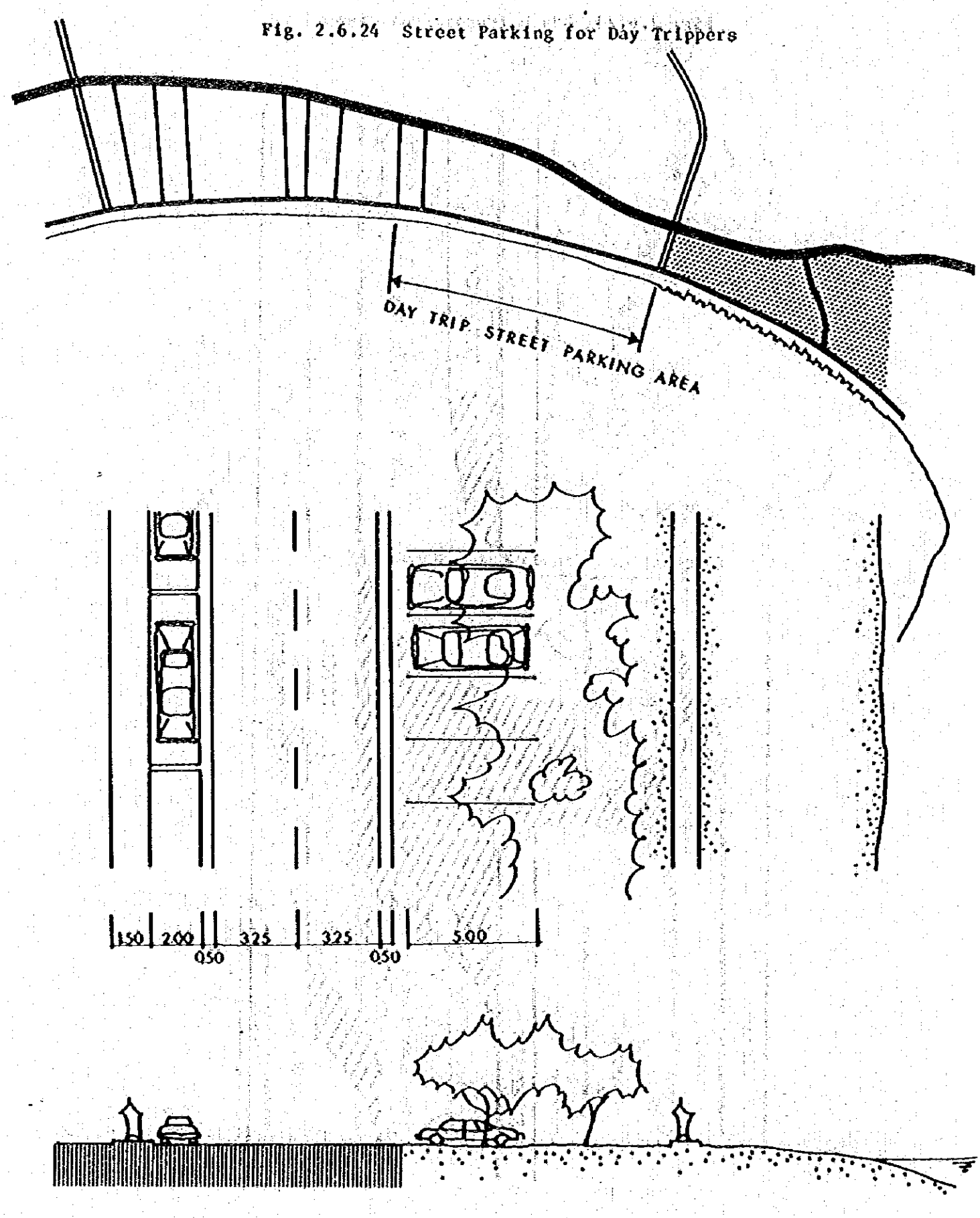


Fig. 2.6.24 Street Parking for Day Trippers



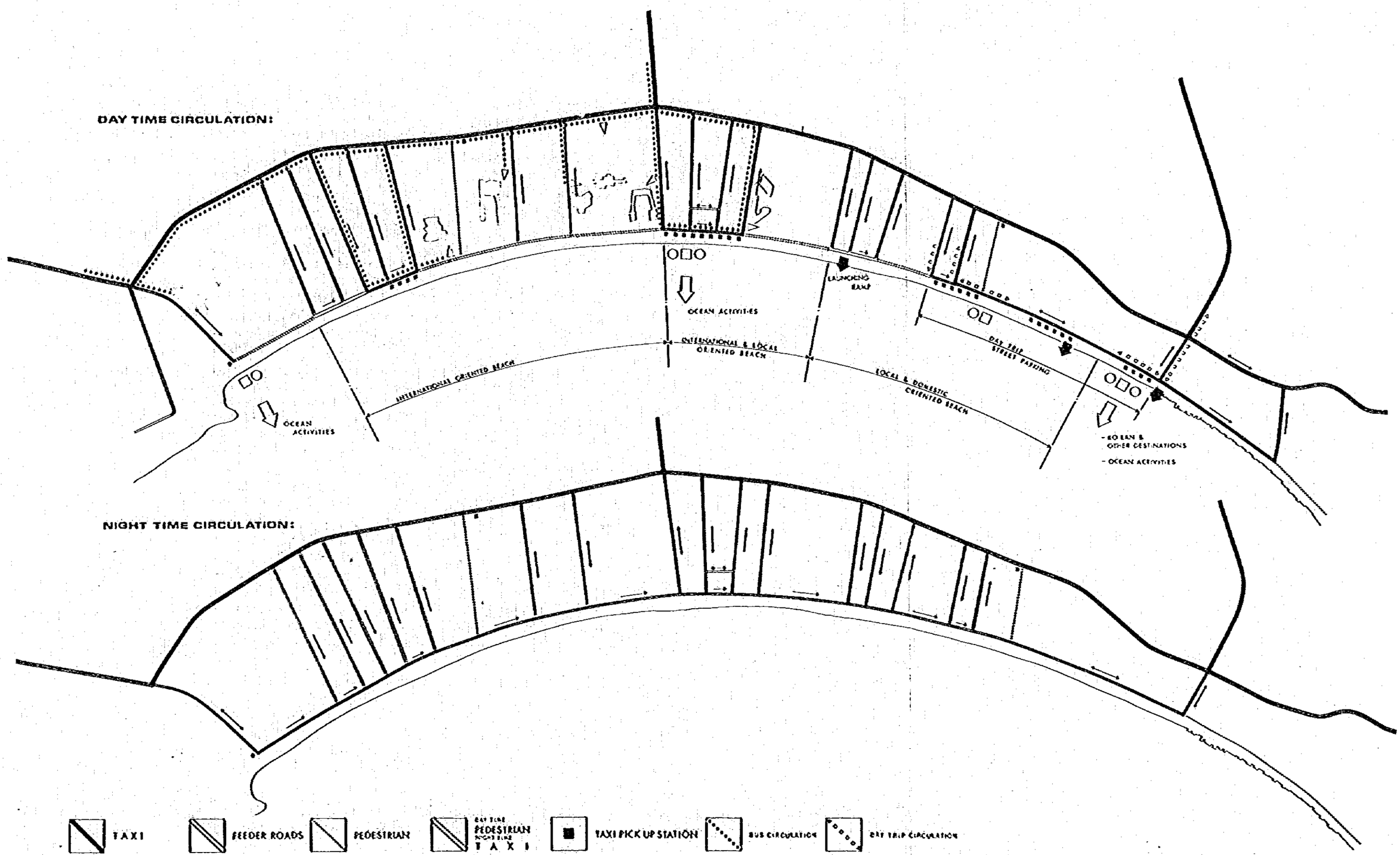


Fig. 2.6.25 Improvement Plan

STEP·1 LESS THAN 5 YEARS

Step 2:

Taking account the arrangement of back roads, facilities for one-day visitors, etc., the beach facilities (service park, satellite park, etc.) shall be constructed. Step 2 work will gradually proceed from stage 1 and will be completed within 10 years.

Concepts :

- As beach facilities, the service parks, satellite parks, etc. shall be arranged.
- Physical improvements, such as changes in the cross section of the beach road, transplanting trees on the beach, etc., shall be made.
- During the preparation of the back road, the road lighting facilities on the road, the patrolling system at evening etc., and car traffic on the beach road shall be regulated during the night.
- As facilities for one-day visitors, public parking lots shall be planned and street parking shall be regulated.

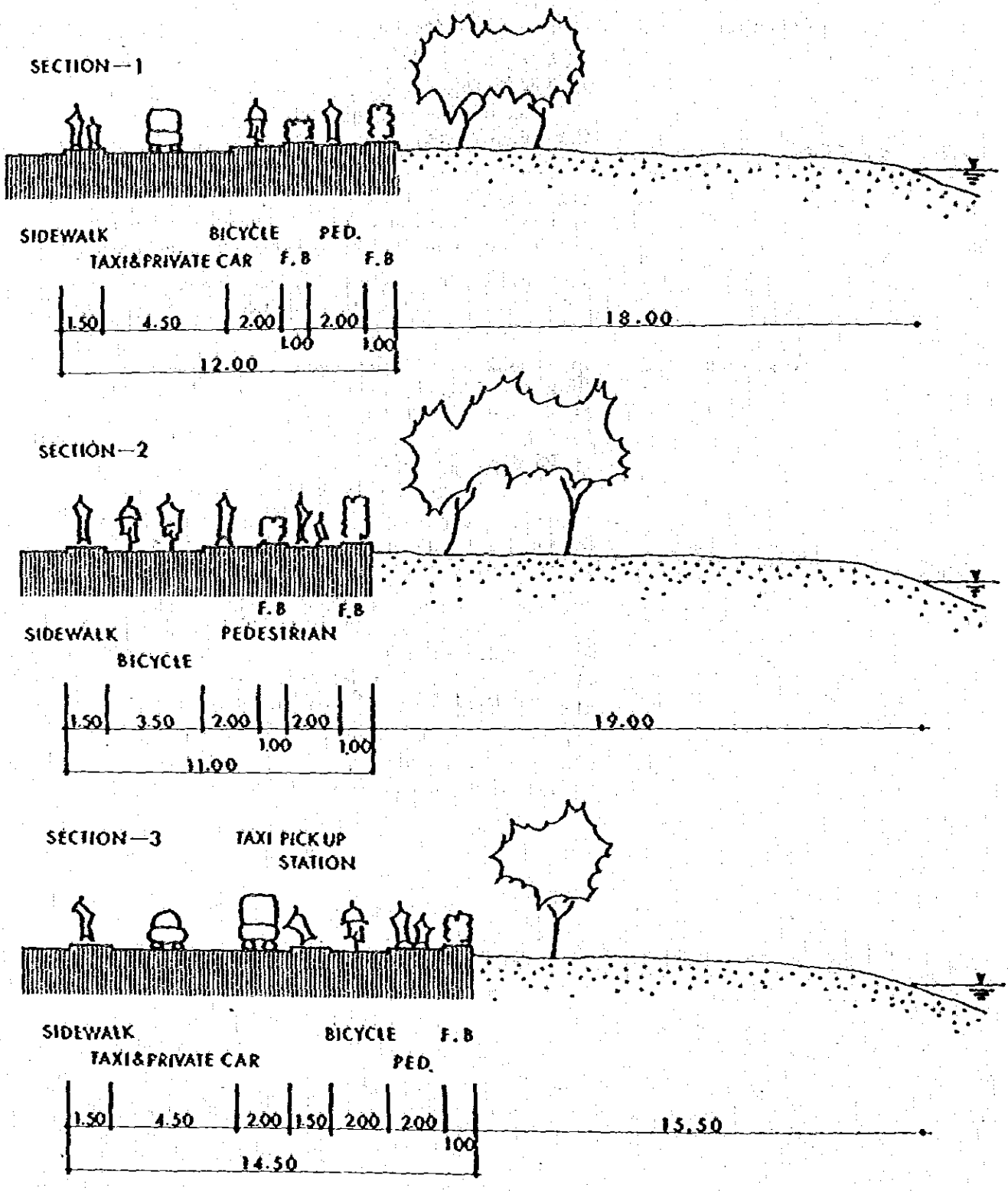
Proposals :

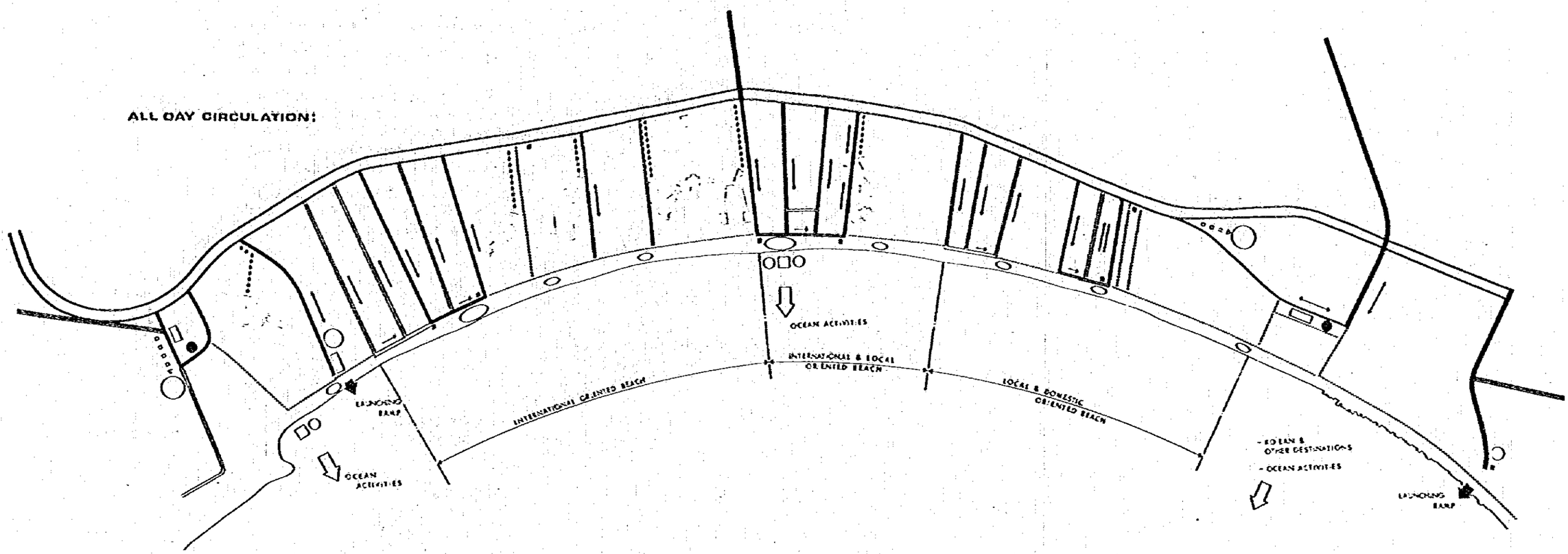
- In Step 2, the improvements shall be made by the construction of permanent facilities. Also, the cross section of the road, the content of the facilities, etc., shall be planned to be the same as in Step 3 basically, so as not to cause major changes when shifting to Step 3.
- A typical section in Step 2 is shown in Fig. 2.6.26 Section-1 shows the cross section of the intersection of the beach road with the loop road.

