

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

**MUNICIPALITY OF PHNOM PENH
THE KINGDOM OF CAMBODIA**

**THE STUDY
ON
THE TRANSPORT MASTER PLAN
OF
THE PHNOM PENH METROPOLITAN AREA
IN
THE KINGDOM OF CAMBODIA**

FINAL REPORT

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Preface

Phnom Penh City has been accelerated the growth of the economy and it is expected that the number of cars will increase rapidly in future along with such remarkable economic growth. The annual growth rate of car possessions in 15 years from 2000 to 2015 is estimated very high, that is, 8.5% in four-wheel car and 5.7 % in motor cycle.

In proportion to the rapid growth of car possessions, road traffic volume will increase sharply, and this will cause serious traffic problems in the city. In short term, deterioration of traffic environment is prospected, which includes frequent traffic congestion, delay and travel time increase, traffic accident increase and frequent occurrence of the serious accidents.

Government of Phnom Penh City is now at work on a mid-term plan to alleviate such condition. They have an urban transportation development plan including constructing new roads and introducing public transportation and they are also going to promote improving traffic facilities in the plan. However, the plan cannot deal skillfully with present condition or short-range traffic problems since the improvement needs much amount of financial resources and long period of time for construction.

It is surely important to carry out traffic management which is possible in short-term and at low cost in order to alleviate the various road problems that Phnom Penh City is now facing with.

Thus, this report deals with preferable counter measures related to the traffic management in the city based on the existing and predicted situations of the roads and traffic s.

ATTACHED REPORT 1
TRAFFIC MANAGEMENT AND CONTROL

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Part 1: Traffic Management And Control

Part 1 discusses various problems related to traffic control and management in Phnom Penh City and presents the setting of basic issues for formulating countermeasures that can be effectively and promptly applied to improve or prevent the further deterioration of traffic environment including traffic accident.

1.1 Traffic Management System and Administration

Traffic management in the city of Phnom Penh is administered by three major government agencies;

- Road Transport Department, Ministry of Public Works and Transport,
- Department of Public Works and Transport, Municipality of Phnom Penh,
- Municipal Traffic Police of Phnom Penh.

(1) Road Transport Department, MPWT

This department has the following roles and responsibilities (based on and authorized by the PRAKAS or Ministerial Declaration No.190, April 05, 1999)

- Motor Vehicle Registration in Cambodia,
- Traffic Law Education and Issuance of Driving Licenses,
- Technical Inspection of Motor Vehicles,
- Road Transport Operation,
- Statistical Research and Publicity.

In addition to the above, the Road Transport Department also participates actively in the drafting of law, agreements or instructions, etc related to road transport and submits them for approval by the Minister. The department has established a computer center since 1996 for producing the computerized driving licenses and registration cards. The computerized motor vehicle technical inspection system was introduced in 2000.

Figure 1.1.1 shows the organization chart of the Road Transport Department in the Ministry of Public Works and Transport.

(2) Department of Public Works and Transport, Municipality of Phnom Penh

This department is basically responsible for the construction and improvement of roads and intersections within the capital city. It is also responsible for the planning, design, implementation, operation as well as maintenance of all roads and related facilities in the city.

Within the department, the public works office takes charge of the infrastructure related works such as roads, bridges while the road transport office is responsible for road traffic management.

Figure 1.1.2 shows the organization chart of the Department of Public Works and Transport, Municipality of Phnom Penh.

(3) Municipal Traffic Police

The Municipal Traffic Police Agency is organized into a central headquarters and seven (7) district police offices within the city.

These offices have the following responsibilities:

- General administration of the police office,
- Gathering, conveying and propagate information related to social security, crime, government rules, etc.
- Accident investigations and record keeping,
- Intervention of various reported disputes or conflicts,
- Traffic control and enforcement.

Figure 1.1.3 shows the organization chart of the Municipal Traffic Police Agency.