  Section-2 shows a typical cross section in the case of eliminating cars from the beach road. The 315-meter wide road is designed to be a bicycle track at this stage. And as this same width, slow moving traffic will be comfortably handed in the future.

  Section-3 shows a cross section for setting up taxi pick-up station, and it includes taxi pick-up and parking facilities for taxies.

Fig. 2.6.26 Road Cross Section
Proposed - Step 2)





TAXI | FEEDER ROADS | PEDESTRIAN | BUS CIRCULATION | TAXI TERMINAL | TAXI PICKUP STATION | SERVICE PARK | SATELLITE PARK | PARKING DAY TRIP | BUS TERMINAL | DAY TRIP CIRCULATION

Fig. 2.6.27 Improvement Plan

STEP-2 LESS THAN 10 YEARS

Step 3:

It is proposed to complete Step 3 by the end of 1986 and by this period the construction of the amenity core and marine facilities, the introduction of slow moving conveyances, etc., shall be completed.

Concepts : - Introduction of slow moving conveyances.

- The completion of the amenity cores and marine facilities.

Proposals : - In Step 3, slow moving conveyances shall be introduced into the cross section of Step 2. The existing road which was used only by bicycles shall be utilized by the slow moving conveyances as shown in the following stage 3 figure.

- As for the intersection of the beach road with the loop roads, the one lane shall be used by both the private cars and slow moving traffic conveyances.

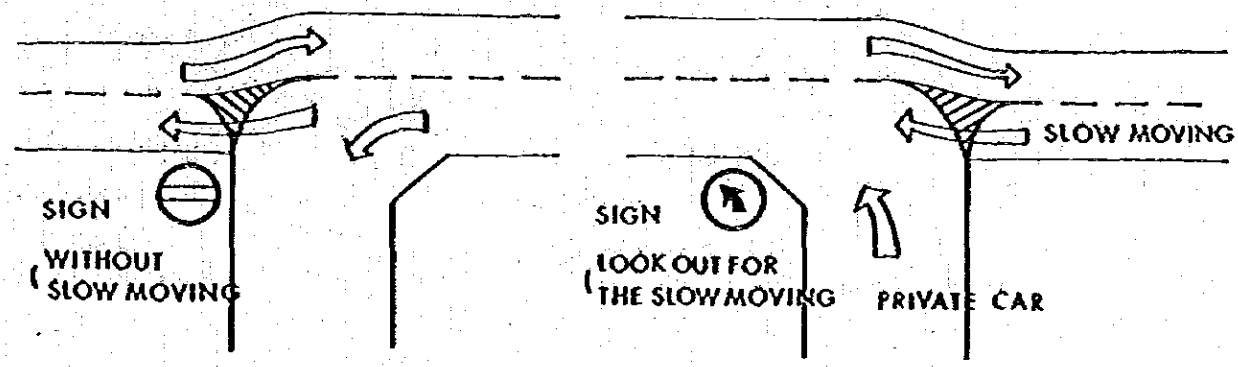
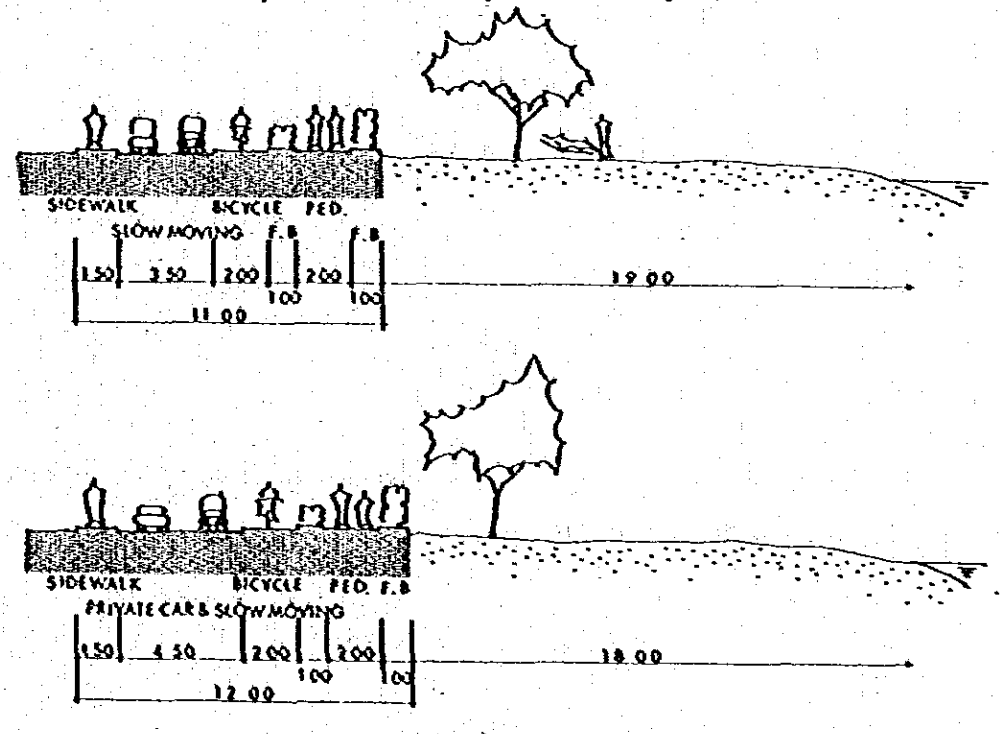
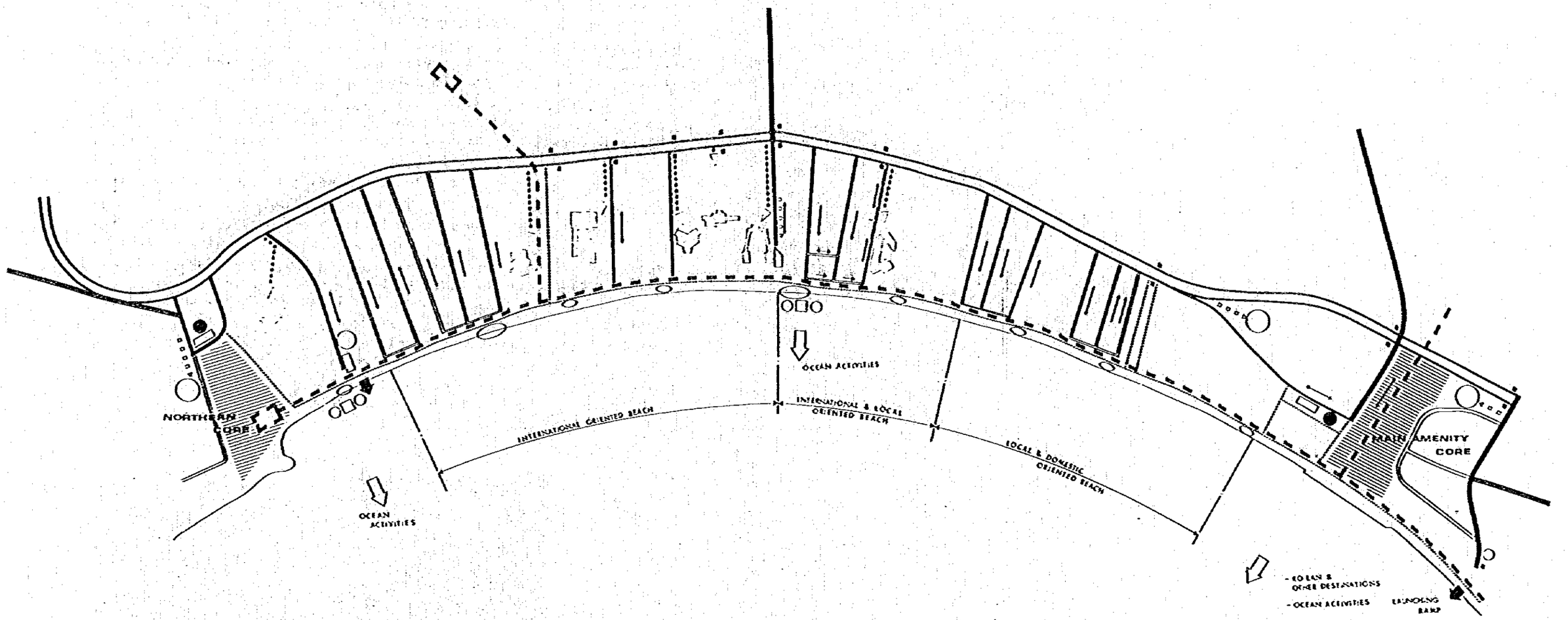


Fig. 2.6.28 Road Cross Section
Proposed - Step 3)



ALL DAY CIRCULATION:



TAXI
FEEDER ROAD
PEDESTRIAN
SLOW MOVING TRANSPORTATION
TAXI TERMINAL
TAXI PICKUP STATION
SERVICE PARK
SATELLITE PARK
PARKING
BUS TERMINAL
BUS CIRCULATION
DAY TRIP CIRCULATION

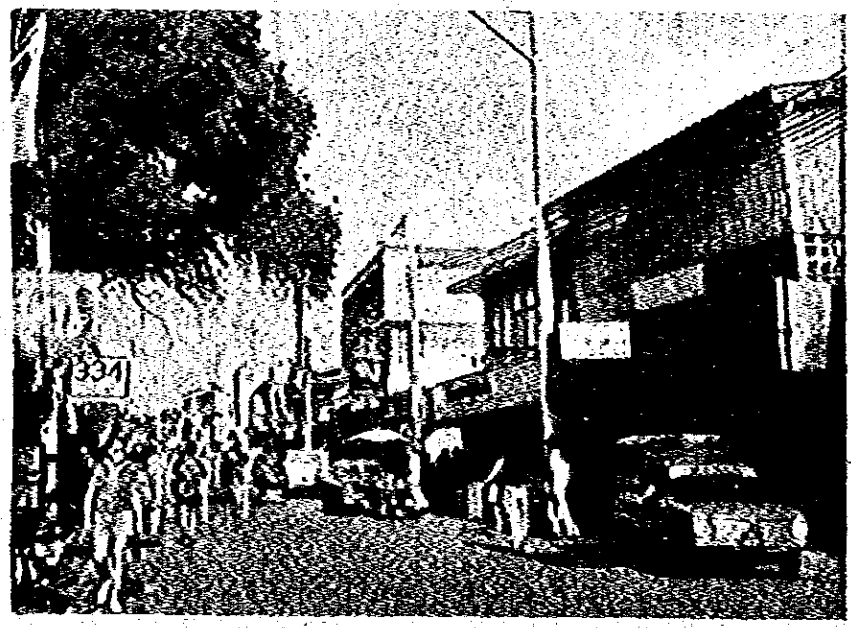
Fig. 2.6.29 Improvement Plan

STEP - 3 10 YEARS

(b) *Examination of the Routes for Baht-Buses*

- The operation of the baht buses shall be affected by the improvement of the beach road. Therefore, with the progress of the improvement plan at each stage, new routes shall be proposed.
- Though the baht-buses are operated basically along the routes set by the baht-bus union, they are frequently used in the same way as taxis, and they are not prohibited from going to other places off the route.
- According to the existing pattern, the solution of modifying the baht-buses into public transportation with a fixed route should be applied, but, for the following reasons, another proposal was recommended.
  - Difficulty of separating the two functions as taxies and buses.
  - The area where the baht-buses are being used is large. It is not desired by users from the point of view of service to restrict operations only along a fixed route.
- Therefore, the baht-buses should operate in the existing way; that is, in principle, the route should be fixed but it should have two functions as buses and taxis.

Proposals :
- Two kinds of routes for the baht-buses should be fixed, one mainly for tourists and another one for local residents.
- Bus stops with parking lots should be located along the routes of the baht-buses.



Downtown Pattaya and Baht-bus

Fig. 2.6.30 Proposed Routes-Step 1
(Day Time)

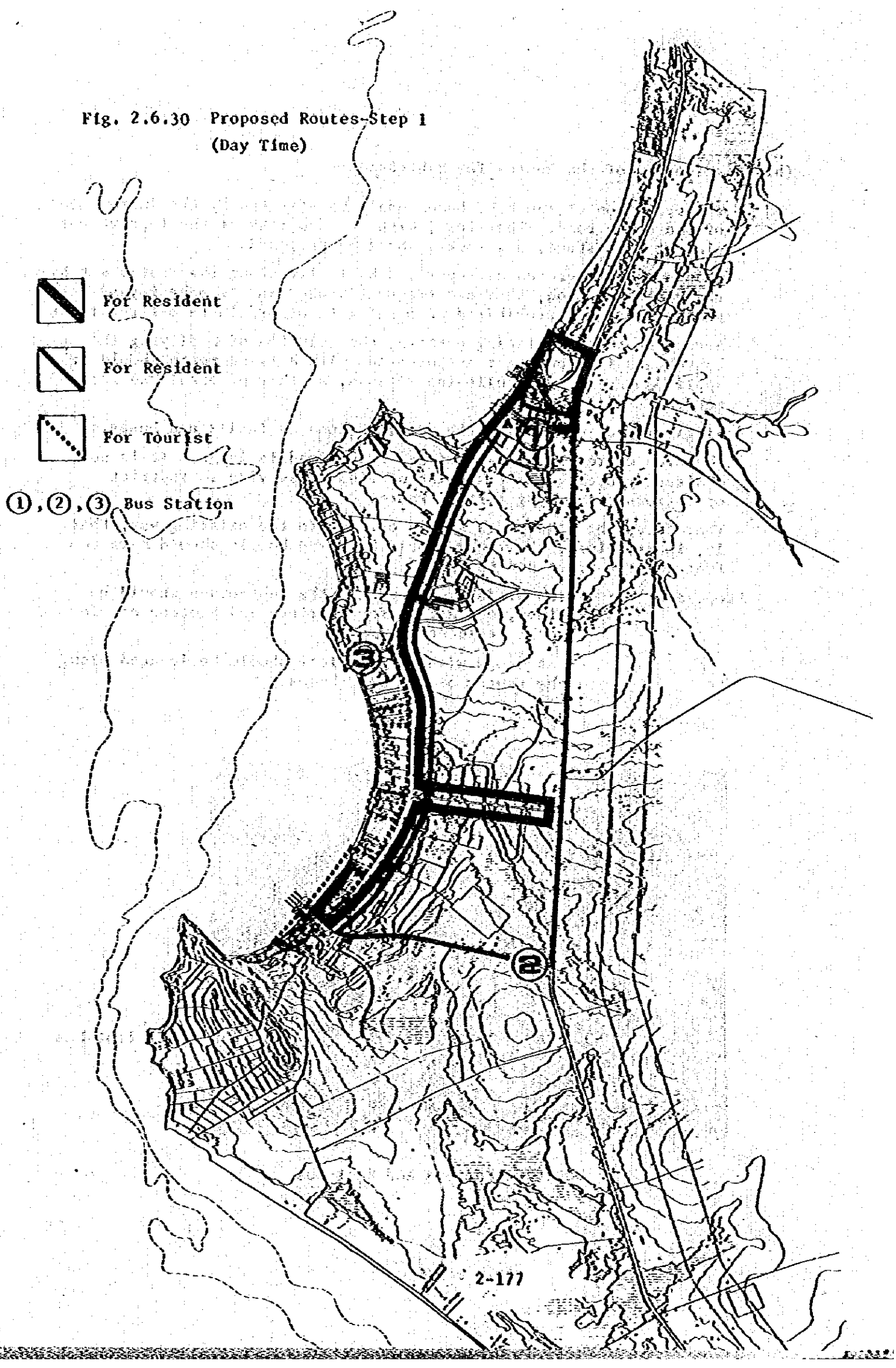
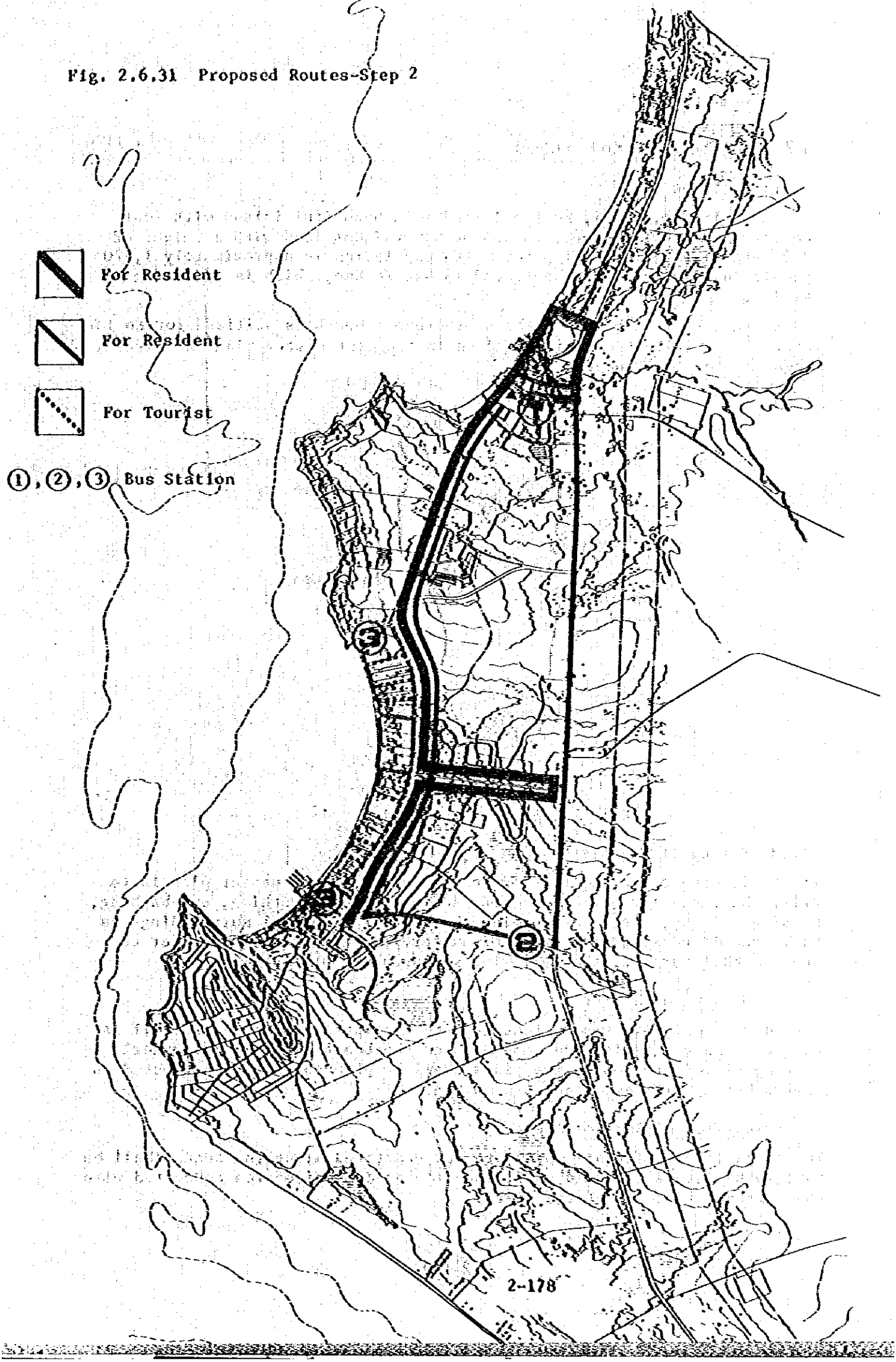


Fig. 2.6.31 Proposed Routes-Step 2



2.7 Road Planning of Ko Lan Island

2.7.1 Outline

As shown in Fig. 2.7.1, Ko Lan island is a beautiful island with four beaches and its interior consists of mountainous land with a height of 200 meters at the highest point. Its population is approximately 1,420 people in 1976 and is concentrated in Ban Ko Lan, which is a fishing village.

Regarding the four beaches, the southernmost beach is utilized for Ko Lan Vac, with private facilities, and an independent master plan has already been made by this company.

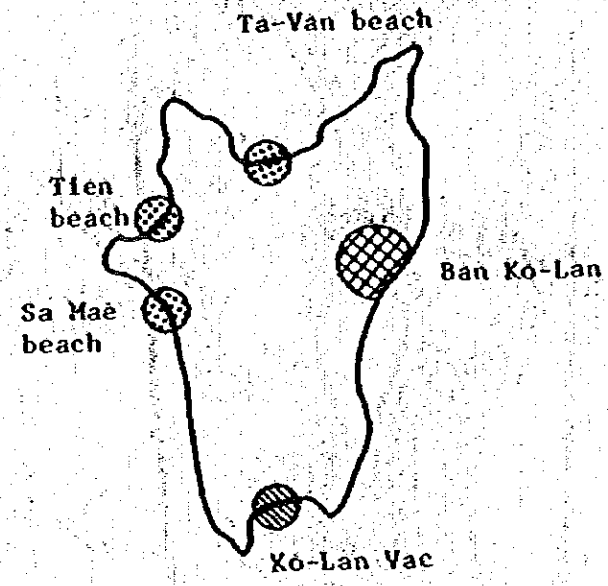


Fig. 2.7.1 Ko Lan Island

2.7.2 Policy of the Master Plan

The basic development policy for Ko Lan island in the master plan is to offer the place for beach and ocean activities (sea-bathing, sun-bathing, fishing, diving, etc.), conserving the beautiful natural surroundings as they are and constructing the minimum service facilities. In order to achieve this purpose, the following measures are proposed.

1) Provision of a pier

In order to maintain smooth contact with the Pattaya mainland as well as to avert the congestion and confusion on the beach caused by disorderly mooring of leisure boats, the piers shall be planned to be constructed on Ta-Van beach, Tien beach and Ban Ko Lan.

2) Provision of Service Area

The shops and restaurants which are now scattered along the beach shall be integrated into a core and shall function as a service area connected with the approach function of the piers.

Supposing that 2,000 persons are expected to visit here per day in 1986, the service area will be provided with beach facilities, including changing rooms, showers, locker rooms, lavatories and service facilities such as a police station, first-aid station, shops, restaurants and so on.

Table 2.7.1 Service Facility (1986)

	Sa-Mae beach Tien beach	Ta-van beach
Shops & restaurants	1,610 m^2	1,130 m^2
First aid and police station	30	30
	426	306
Total building area	2,066	1,466
Total site area	5,200	3,700

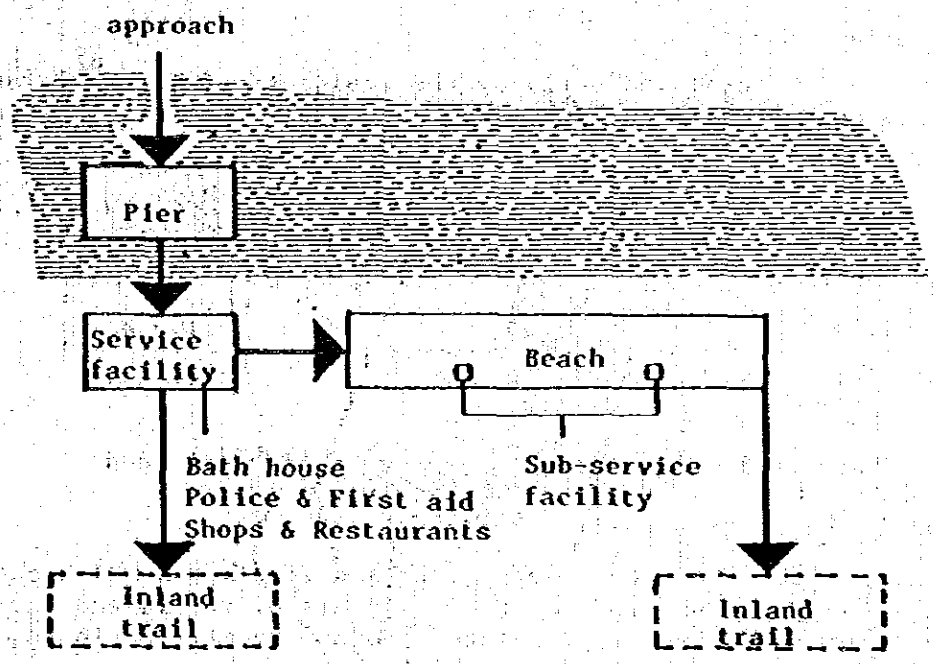


Fig. 2.7.2 Functional Relationship Diagram

3). Control of utilization of the sea surface

The control of the utilization of the beach similar to that of mainland Pattaya is indispensable.

4). Preparation of an inland trail

Planning of the inland part of Ko Lan island shall be implemented based upon a conservation policy. Trails connecting the various facilities of the inland part which are now being planned by Ko Lan Vac with various beaches and the summit of the mountain, shall be prepared.

5). Preparation of Ko Lan Village

The present population of Ko Lan Village is approximately 1,420 and it is expected to grow to 2,520 by 1986. (Besides, there will also be 300 employees of Ko Lan Vac). As for the preparation of Ko Lan Village, it is planned to make a town with a gross population-density of around 150 persons/ha, around the existing village. As daily necessary facilities, absolutely necessary services such as an infrastructure, an elementary school, a hospital, a gathering place, etc. shall be provided.

2.7.3 Road Network

The roads on Ko Lan Island can be classified into three kinds according to their purpose. The purposes and width of roads shall be as follows:

(a) Residential roads

These roads shall be utilized daily by the residents of Ko Lan Island and might be used by cars. The width of the road shall be 4.9 meters and the cross section shall be as follows:

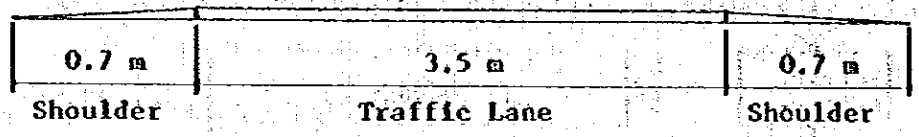


Fig. 2.7.3 Cross Section of the Residential Road

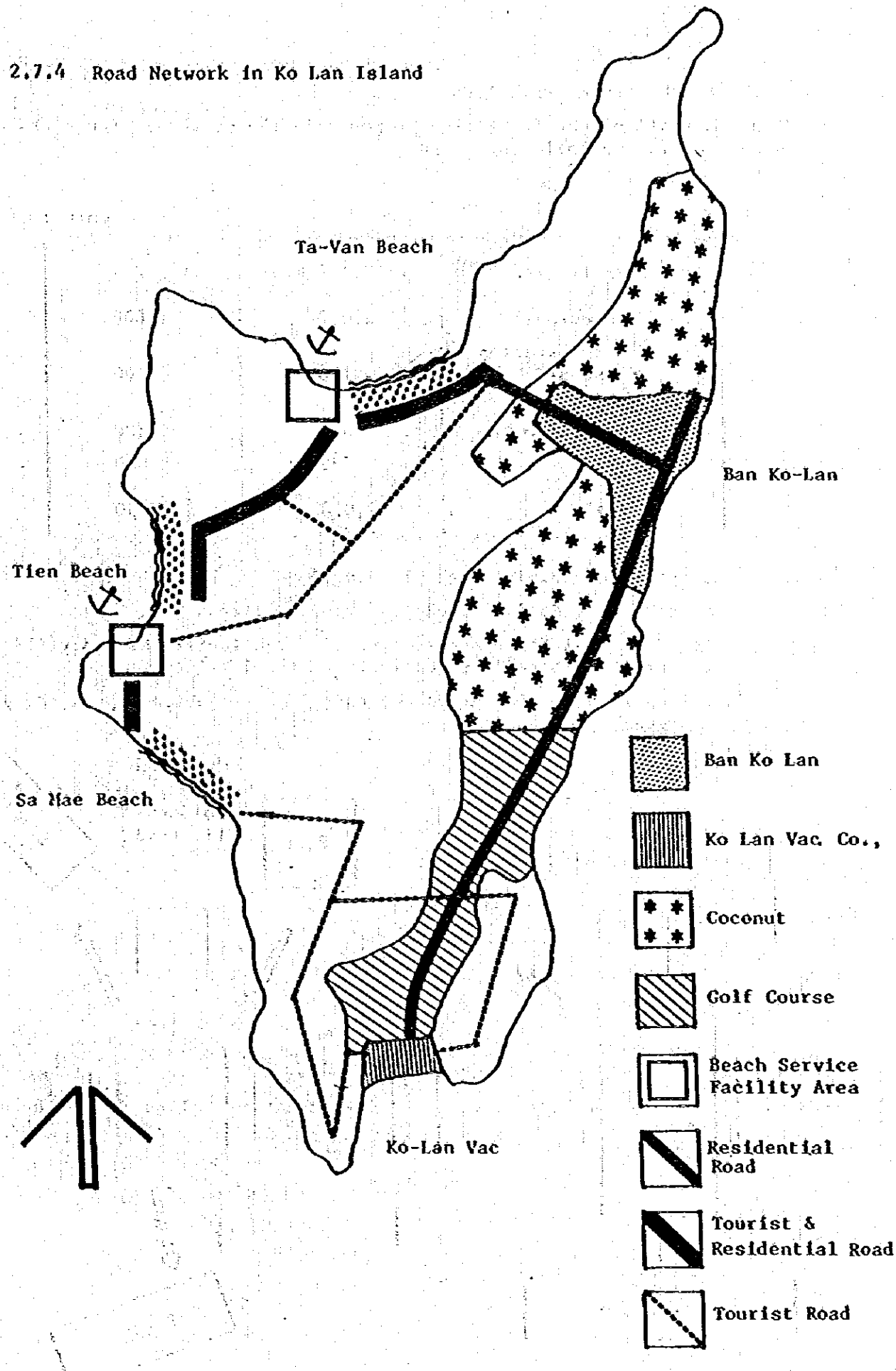
(b) Tourist & residential roads

This includes the road between Ta-van beach and Tien beach which shall be utilized as a daily access route by the residents of the island and as hiking routes for tourists. Taking into account the utilization of HARP-REI, a width of 2 meters shall be secured. The road between Tien beach and Sa Mae beach shall become the main access road connecting the pier, which is planned to be established at Tien beach with Sa-mae beach. Taking account of transportation by carts, a width of 3 meters shall be secured.

(c) Tourist roads

These are for tourists who want to take a walk around the island. A network of tourist roads shall be designed so that tourists can enjoy the beautiful view of the sea and the nature on the island by connecting each beach and inland hill-top facilities. A width of 1 meter shall be secured.

Fig. 2.7.4 Road Network in Ko Lan Island



2.7.4 Beach Service Park Area

Plan and scale of the facilities proposed in the beach service parks are summarized in the following Table

Unit : m^2

Facilities	Ta Van Beach	Tien Beach
Restaurant	1,600	1,600
Police station first aid	100	100
Bath house (shower room)	300	300
Shops	90	90
Total	2,090	2,090

Design concepts for service area planning.

1. Cluster type design developed around a plaza.
2. Adopting Thai style architecture for the facilities and utilizing construction materials available in the locality.
3. Taking into consideration the functional relationship of the pier and beach.

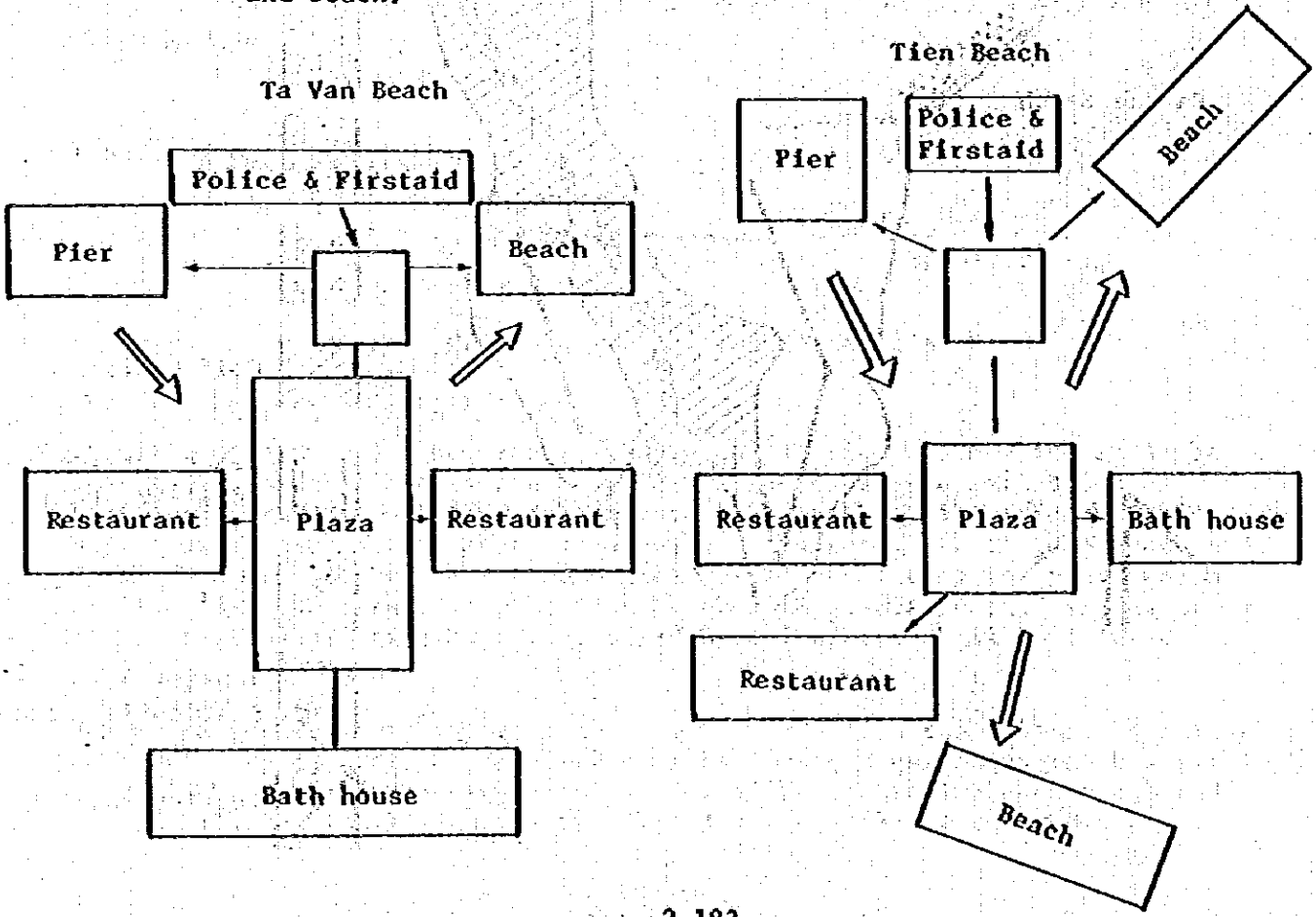


Fig. 2.7.5
Service Facility of
Ko Lan Island

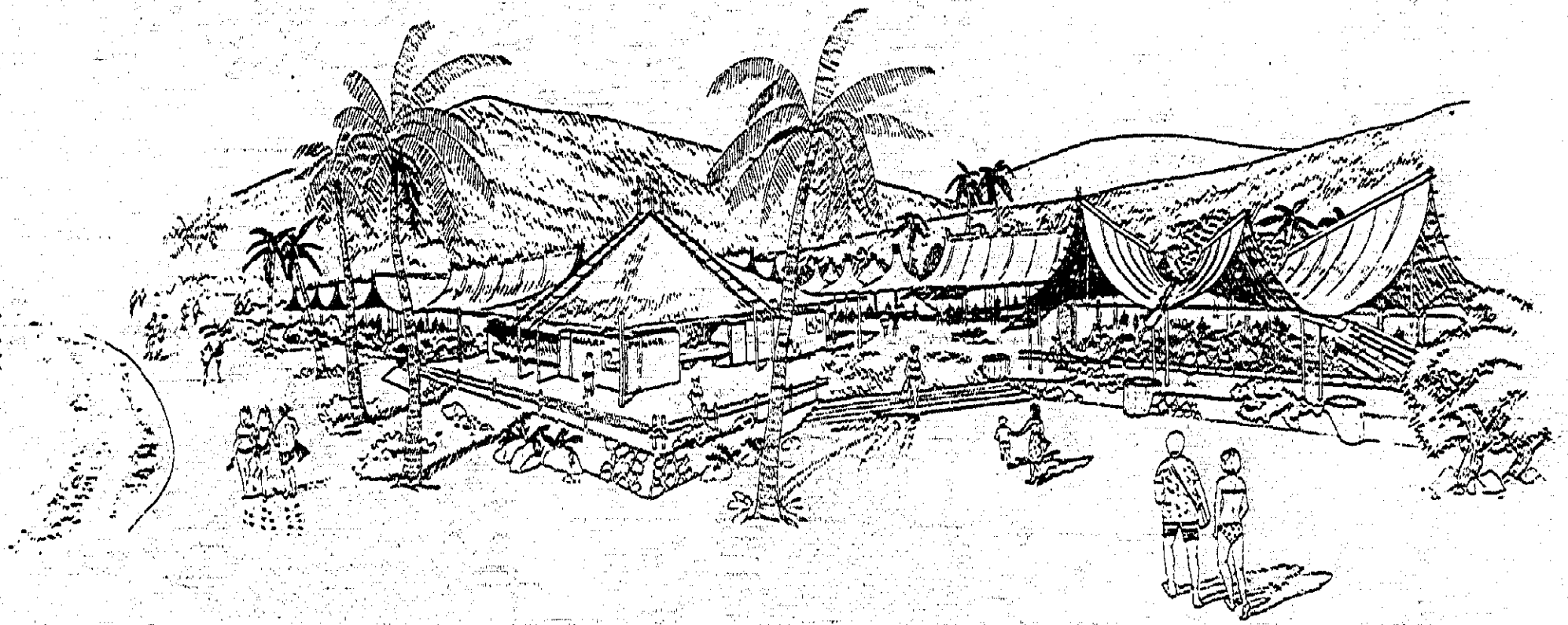


Fig. 2.7.6 Beach Service Park in Ko Lan Island

2.8 Execution Plans

In the execution plans for the construction of roads and streets, arterial road networks are closely related to the number of tourists and the traffic volume, and local street networks are formed by the new town development based on the expected population. The execution plans for arterial roads and local streets are determined in a similar manner. As for the beach promenade (T-3), it will be executed according to the steps mentioned in the previous section.

2.8.1 Road Networks

The yearly plans for the construction of roads and streets (R-2) are:

1) T-1 Execution plans

Based on the analysis of traffic volume in article 2.3.2, a two lane road will be enough at most points, though at some points it might be exceeded. However as this arterial tourist road is a key project for promoting tourism, the construction should be completed in 1981.

2) T-2

As the existing condition is fairly good, execution will be postponed until the appropriate time.

3) T-3

A step-by-step method should be applied, as mentioned in the previous section.

4) T-4, T-5

Execution should be completed in 1981.

5) R-1

The execution plans of R-1 are shown in Fig. 2.8.1 According to the existing condition of R-2 roads.

2.8.2 Street Networks

According to the basic policy stated in the local street plans, the forecasted population of the Na Klua Areas (Na Klua Town A, B) and Pattaya Areas (Northern New Town) is as shown in Table 2.8.3. Construction of the New Town shall be executed as shown in Fig. 2.8.2 to Fig. 2.8.3 based on the forecasted population.