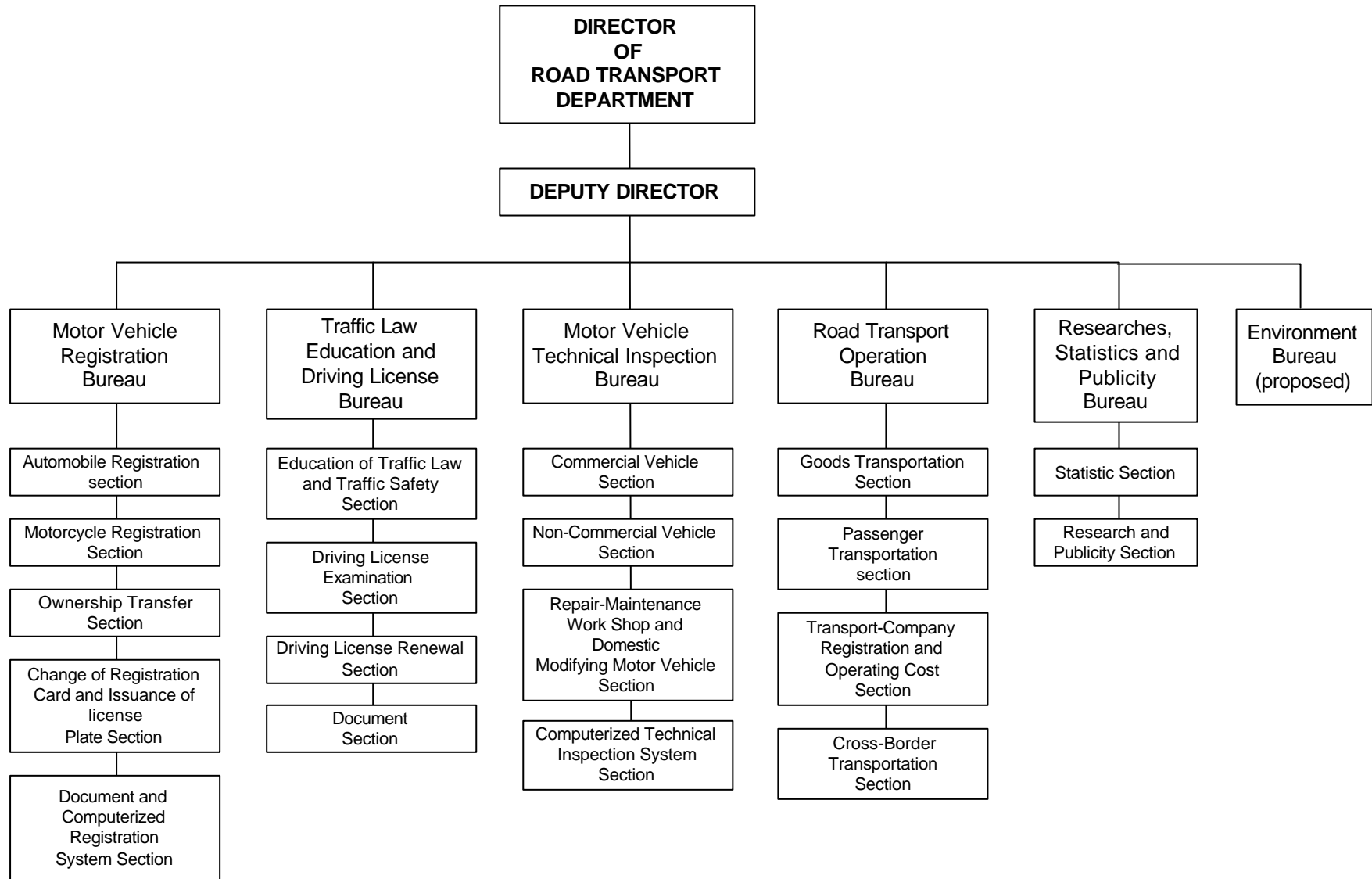


Figure 1.1.1: Organization Chart of Road Transport Department, Ministry of Public Works and Transport