LEGEND

1980

1981

1982

1983

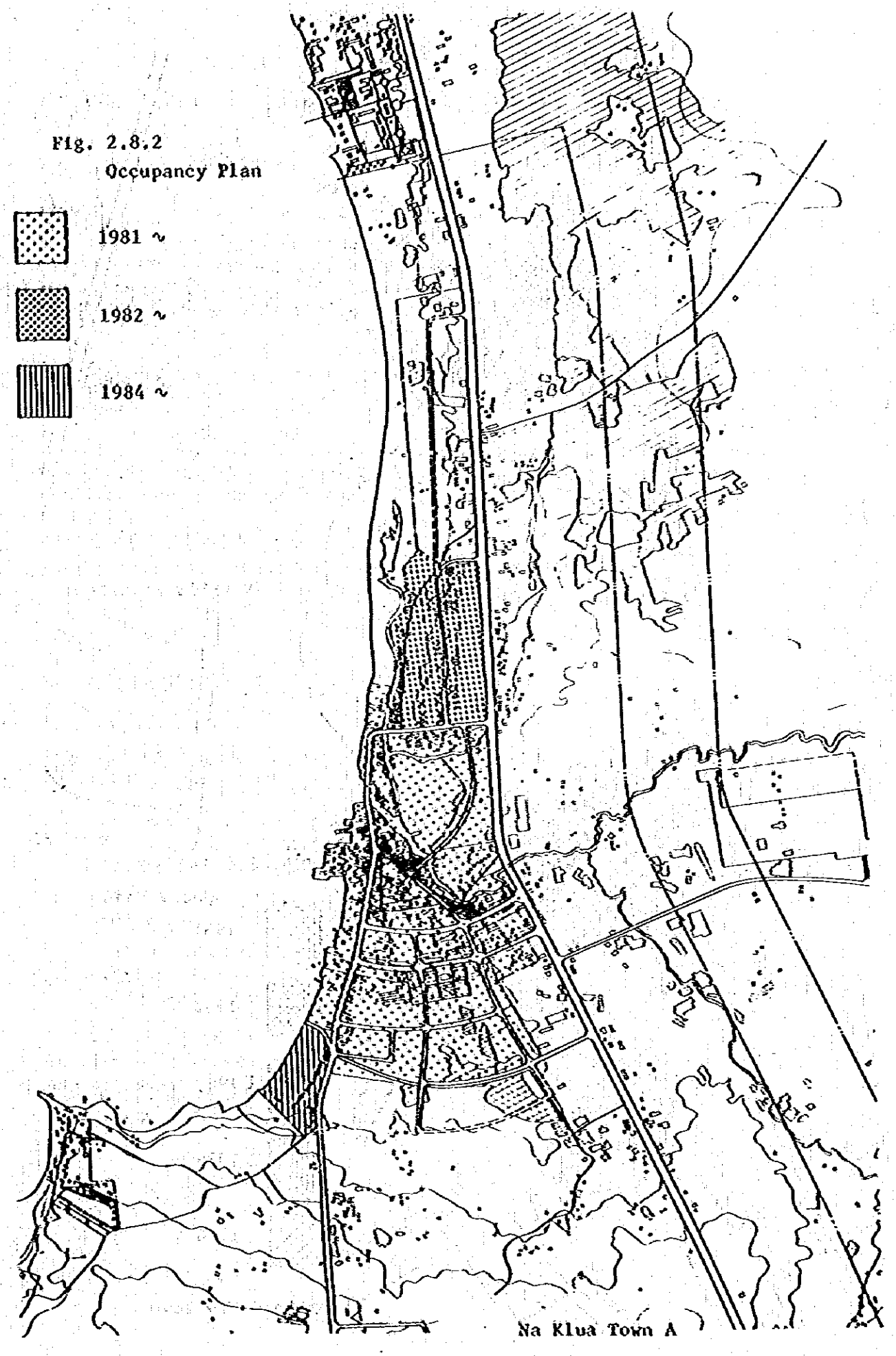
1984

1985

FIG 2.8.1 IMPLEMEN

FIG 2.8.1 IMPLEMENTATION PLAN

Fig. 2.8.2
Occupancy Plan



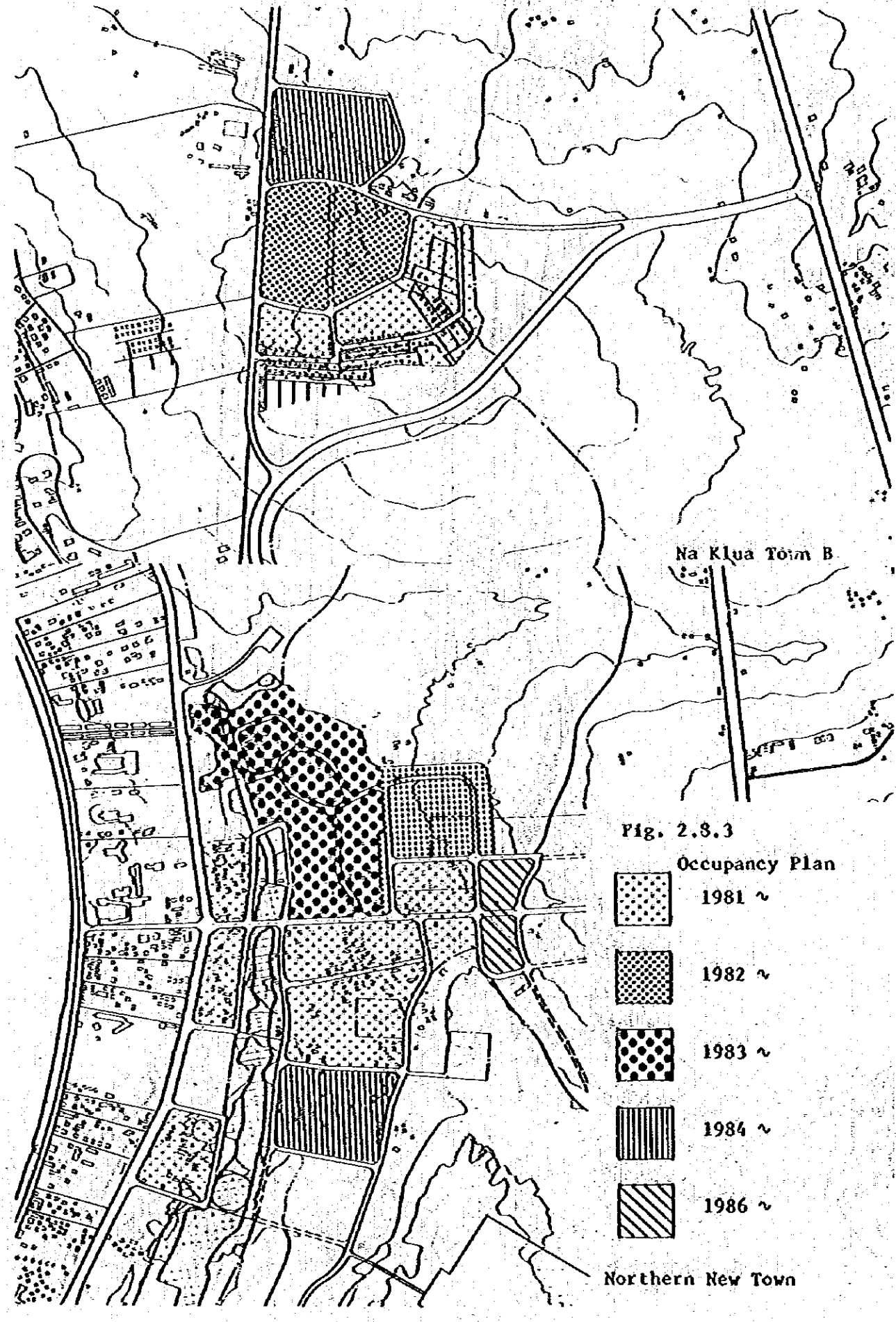


Fig. 2.8.3
Occupancy Plan

2.9 Construction Costs and Operation/Maintenance Costs

2.9.1 Construction Costs

1) The Quantity of Construction Work

A summary of the construction work is presented in Table 2.9.1. The quantity of construction work is calculated according to the Tourism Area and Residential Areas. The Tourism Area comprises Pattaya and Ko Lan island, and the Residential Area comprises Na Klua Town A and B and the Northern New Town.

2) Common Unit Price of Construction, Compensation Costs and Land Cost

The common unit prices of the varieties of infrastructure are determined. The summaries of unit price of the roads and streets are listed in Table 2.9.2 for construction costs, Fig. 2.9.1 for land costs and Table 2.9.3 for compensation costs. The common unit prices are based on the prevailing data in 1976.

3) Construction Costs

The construction costs and land costs of each development area are calculated and summarized in Tables 2.9.4.

2.9.2 Operation and Maintenance Costs

1) Premises

The following premises are adopted in the calculation of the operation and maintenance costs.

(1) Pavement: The paving maintenance cost is assumed to amount to 2% of the construction cost per year from the 6th year after the completion of construction.

(2) Illumination: Calculation of the consumption of power. The bulbs are assumed to be changed every 3 years.

(3) Other costs: The maintenance and operation costs of the drainage gutters and channels, plants, signals and road signs, etc., are also taken into consideration.

2) The operation and maintenance costs are divided according to the Tourism Area (Pattaya) and the Residential Areas (Na Klua and Pattaya), and are described in Table 2.9.5.

Table 2.9.1-(1) The Quantities of Construction

	Route No.	Total Length	Earth Work			Land	Pavement		Drainage System		Crossing Pipe ϕ1,000
			Cutting or Embankment	Slope	Median		Carriage Way	Side Walk	Concrete	Form	
		m	m^3	m^2	m^3	m^2	m^2	m^2	m^3	m^2	m
TOURISM AREA	T-1	5,959	93,583.9	33,538.2	33,765.3	133,245			6,542.98	30,852.73	143.7
	T-2	2,325	14,199.1	5,349.1	5,970.8	47,784			1,401.98	6,355.39	47.2
	T-4	1,200	11,134.4	4,047.1	–	12,496			136.89	616.80	–
	T-5	470	16,205.9	3,356.3	–	6,837			456.92	2,326.97	–
	T-5 (D1)	455	3,792.7	1,035.9	–	4,828			592.45	2,431.28	–
	" (D2)	405	1,088.1	548.4	–	3,890			419.58	2,065.16	21.2
	" (D3)	535	2,406.2	999.6	–	5,222			554.26	2,648.79	21.6
	T-6 (D1)	220	814.8	400.9	–	1,279			227.92	1,089.22	–
	" (D2)	700	1,851.3	1,203.3	–	6,651			325.20	3,455.70	–
	" (D3)	193	252.0	63.7	–	2,100			59.95	935.55	–
	T-3										
TOURISM AREA TOTAL		12,492	144,353.4	38,582.5	39,736.1	224,119.2			11,198.05	52,737.55	232.4
GRAND TOTAL 1		37,621									
GRAND TOTAL 2		37,621	285,539.2	82,675.0	39,736.1	611,178			37,231.69	177,681.28	652.4

Table 2.9.1 (2) The Quantities of Construction

	Route No.	Total Length	Open Ditch			Bridge	Safety Facilities			Remarks		
			Slope	Excavation	Land	RC Slab	Traffic Signal	Lighting	Traffic Sign			
		m	m^2	m^3	m^2	m^2	Nos.	Nos.	Nos.			
	T-1	5,959	9,100	4,100	12,500	–		171				
TOURISM AREA	T-2	2,325	3,000	1,500	4,200	–		62				
	T-4	1,200	–	–	–	–		–				
	T-5	470	–	–	–	–		8				
	T-5 (D1)	455	–	–	–	–		9				
	" (D2)	405	–	–	–	–		7				
	" (D3)	535	–	–	–	–		9				
	T-6 (D1)	220	–	–	–	–		4				
	" (D2)	700	–	–	–	–		12				
	" (D3)	193	–	–	–	–		4				
	T-3		–	–	–	–						
TOURISM AREA TOTAL		12,492	12,100	5,600	16,700	00		311162153				
GRAND TOTAL 1		37,621										
GRAND TOTAL 2		37,621	33,200	6,000	18,300	1800		311162153				

Table 2.9.1-(3) The Quantities of Construction

	Route No.	Total Length	Earth Work			Pavement			Drainage System		Pipe ϕ1,000
			Cutting or Embankment	Slope	Median	Land	Carriage Way	Side Walk	Concrete	Form	
		m	m^3	m^2	m^3	m^2	m^2	m^2	m^3	m^2	m
NA KLUA-A	R-1 (A)	3,520	11,831.8	5,269.9	-	10,016			3,646.72	17,437.52	43.2
	R-1 (B)	1,230	8,191.7	1,839.5	-	11,455			1,274.28	6,087.73	86.4
	R-2' (A1)	749	2,525.3	670.5	-	2,641			775.96	3,708.30	43.2
	" (A2)	314	628.3	450.4	-	3,032			325.39	1,554.62	21.6
	" (A3)	144	747.6	60.2	-	1,323			149.18	712.95	-
	" (A4)	141	394.4	85.4	-	1,307			146.08	698.09	-
	R-2 (A1)	843	3,259.5	1,916.1	-	9,844			842.27	4,025.17	13.6
	" (A2)	956	658.5	707.0	-	6,941			990.42	4,733.16	-
	" (A3)	693	1,262.6	801.3	-	6,493			717.55	3,431.05	-
	" (A4)	469	617.6	323.2	-	2,430			485.88	2,322.02	-
	" (A5)	453	3,012.1	1,502.0	-	4,778			469.67	2,292.32	-
	" (A6)	470	944.0	724.5	-	4,278			486.92	2,326.97	-
	" (A7)	660	1,592.8	1,293.2	-	7,357			683.76	3,267.66	27.2
	" (A8)	704	1,948.6	1,286.1	-	8,199			729.38	3,485.51	40.8
	" (A9)	351	1,765.6	873.7	-	8,292			363.64	1,737.89	-
NA KLUA-A TOTAL		11,617	39,610.5	17,833.0	0.0	83,212			12,097.32	57,812.87	276.0
NA KLUA-B	R-2 (B1)	690	2,358.5	1,098.7	-	6,306			714.84	3,416.69	13.6
	" (B2)	815	6,076.3	1,809.5	-	7,815			844.34	4,035.07	13.6
	" (B3)	679	3,481.9	1,337.4	-	6,359			703.41	3,361.73	-
	" (B4)	650	1,447.9	533.4	-	3,668			704.43	3,366.63	-
NA KLUA-B TOTAL		2,864	13,364.6	4,844.0	0.0	24,378			2,957.10	14,179.67	27.2
NA KLUA TOTAL		14,541	52,975.1	22,657.0	0.0	113,393			15,054.47	71,992.54	303.2

Table 2.9.1-(4) The Quantities of Construction

	Route No.	Total Length	Open Ditch			Bridge	Safety Facility			Remarks
			Slope	Excavation	Land	RC Slab	Traffic Signal	Lighting	Traffic Sign	
		m	m^2	m^3	m^2	m^2	Nos.	Nos.	Nos.	
NA KLUA-A	R-1 (A)	3,520	1,100	400	1,600	-	4	59		
	R-1 (B)	1,230	-	-	-	-		21		
	R-2' (A1)	749	-	-	-	-		13		
	" (A2)	314	-	-	-	-	1	6		
	" (A3)	144	-	-	-	-		3		
	" (A4)	141	-	-	-	-		3		
	R-2 (A1)	843	-	-	-	-		14		
	" (A2)	956	-	-	-	-		16		
	" (A3)	693	-	-	-	180.0		12		
	" (A4)	469	-	-	-	-		8		
	" (A5)	453	-	-	-	-		8		
	" (A6)	470	-	-	-	-		8		
	" (A7)	660	-	-	-	-		11		
	" (A8)	704	-	-	-	-		11		
	" (A9)	351	-	-	-	-		12		
NA KLUA-A TOTAL		11,617	1,100	400	1,600	180.0	5			
NA KLUA-B	R-2 (B1)	690	-	-	-	-		12		
	" (B2)	815	-	-	-	-		14		
	" (B3)	679	-	-	-	-		12		
	" (B4)	650	-	-	-	-		12		
NA KLUA-B TOTAL		2,864	0	0	0	0.0	0			
NA KLUA TOTAL		14,541	1,100	400	1,600	180.0	5	255		

Table 2.9.1-(5) The Quantities of Construction

	Route No.	Total Length	Earth Work			Land	Pavement		Drainage System		Crossing Pipe ϕ1,000
			Cutting or Embankment	Slope	Median		Carriage Way	Side Walk	Concrete	Form	
		m	m^3	m^3	m^3	m^2	m^2	m^2	m^3	m^2	m
	R-1 (C)	1,626	14,551.8	3,602.2	–	0			1,684.59	8,050.33	21.6
	R-2 (C1)	854	2,510.3	1,475.7	–	4,930			858.74	4,228.16	–
NORTHERN NEW TOWN	" (C2)	495	2,023.5	1,160.5	–	4,192			512.83	2,450.75	–
	" (C3)	170	630.5	375.4	–	1,018			176.32	841.47	–
	" (C4)	1,063	2,946.7	1,113.3	–	11,626			1,101.27	5,262.92	93.6
	" (C5)	430	2,172.0	718.7	–	4,543			445.48	2,128.93	–
	" (C6)	183	1,320.5	597.9	–	1,183			189.59	906.04	–
	" (C7)	687	3,320.1	1,636.5	–	5,000			711.73	3,401.34	49.8
	" (C8)	450	3,074.5	1,375.1	–	4,372			976.56	2,237.48	33.6
	" (C9)	670	4,001.9	1,933.5	–	5,630			694.12	3,317.17	–
	" (C10)	1,700	3,644.4	2,597.0	–	13,526			1,761.20	8,416.70	–
	" (C11)	428	451.8	452.6	–	2,342			443.41	2,119.03	–
	" (C12)	363	1,041.3	668.4	–	2,118			376.07	1,797.22	–
	" (C13)	323	1,316.2	435.4	–	3,619			334.63	1,599.18	–
	" (C14)	295	3,314.2	1,227.6	–	4,045			305.62	1,460.55	33.6
	" (C15)	166	1,099.5	514.3	–	950			155.40	742.65	–
	" (C16)	691	2,689.2	1,591.9	–	7,084			715.88	3,421.14	33.6
NORTHERN NEW TOWN TOTAL		10,654	49,319.7	21,475.5	0.0	76,606			10,969.18	52,371.24	816.8

Table 2.9.1-(6) The Quantities of Construction

	Route No.	Total Length	Open Ditch			Bridge	Safety Facilities			Remarks		
			Slope	Excavation	Land	RC Slab	Traffic Signal Nos	Lighting Nos	Traffic Sign Nos			
		m	m^2	m^3	m^2	m^2						
	R-1 (C)	1,626	–	–	–	–	–	28	–			
	R-2 (C1)	854	–	–	–	–	–	13	–			
	" (C2)	495	–	–	–	–	–	9	–			
	" (C3)	170	–	–	–	–	–	3	–			
	" (C4)	1,063	–	–	–	–	–	18	–			
	" (C5)	430	–	–	–	–	–	8	–			
	" (C6)	183	–	–	–	–	–	4	–			
	" (C7)	687	–	–	–	–	–	12	–			
	" (C8)	450	–	–	–	–	–	8	–			
	" (C9)	670	–	–	–	–	–	12	–			
	" (C10)	1,700	–	–	–	–	–	29	–			
	" (C11)	428	–	–	–	–	–	8	–			
	" (C12)	363	–	–	–	–	–	7	–			
	" (C13)	323	–	–	–	–	–	6	–			
	" (C14)	295	–	–	–	–	–	5	–			
	" (C15)	166	–	–	–	–	–	3	–			
	" (C16)	691	–	–	–	–	–	12	–			
NORTHERN NEW TOWN TOTAL		10,588	0.0	0.0	0	0.0	0	185	0			

Table 2.9.1-(7) Beach Promenade (T_3)

1. Parking (Public)			
		Pavement	21,750 m^2
		Planting	1,150 m^2
			22,900 m^2
2. Bus Terminal		Pavement	3,940 m^2
		Planting	2,960 m^2
		Sidewalk	5,580 m^2
3. Beach Road Length			
	Section A (Wide)		860 m
	" B (Wide)		2,340 m
4. Road Lighting			
			3.2 km
			23 nos.
5. Road Sign			24 nos.
6. Parking			
		Pavement	148 m^2
		Planting	44 m^2
		Sidewalk	188 m^2

7 Park Facilities

	Quantity		Quantity
Service Park A			
Earth work	640 m^3	Snack	40 m^2
Side walk	700 m^2	Toilet	20 "
Parking for bicycle	60 "	Service house	50 "
Parking for rental bicycle	70 "	Retaining wall	100 "
Planting	420 "	Lighting	10 nos.

	Quantity		Quantity
Service Park B			
Earth work	720 m^3	Snack	40 m^2
Side walk	310 m^2	Toilet	20 "
Parking for bicycle	50 "	Service house	60 "
Parking for rental bicycle	45 "	Retaining wall	130 "
Planting	960 "	Lighting	12 nos.

	Quantity		Quantity
Satellite Park			
Earth work	-	Toilet	15 m^2
Side walk	170 m^2	Vending	7 "
Parking for bicycle	40 "	Retaining wall	-
Planting	100 "	Lighting	3 nos.

Table 2.9.1-(8) Ko Lan Island

		Total Length
R. Fishery v.	N	2,225 m
"	S	1,400
Total		3,625
Tien	a	425
Tien Ta-Van	b	1,100
Tien Samae	T	300 + 80
Hiking Road		4,200

Table 2.9.2-(1) Unit Price

Unit : Baht

Item	Unit	Equipment & Material (1)		Operating (2)		Unskilled Labour	Construction Cost (4)=(1)+(2)+(3)		Tax (5)	Remarks
		Local	Foreign	Local	Foreign		Local	Foreign		
Form	m^2	181.33	-	58.62	-	16.02	255.97	-	6.03	60฿/m^2 262
Timbering	m^3	11.49	-	4.04	-	-	15.53	-	0.37	
Staging	m^3	15.79	-	5.47	-	-	21.26	-	0.50	
Surplus Soil 4km by Dump Truck (6 t)	m^3	11.05	-	28.6	9.33	-	39.65	9.33	4.02	
Excavation by Hand	m^3	-	-	-	-	39.95	39.95	-	0.94	
Embankment		-	-	36.14	12.49	-	36.14	12.49	3.37	52
Walling H=8 Both Side	m	63.12	-	2,052.03	519.23	-	2,052.03	519.23	107.49	2,741.87
Walling H=4m Both Side	m	31.57	-	1,025.98	259.61	-	1,057.55	259.61	53.74	
Walling H=15m		118.36	-	1,758.07	584.90	-	1,876.43	584.90	109.17	
Fence H=1.9m	m	278.84	-	22.96	-	-	301.80	-	7.10	
Concrete Pavement t=5cm	m^2	36.22	-	12.87	1.12	44.38	93.47	1.12	2.32	
Walling H=6.0m Both Side		47.35	-	1,539.02	389.42	-	1,586.37	389.42	80.61	
Sodding	m^2	20.52	-	-	-	1.66	22.18	-	0.52	22.7
Concrete	m^3	478.34	-	185.85	-	-	664.19	-	15.81	450฿/m^3 630
Excavation Bulldozer (10t)	m^3	0.90	-	9.45	4.6	-	10.34	4.6	0.81	
Excavation by Shovel ($0.6m^3$)	m^3	2.58	-	17.36	11.07	-	19.94	11.07	1.99	33
Pump Drainage (day) 10Ps	day	76.99	-	115.88	15.02	22.18	215.05	15.02	7.75	
Pump Drainage (day) 5Ps	day	38.10	-	117.87	2.0	-	155.97	2.0	4.03	
Reinforcement	t	9,499.4	-	998.5	-	249.1	10,747.0	-	253.0	11,000฿/kg
Masonry		285.0	-	87.7	-	13.2	385.9	-	9.1	
Asphalt Concrete 1,093 ฿/m^3		533.93	-	131.46	163.95	213.57	878.96	163.95	50.36	
Base 307 ฿/m^3		149.97	-	42.41	52.75	46.90	239.28	52.75	14.97	
Sub base 110 ฿/m^3		53.73	-	16.08	20.00	14.66	84.47	20.00	5.53	

Table 2.9.2-(2) Unit Price

Unit : Baht

Item	Unit	Equipment & Material (1)		Operating (2)		Unskilled Labour	Construction Cost (4)=(1)+(2)+(3)		Tax (5)	Total (4)+(5)
		Local	Foreign	Local	Foreign		Local	Foreign		
Lighting (1) 	nos	13,189.5	-	1,245.7	-	219.8	14,655.0	-	345	15,000
" (2) 	nos	-	18,356	5,209	-	274.0	5,479	18,356	2,881.4	26,716.4
" (3) 	nos	-	16,289	4,628.4	-	243.6	4,872	16,289	2,557.6	23,718.6
Signal		6,839	5,950	3,908	-	1,954	12,701	5,950	1,349	20,000
Sign	m^2	586.20	-	439.65	-	146.55	1,172.4	-	27.6	1,200
Lighting (1)	km	448,443	-	42,353.8	-	7,473.2	498,270	-	11,730	510,000
" (2)	km	-	550,680	156,270	-	8,220	164,370	550,680	96,442	801,492
" (3)	km	-	456,092	129,595.2	-	6,820.8	136,416	456,092	71,612.8	664,120.8

Table 2.9.3 Compensation

Compensation	
- Remaining price for building	400 ฿/m^2
- Compensation for removal of personal property	50 ฿/m^2
- Business compensation	500 ฿/m^2
Construction Cost for Removal	
R.C.	200 ฿/m^2
Wooden	80 ฿/m^2