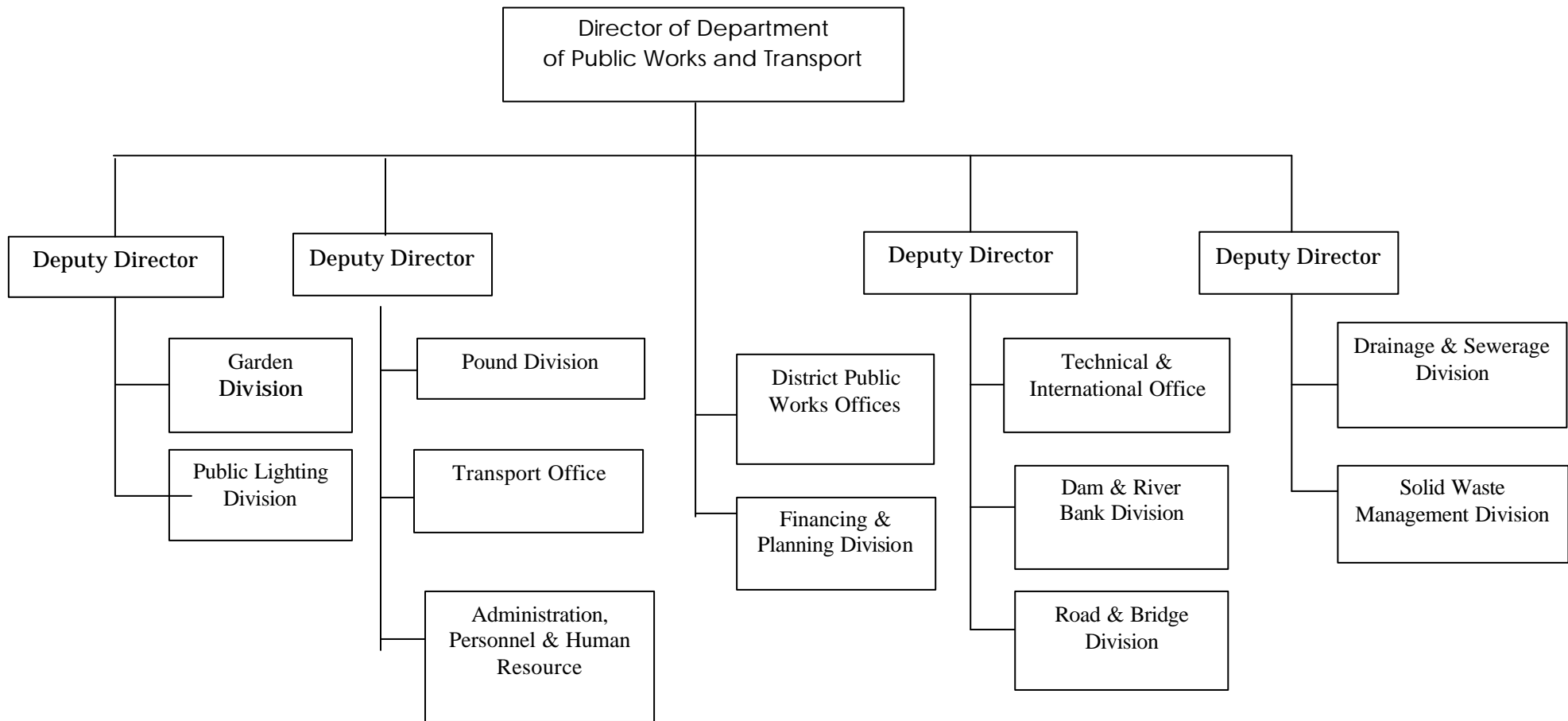


Figure 1.1.2: Organization Chart of Department of Public Works and Transport, Municipality of Phnom Penh

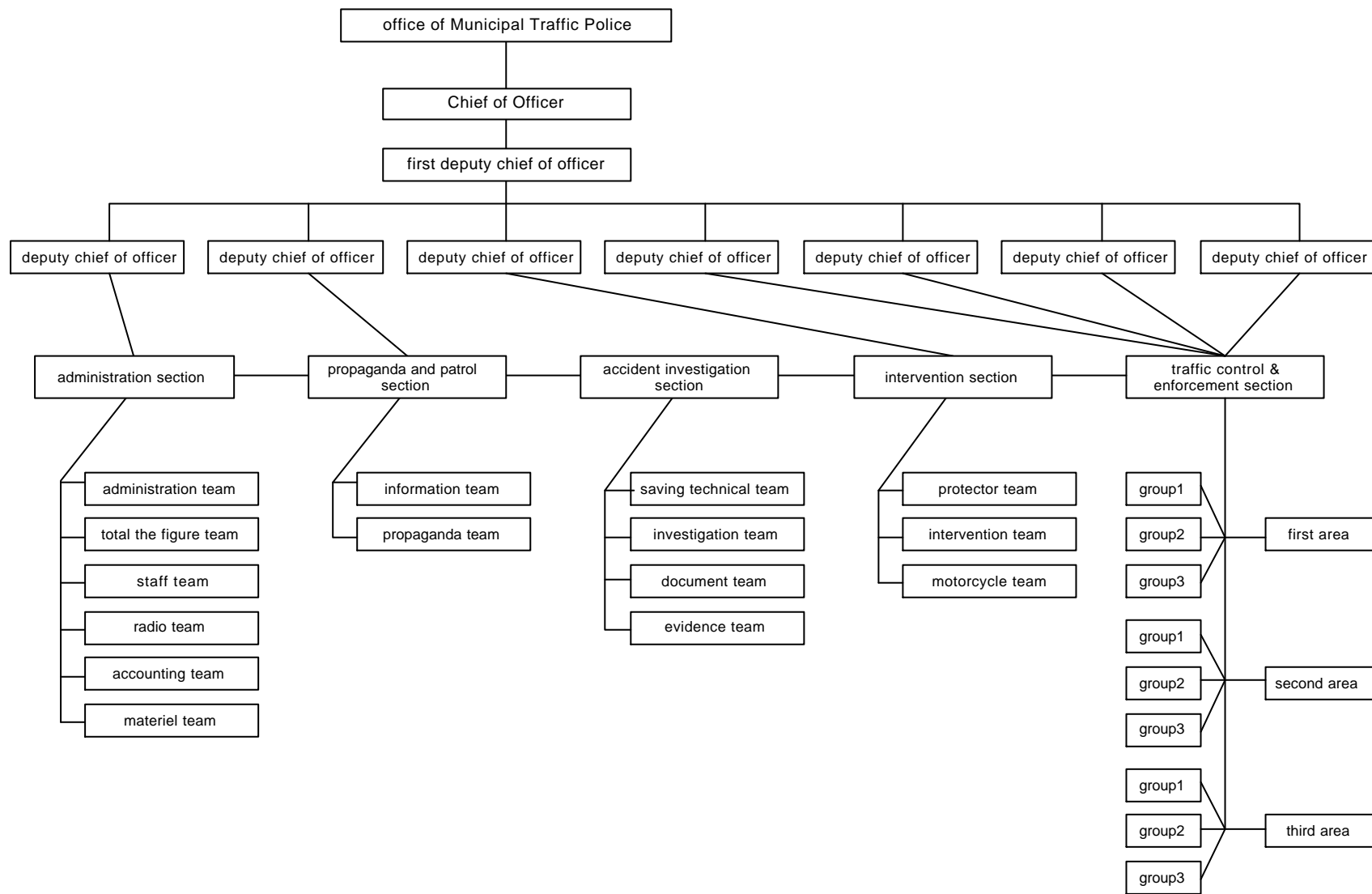


Figure 1.1.3: Organization Chart of Phnom Penh Traffic Police

(4) Agencies Involved in Traffic Management in Phnom Penh

The following Table 1.1.1 is a list of government agencies and their respective responsibilities in traffic management.

Table 1.1.1: Agencies Related to Traffic Management in Phnom Penh

No.	Category	Responsibility	Agency
1.	Traffic Operation And Control	Road/intersection design standards	Public Works General Directorate, Ministry of PWT.
		Road/intersection improvements	Dept.of P.W.T., Municipality Phnom Penh
		Traffic regulation and control	Dept.of P.W.T., Municipality Phnom Penh
		Traffic signal	Dept.of PWT, Municipality Phnom Penh
		Pavement markings/ traffic signs	Dept.of P.W.T., Municipality Phnom Penh
2.	Traffic Safety Facilities	Pedestrian overhead bridges	Dept.of P.W.T., Municipality Phnom Penh
		Pedestrian protective barriers	Dept.of P.W.T., Municipality Phnom Penh
		Street lighting	Dept.of PWT, Municipality Phnom Penh
3.	Planting	Street planting & maintenance	Dept.of PWT, Municipality Phnom Penh
4.	Drivers / Vehicles Management	Motor vehicle registration system <ul style="list-style-type: none"> • Motor vehicles (except M/C) • Motorcycles 	Ministry of PWT Dept.of PWT., Municipality Phnom Penh.
		Driving licensing system All motor vehicle drivers	Ministry of PWT.
		Motor vehicles technical inspection system (all motor vehicles)	Ministry of PWT.
5.	Traffic Control/ Enforcement and Accident Investigation/ Treatment	Traffic rules violations	Municipal Traffic Police
		Traffic control on site	Municipal Traffic Police
		Accident investigation	Municipal Traffic Police

Examining this table and the share of responsibilities, the following major observations can be made:

- 1) While the actual traffic operation, control, provision of traffic safety facilities on site are the responsibilities of the Dept. of PWT in the Municipality of Phnom Penh, the setting of design standards of which is the job of the Ministry of Public Works and Transport.
- 2) While the registration of vehicles and licensing of drivers as well as technical inspection of vehicles are all the tasks of the Ministry of Public Works and Transport, the registration of motorcycles alone is the work of the Dept. of PWT, in the Municipality of Phnom Penh.
- 3) Traffic enforcement, control on site, as well as traffic accident investigation and processing are all the responsibilities of the Municipal Traffic Police Agency. This agency also participated actively and provided the needed cooperation on traffic safety education to the Dept. of PWT, in the Municipality of Phnom Penh.