Fig. 2.9.1 Land Price

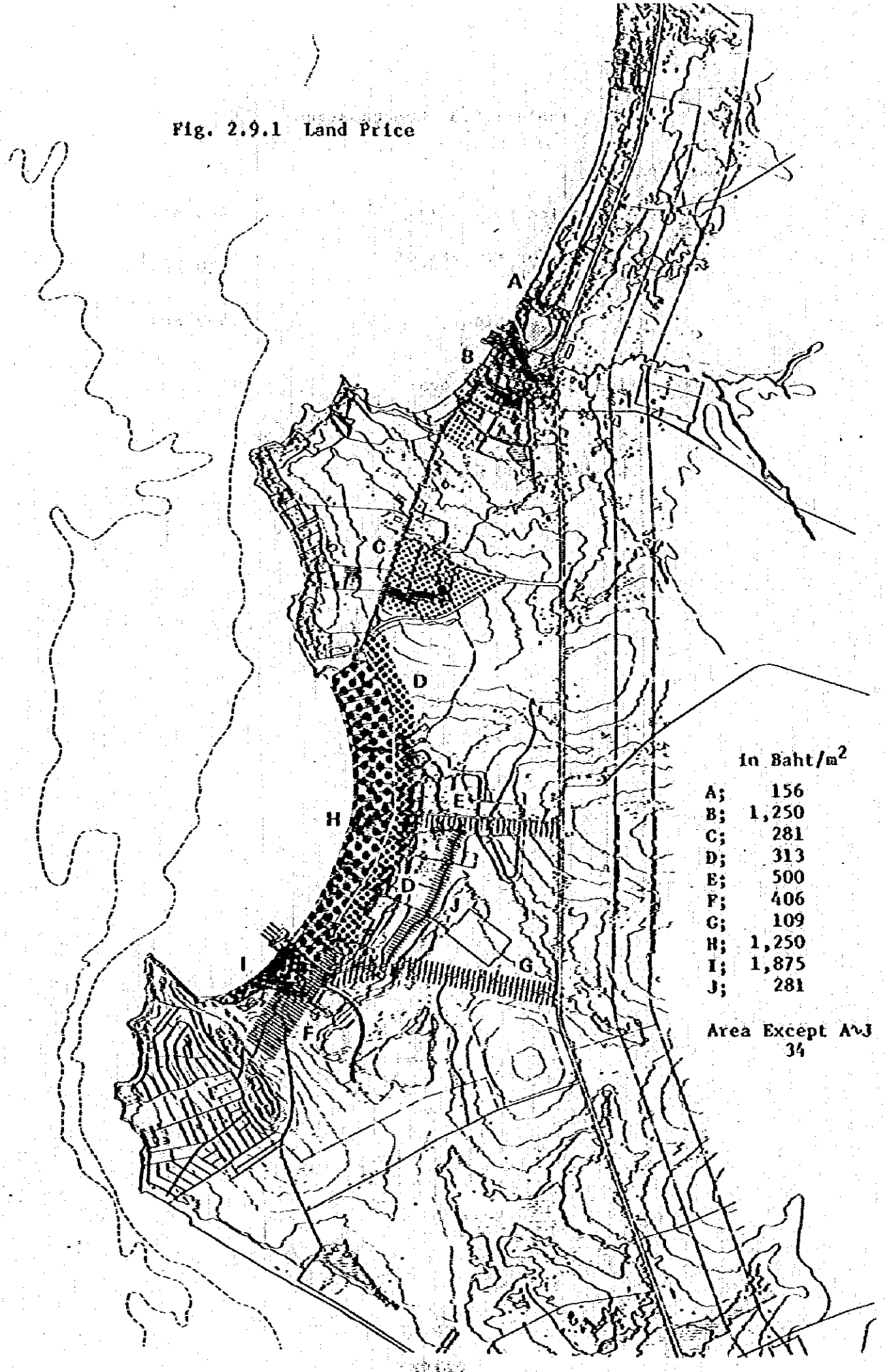


Table 2.9.4-(1) Construction Cost for Tourism

REMARKS
1. U.L = COST FOR UNSKILLED LABOR

Unit in 1,000 Baht

WORKS		TOTAL: CIVIL WORKS	TOTAL: EQUIPMENT	TOTAL: COST WITHOUT TAX	TOTAL: TAX	TOTAL: COST WITH TAX	TOTAL: U.L	1990: CIVIL WORKS	1990: EQUIPMENT	1990: COST WITHOUT TAX	1990: TAX	1990: COST WITH TAX	1990: U.L
1 T-1	LOCAL			27,327.6	1,929.2	29,256.8	3,615.3			27,327.6	1,929.2	29,257.8	3,615.3
	FOREIGN			7,355.2		7,355.2				7,355.2		7,355.2	
	TOTAL			34,682.8	1,929.2	36,612.0	3,615.3			34,682.8	1,929.2	36,538.0	3,615.3
	LAND					41,283.0						41,283.0	
2 T-2	LOCAL			5,407.0	430.3	5,837.3	1,136.2						
	FOREIGN			1,812.3		1,812.3							
	TOTAL			7,219.3	430.3	7,649.6	1,136.2						
	LAND					2,275.0							
3 T-3 (BEACH ROAD)	LOCAL			5,912.7	475.5	6,388.2	448.8						
	FOREIGN			3,372.9		3,372.9							
	TOTAL			9,285.6	475.5	9,761.1	448.8						
4 T-4	LOCAL			1,192.4	75.7	1,268.1	142.1						
	FOREIGN			248.9		248.9							
	TOTAL			1,441.3	75.7	1,517.0	142.1						
	LAND					749.0							
5 T-5	LOCAL			6,150.2	292.2	6,442.4	715.8						
	FOREIGN			795.6		795.6							
	TOTAL			6,945.8	292.2	7,238.0	715.8						
	LAND					20,377.0							
6 T-6	LOCAL			2,245.6	78.7	2,324.3	153.9						
	FOREIGN			929.7		929.7							
	TOTAL			3,175.3	78.7	3,254.0	153.9						
	LAND					15,454.0							
7 SUB-TOTAL	LOCAL			48,243.5	3,455.0	51,659.5	6,365.5			27,327.6	1,929.2	29,257.8	3,615.3
	FOREIGN			13,501.6		13,501.6				7,355.2		7,355.2	
	TOTAL			61,545.1	3,455.0	65,200.1	6,365.5			34,682.8	1,929.2	36,538.0	3,615.3
	LAND					79,342.0						41,283.0	
8 TOTAL (CONST. + LAND)	LOCAL												
	FOREIGN												
	TOTAL			61,545.1	3,455.0	144,345.1	6,365.5			34,682.8	1,929.2	77,276.5	1,857.7
9 KO LAN ISLAND	LOCAL			439.2	23.8	463.0	163.0			198.2	11.9	211.1	34.3
	FOREIGN			76.6		76.6				47.0		47.0	
	TOTAL			515.8	23.8	539.6	163.0			245.2	11.9	258.1	34.3
						111.9						162.2	
10 GRAND TOTAL OF TOURISM	LOCAL			48,692.7	3,478.8	51,961.5	6,543.6			27,525.8	1,931.1	29,468.9	3,649.6
	FOREIGN			13,578.2		13,578.2				7,402.2		7,402.2	
	TOTAL			62,265.9	3,478.8	65,739.3	6,543.6			34,928.0	1,931.1	36,871.1	3,649.6
	LAND					85,343.7						41,385.1	
11	LOCAL												
	FOREIGN												
	TOTAL												
	LAND												
	LOCAL												
	FOREIGN												
	TOTAL					26.7							
GRAND TOTAL OF TOURISM AND RESIDENT	LOCAL			95,158.0	5,176.2	318,144.3	11,372.0			49,371.1	2,483.0	51,263.3	5,367.1
	FOREIGN			18,358.0		10,238.9				8,034.8		8,034.8	
	TOTAL			113,456.0	5,176.7	329,302.7	11,372.8			57,258.3	2,483.0	59,958.5	5,367.4
						212,473.3						59,579.2	

WORKS		1991: CIVIL WORKS	1991: EQUIPMENT	1991: COST WITHOUT TAX	1991: TAX	1991: COST WITH TAX	1991: U.L	1992: CIVIL WORKS	1992: EQUIPMENT	1992: COST WITHOUT TAX	1992: TAX	1992: COST WITH TAX	1992: U.L
1 T-1	LOCAL												
	FOREIGN												
	TOTAL												
	LAND												
2 T-2	LOCAL												
	FOREIGN												
	TOTAL												
	LAND												
3 T-3 (BEACH ROAD)	LOCAL			5,912.7	475.5	6,388.2	448.8						
	FOREIGN			3,372.9		3,372.9							
	TOTAL			9,285.6	475.5	9,761.1	448.8						
4 T-4	LOCAL			1,192.4	75.7	1,268.1	142.1						
	FOREIGN			248.9		248.9							
	TOTAL			1,441.3	75.7	1,517.0	142.1						
	LAND					749.0							
5 T-5	LOCAL			6,150.2	292.2	6,442.4	715.8						
	FOREIGN			795.6		795.6							
	TOTAL			6,945.8	292.2	7,238.0	715.8						
	LAND					20,377.0							
6 T-6	LOCAL			2,451.6	78.7	2,324.3	153.9						
	FOREIGN			929.7		929.7							
	TOTAL			3,175.3	78.7	3,254.0	153.9						
	LAND					15,454.0							
7 SUB-TOTAL	LOCAL			15,369.9	1,114.1	16,021.8	1,659.8						
	FOREIGN			4,334.1		4,334.1							
	TOTAL			19,643.0	1,114.1	20,357.1	1,659.8						
	LAND					36,362.0							
8 TOTAL (CONST. + LAND)	LOCAL												
	FOREIGN												
	TOTAL			19,643.0	1,114.1	57,139.1	1,659.8						
9 KO LAN ISLAND	LOCAL									76.7	3.8	78.5	70.7
	FOREIGN												
	TOTAL									76.7	3.8	78.5	70.7
												8.1	
10 GRAND TOTAL OF TOURISM	LOCAL			15,329.9	1,114.1	16,021.6	1,659.8			76.7	3.8	78.5	70.7
	FOREIGN			4,334.0		4,334.1							
	TOTAL			19,643.0	1,114.1	20,357.1	1,659.8			76.7	3.8	78.5	70.7
	LAND					36,362.0						8.1	
11	LOCAL												
	FOREIGN												
	TOTAL												
	LAND												
	LOCAL												
	FOREIGN												
	TOTAL												
GRAND TOTAL OF TOURISM AND RESIDENT	LOCAL			21,348.6	1,336.7	22,651.3	5,367.1			13,179.3	568.8	13,743.1	1,024.8
	FOREIGN			4,568.8		4,566.1				1,390.4		1,390.4	
	TOTAL			25,921.6	1,336.7	27,251.1	5,367.9			14,569.7	568.8	15,133.5	1,024.8
						42,931.0						19,659.1	

WORKS		1993: CIVIL WORKS	1993: EQUIPMENT	1993: COST WITHOUT TAX	1993: TAX	1993: COST WITH TAX	1993: U.L	1994: CIVIL WORKS	1994: EQUIPMENT	1994: COST WITHOUT TAX	1994: TAX	1994: COST WITH TAX	1994: U.L	1995: CIVIL WORKS	1995: EQUIPMENT	1995: COST WITHOUT TAX	1995: TAX	1995: COST WITH TAX	1995: U.L
1 T-1	LOCAL																		
	FOREIGN																		
	TOTAL																		
	LAND																		
2 T-2	LOCAL									5,427.0	430.3	5,837.3	1,136.2						
	FOREIGN									1,812.3		1,812.3							
	TOTAL									7,219.3	430.3	7,659.6	1,136.2						
	LAND											2,275.0							
3 T-3 (BEACH ROAD)	LOCAL																		
	FOREIGN																		
	TOTAL																		
4 T-4	LOCAL																		
	FOREIGN																		
	TOTAL																		
	LAND																		
5 T-5	LOCAL																		
	FOREIGN																		
	TOTAL																		
	LAND																		
6 T-6	LOCAL																		
	FOREIGN																		
	TOTAL																		
	LAND																		
7 SUB-TOTAL	LOCAL									5,427.0	430.3	5,837.3	1,136.2						
	FOREIGN									1,812.3		1,812.3							
	TOTAL									7,219.3	430.3	7,659.6	1,136.2						
	LAND											2,275.0							
8 TOTAL (CONST. + LAND)	LOCAL																		
	FOREIGN																		
	TOTAL									7,219.3	430.3	9,925.8	1,136.2						
9 KO LAN ISLAND	LOCAL			143.8	8.6	152.4	39.2									20.5	0.5	21.0	15.3
	FOREIGN			29.6		29.6													
	TOTAL			173.4	8.6	182.0	39.2									20.5	0.5	21.0	15.3
						12.1												3.9	
10 GRAND TOTAL OF TOURISM	LOCAL			143.8	8.6	152.4	39.2			5,427.0	430.3	5,837.3	1,136.2			20.5	0.5	21.0	15.3
	FOREIGN			29.6		29.6				1,812.3		1,812.3							
	TOTAL			173.4	8.6	182.0	39.2			7,219.3	430.3	7,659.6	1,136.2			20.5	0.5	21.0	15.3
	LAND					12.6						2,275.0						3.9	
11	LOCAL																		
	FOREIGN																		
	TOTAL																		
	LAND																		
	LOCAL																		
	FOREIGN																		
	TOTAL																		
GRAND TOTAL OF TOURISM AND RESIDENT	LOCAL			4,518.4	142.7	4,731.1	374.5			14,378.4	825.6	15,184.8	2,254.5			3,463.4	119.1	3,592.9	276.9
	FOREIGN			284.9		284.9				2,493.0		2,493.0				204.0		204.0	
	TOTAL			4,813.3	142.7	5,016.0	374.5			17,871.4	825.6	17,871.6	2,254.5			3,667.9	119.1	3,787.0	276.9
						11,168.1						13,384.8						13,369	

Table 2.9.4-(2) Construction Cost for Residential Area (Na Klua/Pattaya)

REMARKS
1. U.L = COST FOR UNSKILLED LABOR

Unit in 1,000 Baht

TOTAL

No.	WORKS		CIVIL WORKS	EQUIP-MENT	COST WITHOUT TAX	TAX	COST WITH TAX	U.L
1	NA KLUA R-1	LOCAL			13,724.8	652.0	14,376.8	1,624.4
		FOREIGN			1,764.2		1,764.2	
		TOTAL			15,489.0	652.0	16,141.0	1,624.0
		LAND					13,436.0	
2	R-2	LOCAL			20,738.1	710.5	21,451.6	1,533.8
		FOREIGN			1,229.4		1,229.4	
		TOTAL			21,967.5	710.5	22,681.0	1,533.8
		LAND					82,146.0	
3	SUB-TOTAL	LOCAL			34,462.9	1,364.5	35,827.4	3,158.2
		FOREIGN			2,993.6		2,993.6	
		TOTAL			37,455.5	1,364.5	38,821.0	3,158.2
		LAND					95,582.0	
4	TOTAL (CONST. + LAND)	LOCAL						
		FOREIGN						
		TOTAL			37,454.5	1,364.5	134,425.8	3,158.2
5		LOCAL						
		FOREIGN						
		TOTAL						
6	PATTAYA R-1	LOCAL			5,037.2	239.3	5,276.5	548.8
		FOREIGN			647.5		647.5	
		TOTAL			5,684.7	239.3	5,924.0	548.8
		LAND					0	
7	R-2	LOCAL			17,345.2	592.1	17,937.3	1,274.3
		FOREIGN			1,818.1		1,818.1	
		TOTAL			19,263.3	592.1	19,756.4	1,274.3
		LAND					6,545.0	
8	SUB-TOTAL	LOCAL			22,712.4	831.4	23,651.5	2,316.8
		FOREIGN			2,466.2		2,466.2	
		TOTAL			25,159.6	831.4	26,120.7	2,171.8
		LAND					6,545.0	
9	TOTAL (CONST. + LAND)	LOCAL						
		FOREIGN						
		TOTAL			25,159.6	831.4	32,565.0	2,071.8
10		LOCAL						
		FOREIGN						
		TOTAL						
11	3 + 8 TOTAL OF CONSTRUCTION	LOCAL			56,685.3	2,197.9	58,883.2	5,329.2
		FOREIGN			4,659.8		4,659.8	
		TOTAL			61,345.1	2,197.9	63,543.0	5,329.2
		LAND					102,427.0	
12		LOCAL						
		FOREIGN						
		TOTAL						
11 + 12	GRAND TOTAL OF RESIDENT	LOCAL						
		FOREIGN						
		TOTAL			61,345.1	2,197.9	165,970.5	5,329.2

1980

No.	WORKS		CIVIL WORKS	EQUIP-MENT	COST WITHOUT TAX	TAX	COST WITH TAX	U.L
1	NA KLUA R-1	LOCAL			3,297.4	76.3	3,373.5	433.4
		FOREIGN			476.5		476.5	
		TOTAL			3,773.9	76.3	3,850.0	433.4
		LAND					3,446.0	
2	R-2	LOCAL			10,656.3	368.2	11,024.5	836.6
		FOREIGN			633.5		633.5	
		TOTAL			11,289.8	368.2	11,658.0	836.6
		LAND					52,021.0	
3	SUB-TOTAL	LOCAL			13,953.7	444.5	14,398.0	1,270.0
		FOREIGN			1,110.0		1,110.0	
		TOTAL			15,063.7	444.5	15,508.0	1,270.0
		LAND					55,455.0	
4	TOTAL (CONST. + LAND)	LOCAL						
		FOREIGN						
		TOTAL			15,533.7	444.3	71,337.0	1,270.0
5		LOCAL						
		FOREIGN						
		TOTAL						
6	PATTAYA R-1	LOCAL						
		FOREIGN						
		TOTAL						
		LAND						
7	R-2	LOCAL			6,054.0	222.4	6,276.4	483.5
		FOREIGN			382.6		382.6	
		TOTAL			6,436.6	222.4	6,659.0	483.5
		LAND					2,365.0	
8	SUB-TOTAL	LOCAL			6,054.0	222.4	6,276.4	483.5
		FOREIGN			382.6		382.6	
		TOTAL			6,436.6	222.4	6,659.0	483.5
		LAND					2,365.0	
9	TOTAL (CONST. + LAND)	LOCAL						
		FOREIGN						
		TOTAL			6,436.6	222.4	9,024.0	483.5
10		LOCAL						
		FOREIGN						
		TOTAL						
11	3 + 8 TOTAL OF CONSTRUCTION	LOCAL			20,343.7	766.9	21,110.6	1,715.5
		FOREIGN			1,492.6		1,492.6	
		TOTAL			21,500.3	766.9	22,267.2	1,715.5
		LAND					57,832.0	
12		LOCAL						
		FOREIGN						
		TOTAL						
11 + 12	GRAND TOTAL OF RESIDENT	LOCAL						
		FOREIGN						
		TOTAL			21,500.3	766.9	80,099.2	1,715.5

1981

No.	WORKS		CIVIL WORKS	EQUIP-MENT	COST WITHOUT TAX	TAX	COST WITH TAX	U.L
1	NA KLUA R-1	LOCAL			1,551.2	54.7	1,605.9	134.7
		FOREIGN			148.1		148.1	
		TOTAL			1,699.3	54.7	1,754.0	134.7
		LAND					1,346.0	
2	R-2	LOCAL			3,435.0	111.3	3,546.3	255.2
		FOREIGN			361.9		361.9	
		TOTAL			3,796.9	111.3	3,908.2	255.2
		LAND					8,238.0	
3	SUB-TOTAL	LOCAL			4,986.2	172.0	5,158.2	365.3
		FOREIGN			510.0		510.0	
		TOTAL			5,496.2	172.0	5,668.2	389.9
		LAND					9,584.0	
4	TOTAL (CONST. + LAND)	LOCAL						
		FOREIGN						
		TOTAL			4,956.0	172.0	14,454.0	365.3
5		LOCAL						
		FOREIGN						
		TOTAL						
6	PATTAYA R-1	LOCAL						
		FOREIGN						
		TOTAL						
		LAND						
7	R-2	LOCAL			1,293.7	44.6	1,338.3	96.9
		FOREIGN			76.7		76.7	
		TOTAL			1,370.4	44.6	1,415.0	96.9
		LAND					265.0	
8	SUB-TOTAL	LOCAL			1,293.7	44.6	1,338.3	96.9
		FOREIGN			76.7		76.7	
		TOTAL			1,370.4	44.6	1,415.0	96.9
		LAND					265.0	
9	TOTAL (CONST. + LAND)	LOCAL						
		FOREIGN						
		TOTAL			1,370.4	44.6	1,680.0	96.9
10		LOCAL						
		FOREIGN						
		TOTAL						
11	3 + 8 TOTAL OF CONSTRUCTION	LOCAL			5,856.7	216.6	6,768.3	456.1
		FOREIGN			426.7		426.7	
		TOTAL			6,278.0	216.6	6,495.0	456.1
		LAND					9,849.0	
12		LOCAL						
		FOREIGN						
		TOTAL						
11 + 12	GRAND TOTAL OF RESIDENT	LOCAL						
		FOREIGN						
		TOTAL			6,278.0	216.6	16,344.0	456.1

1982

No.	WORKS		CIVIL WORKS	EQUIP-MENT	COST WITHOUT TAX	TAX	COST WITH TAX	U.L
1	NA KLUA R-1	LOCAL			8,865.2	421.2	9,286.4	1,936.3
		FOREIGN			1,139.6		1,139.6	
		TOTAL			10,004.8	421.2	10,426.0	1,936.3
		LAND					8,872.0	
2	R-2	LOCAL						
		FOREIGN						
		TOTAL						
		LAND					0	
3	SUB-TOTAL	LOCAL			8,865.2	421.2	9,286.4	1,936.3
		FOREIGN			1,139.6		1,139.6	
		TOTAL			10,004.8	421.2	10,426.0	1,936.3
		LAND					8,872.0	
4	TOTAL (CONST. + LAND)	LOCAL						
		FOREIGN						
		TOTAL			10,004.8	421.2	19,298.0	1,936.3
5		LOCAL						
		FOREIGN						
		TOTAL						
6	PATTAYA R-1	LOCAL						
		FOREIGN						
		TOTAL						
		LAND						
7	R-2	LOCAL			4,331.4	145.8	4,477.2	317.0
		FOREIGN			258.8		258.8	
		TOTAL			4,590.2	145.8	4,736.0	317.0
		LAND					1,656.0	
8	SUB-TOTAL	LOCAL			4,331.4	145.8	4,477.2	317.0
		FOREIGN			258.8		258.8	
		TOTAL			4,590.2	145.8	4,736.0	317.0
		LAND					1,656.0	
9	TOTAL (CONST. + LAND)	LOCAL						
		FOREIGN						
		TOTAL			4,590.2	145.8	6,392.0	317.0
10		LOCAL						
		FOREIGN						
		TOTAL						
11	3 + 8 TOTAL OF CONSTRUCTION	LOCAL			13,196.6	567.0	13,763.6	2,253.3
		FOREIGN			1,398.4		1,398.4	
		TOTAL			14,595.0	567.0	15,162.0	2,253.3
		LAND					10,528.0	
12		LOCAL						
		FOREIGN						
		TOTAL						
11 + 12	GRAND TOTAL OF RESIDENT	LOCAL						
		FOREIGN						
		TOTAL			14,595.0	567.0	25,690.0	2,253.3

1983

No.	WORKS		CIVIL WORKS	EQUIP-MENT	COST WITHOUT TAX	TAX	COST WITH TAX	U.L
1	NA KLUA R-1	LOCAL						
		FOREIGN						
		TOTAL						
		LAND						
2	R-2	LOCAL			2,711.8	93.4	2,805.2	263.2
		FOREIGN			160.8		160.8	
		TOTAL			2,872.6	93.4	2,966.0	263.2
		LAND					10,776.0	
3	SUB-TOTAL	LOCAL			2,711.8	93.4	2,805.2	263.2
		FOREIGN			160.8		160.8	
		TOTAL			2,872.6	93.4	2,966.0	263.2
		LAND					10,776.0	
4	TOTAL (CONST. + LAND)	LOCAL						
		FOREIGN						
		TOTAL			2,872.6	93.4	13,742.0	263.2
5		LOCAL						
		FOREIGN						
		TOTAL						
6	PATTAYA R-1	LOCAL						
		FOREIGN						
		TOTAL						
		LAND						
7	R-2	LOCAL			1,762.8	65.7	1,828.5	132.1
		FOREIGN			154.5		154.5	
		TOTAL			1,917.3	65.7	1,983.0	132.1
		LAND					959.0	
8	SUB-TOTAL	LOCAL			1,762.8	65.7	1,828.5	132.1
		FOREIGN			154.5		154.5	
		TOTAL			1,917.3	65.7	1,983.0	132.1
		LAND					959.0	
9	TOTAL (CONST. + LAND)	LOCAL						
		FOREIGN						
		TOTAL			1,917.3	65.7	2,942.0	132.1
10		LOCAL						
		FOREIGN						
		TOTAL						
11	3 + 8 TOTAL OF CONSTRUCTION	LOCAL			4,474.6	159.1	4,633.7	395.3
		FOREIGN			265.3		265.3	
		TOTAL			4,739.9	159.1	4,899.0	395.3
		LAND					11,656.0	
12		LOCAL						
		FOREIGN						
		TOTAL						
11 + 12	GRAND TOTAL OF RESIDENT	LOCAL						
		FOREIGN						
		TOTAL			4,739.9	159.1	16,552.0	395.3

1984

No.	WORKS		CIVIL WORKS	EQUIP-MENT	COST WITHOUT TAX	TAX	COST WITH TAX	U.L
1	NA KLUA R-1	LOCAL						
		FOREIGN						
		TOTAL						
		LAND						
2	R-2	LOCAL			3,934.2	135.6	4,069.8	294.1
		FOREIGN			233.2		233.2	
		TOTAL			4,167.4	135.6	4,303.0	294.1
		LAND					11,311.0	
3	SUB-TOTAL	LOCAL			3,934.2	135.6	4,069.8	294.1
		FOREIGN			233.2		233.2	
		TOTAL			4,167.4	135.6	4,303.0	294.1
		LAND						11,311.0
4	TOTAL (CONST. + LAND)	LOCAL						
		FOREIGN						
		TOTAL			4,167.0	135.6	15,414.0	294.1
5		LOCAL						
		FOREIGN						
		TOTAL						
6	PATTAYA R-1	LOCAL			5,037.2	239.3	5,276.5	548.8
		FOREIGN			647.5		647.5	
		TOTAL			5,684.7	239.3	5,924.0	548.8
		LAND						
7	R-2	LOCAL						
		FOREIGN						
		TOTAL						
		LAND					0	
8	SUB-TOTAL	LOCAL			5,037.2	239.3	5,276.5	548.8
		FOREIGN			647.5		647.5	
		TOTAL			5,684.7	239.3	5,924.0	548.8
		LAND					0	
9	TOTAL (CONST. + LAND)	LOCAL						
		FOREIGN						
		TOTAL			5,684.7	239.3	5,924.0	548.8
10		LOCAL						
		FOREIGN						
		TOTAL						
11	3 + 8 TOTAL OF CONSTRUCTION	LOCAL			8,971.4	374.9	9,346.3	[illegible]
		FOREIGN			880.7		880.7	
		TOTAL			9,852.1	374.9	10,227.0	[illegible]
		LAND					11,311.0	
12		LOCAL						
		FOREIGN						
		TOTAL						
11 + 12	GRAND TOTAL OF RESIDENT	LOCAL						
		FOREIGN						
		TOTAL			9,852.1	374.9	21,538.0	[illegible]

1985

No.	WORKS		CIVIL WORKS	EQUIP-MENT	COST WITHOUT TAX	TAX	COST WITH TAX	U.L
1	NA KLUA R-1	LOCAL						
		FOREIGN						
		TOTAL						
		LAND						
2	R-2	LOCAL						
		FOREIGN						
		TOTAL						
		LAND					0	
3	SUB-TOTAL	LOCAL						
		FOREIGN						
		TOTAL						
		LAND					0	
4	TOTAL (CONST. + LAND)	LOCAL						
		FOREIGN						
		TOTAL						
5		LOCAL						
		FOREIGN						
		TOTAL						
6	PATTAYA R-1	LOCAL						
		FOREIGN						
		TOTAL						
		LAND						
7	R-2	LOCAL			3,443.3	115.6	3,561.9	251.0
		FOREIGN			204.1		204.1	
		TOTAL			3,647.4	115.6	3,766.0	251.0
		LAND					1,929.0	
8	SUB-TOTAL	LOCAL			3,443.3	115.6	3,561.9	251.0
		FOREIGN			204.1		204.1	
		TOTAL			3,647.4	115.6	3,766.0	251.0
		LAND					1,929.0	
9	TOTAL (CONST. + LAND)	LOCAL						
		FOREIGN						
		TOTAL			3,647.4	115.6	5,695.0	251.0
10		LOCAL						
		FOREIGN						
		TOTAL						
11	3 + 8 TOTAL OF CONSTRUCTION	LOCAL			3,443.3	115.6	3,561.9	251.0
		FOREIGN			204.1		204.1	
		TOTAL			3,647.4	115.6	3,766.0	251.0
		LAND					1,929.0	
12		LOCAL						
		FOREIGN						
		TOTAL						
11 + 12	GRAND TOTAL OF RESIDENT	LOCAL						
		FOREIGN						
		TOTAL			3,647.4	115.6	5,695.0	251.0

Table 2.9.5-(1) Operation and Maintenance Cost for Tourism (Pattaya)

Unit : 1,000 Baht

Route No.	Kind	1990	91	92	93	94	95	96	97	98	99	2000
T-1	Pavement					275.6	275.6	275.6	275.6			
	Drainage					86	86	86	86			
	Lighting		278	278	278	278	278					
					137.1	137.1	137.1					
	Planting		5.6	5.6	5.6	5.6	5.6					
	Signal					1.6	1.6	1.6	1.6	1.6	1.6	
	Sign					1.0	1.0	1.0	1.0	1.0	1.0	
	Total		283.4	283.4	420.5	420.5	420.5	782.5	782.5	782.5	782.5	782.5
T-2	Pavement									36	36	
	Drainage					46	46	46	46	17	17	17
	Lighting							44.1	44.1	44.1	44.1	
	Planting											
	Signal									0.2	0.2	0.2
	Sign									0.2	0.2	0.2
	Total					46	46	92.1	92.1	92.1	143.3	143.3
T-3	Pavement						29	29				
	Drainage											
	Lighting		159	159	159	159	159	159				
					47.2	47.2	47.2	47.2				
	Planting		1.0	1.0								
	Parking										58	58
	Sign							0.1	0.1			
	Total		160	160	247.2	247.2	247.2	275.3	275.3	275.3	333.3	
T-4	Pavement									12	12	
	Drainage									1	1	
	Lighting				-							
	Planting				-							
	Signal				-							
	Sign											
	Total									13	13	
T-5	Pavement							50	50	50		
	Drainage							25	25	25		
	Lighting		3	3	3	3	3	3				
					14.6	14.6	14.6	14.6				
	Planting											
	Signal							0.2	0.2	0.2		
	Sign							0.1	0.1	0.1		
	Total		3	3	17.6	17.6	17.6	92.9	92.9	92.9		
T-6	Pavement							7	7	7		
	Drainage							15	15	15		
	Lighting		2	2	2	2	2	2				
					8.8	8.8	8.8	8.8				
	Planting											
	Signal											
	Sign											
	Total		2	2	10.8	10.8	10.8	32.8	32.8			
	Total		283.4	448.4	585.5	696.1	696.1	1,106.1	1,221.5	1,273.6	1,288.6	1,342.0

Table 2.9.5-(2) Operation and Maintenance Cost for Residential Area (Na Klua/Pattaya)

Unit : 1,000 Baht

	Kind	1980	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97
Na Klua A	Pavement							59	84		190	206	206	→					
	Drainage							61	85	127	139	156		→					
	Lighting		7	10	15	16	18	18 12		25	27	30		→					
	Planting																		
	Signal								0.1	0.8	0.8	1.0		→					
	Sign							0.11	0.19	0.52	0.56	0.58		→					
	Total		7	10	15	16	18	150.11	186.3	319.3	357.4	393.6	393.6	→					
Na Klua B	Pavement							21	21	21	21	21	28	105	105	→			
	Drainage							29	29	29	29	29 9	29 9	→					
	Lighting		3	3	3	3	4	6 4	6 6	6 4	6 4	6 2	6 2	→					
	Planting																		
	Signal																		
	Sign							0.08	0.08	0.08	0.08	0.08 0.03	0.08 0.03	→					
	Total		3	3	3	3	4	60.1	60.1	60.1	60.1	67.1	74.1	74.1	→				
Na Klua (A+B)	Total		10	13	18	19	22	210.2	246.4	379.4	417.5	460.7	467.7	→					
Pattaya	Pavement							27	33	50	60	103	117	→					
	Drainage							45	55	84	96	118	141	→					
	Lighting		5	6	9	10	12	15 9	11	16	18	22	26	→					
	Planting																		
	Signal											0.3	→						
	Sign							0.09	0.11	0.16	0.17	0.27	0.31	→					
	Total		5	6	9	10	12	96.1	114.1	150.2	174.2	200.7	284.7	284.7	→				
	Grand Total		15	19	27	29	34	306.3	360.5	529.6	591.7	661.4	752.4	752.4	→				