1.2 Traffic Rules and Regulations

1.2.1 Land Traffic Law

The Land Traffic Law of Cambodia was legally approved and passed by the National Assembly of Territory of Cambodia on August 17, 1991 during the 21st Meeting of the First Legislature.

With the passing of this basic law on land transport, all citizens are now required by law to observe the rules and regulations on the use of public roads. Besides, all motor vehicle drivers are required to obey the various traffic rules and safety regulations when driving their vehicles on public roads.

The approved Land Traffic Law contains the following coverage:

- Chapter 1: General Provisions (Articles 1-6)
- Chapter 2: Rules governing the movement of pedestrians, animal carts and riders. (Articles 7-9)
- Chapter 3: Drivers' Responsibilities (Article 10-31)
- Chapter 4: Technical Specification and Requirements of Motor Vehicles (Articles 32-38)
- Chapter 5: Enforcement of traffic rules and control of traffic by Traffic Police (Articles 39-45)
- Chapter 6: Penalties under the Law for Violations of Traffic Rules (Articles 46-61)
- Chapter 7: Law overwriting all other existing regulations (Article 62)

1.2.2 Standard Uniform Traffic Control Devices

Presently, there is a traffic sign installation standard legally authorized in 1996 in Cambodia. The Ministry of Public Works and Transport however is currently preparing a draft for governing the important other traffic control devices.

- A standard on the contents and design of traffic signs (regulatory, warning and information/ guidance signs) has been approved by the Minister in 1996. Subsequently, a draft on the uniformity of installation and location is currently under preparation,
- Installation standards of pavement markings are also under preparation,
- Installation standards for traffic signals shall be prepared after the above two items are finished and approved.

1.3 Present Traffic Control Facilities and Measures

1.3.1 Existing Traffic Control and Operation

In Phnom Penh, several types of traffic control measures are already implemented especially in the city center. With these measures, traffic flow and operation have since improved. However, in view of the anticipated increase in traffic demand accompanied by the continuous economic expansion in the near future, these traffic control facilities or measures must be expanded as well as further upgraded.

Presently, the types of traffic control measures implemented include the followings:

- 1) Control measures along road sections
 - a. one-way operation,
 - b. entry restrictions by vehicle types,
 - c. toll collection control,
 - d. On-street parking control
- 2) Control measures at intersections
 - a. roundabout control,
 - b. signal control,
 - c. left-turn prohibition.
- 3) Area Restriction for trucks
 - a. entry restriction for trucks to designated areas.

1.3.2 Existing Traffic Control Measures and Locations

- (1) Control measures at intersections

- 1) Roundabout Control

There are ten (10) roundabouts in the center of Phnom Penh. These roundabouts were designed and constructed way back during the French colonial era as part of the road network plan.

The locations of these roundabouts are shown in Figure 1.3.1.

Most of these roundabouts are now facing traffic congestion in the morning and evening peak hours, especially the three roundabouts along Blvd. Samdech Monired, and the roundabout at Blvd. Monivong with National Routes No. 1 and No. 2.

- 2) Signal Control

Traffic signal control is introduced at busy intersections in the center of the city, while intersections in the suburban area are not signalized yet. Twenty (20) intersections in the city center within the ring road of Blvd. Mao Tse Toung are signalized as of May 2000.

These intersections are located along main arterial streets:

- Radical roads
 - Blvd. Monivong ----- 7 intersections
 - Blvd. Norodom ----- 4 intersections
 - Rue Kampuchea Krom ---- 4 intersections
(one of which is previously mentioned)
- Ring roads
 - Blvd. Sihanouk ----- 5 intersections
(two of which are previously mentioned)
 - Blvd. Mao Tse Toung ---- 6 intersections
(three of which are previously mentioned)

The locations of these signalized intersections can also be seen in Figure 1.3.1.

- 3) Left turning prohibition at intersections

Left turning prohibition control is enforced at three (3) intersections along Blvd. Monivong to increase the intersection capacity, reduce congestion and thus enhance traffic safety. The location of intersections with such directional prohibition control can be seen in Figure 1.3.1.

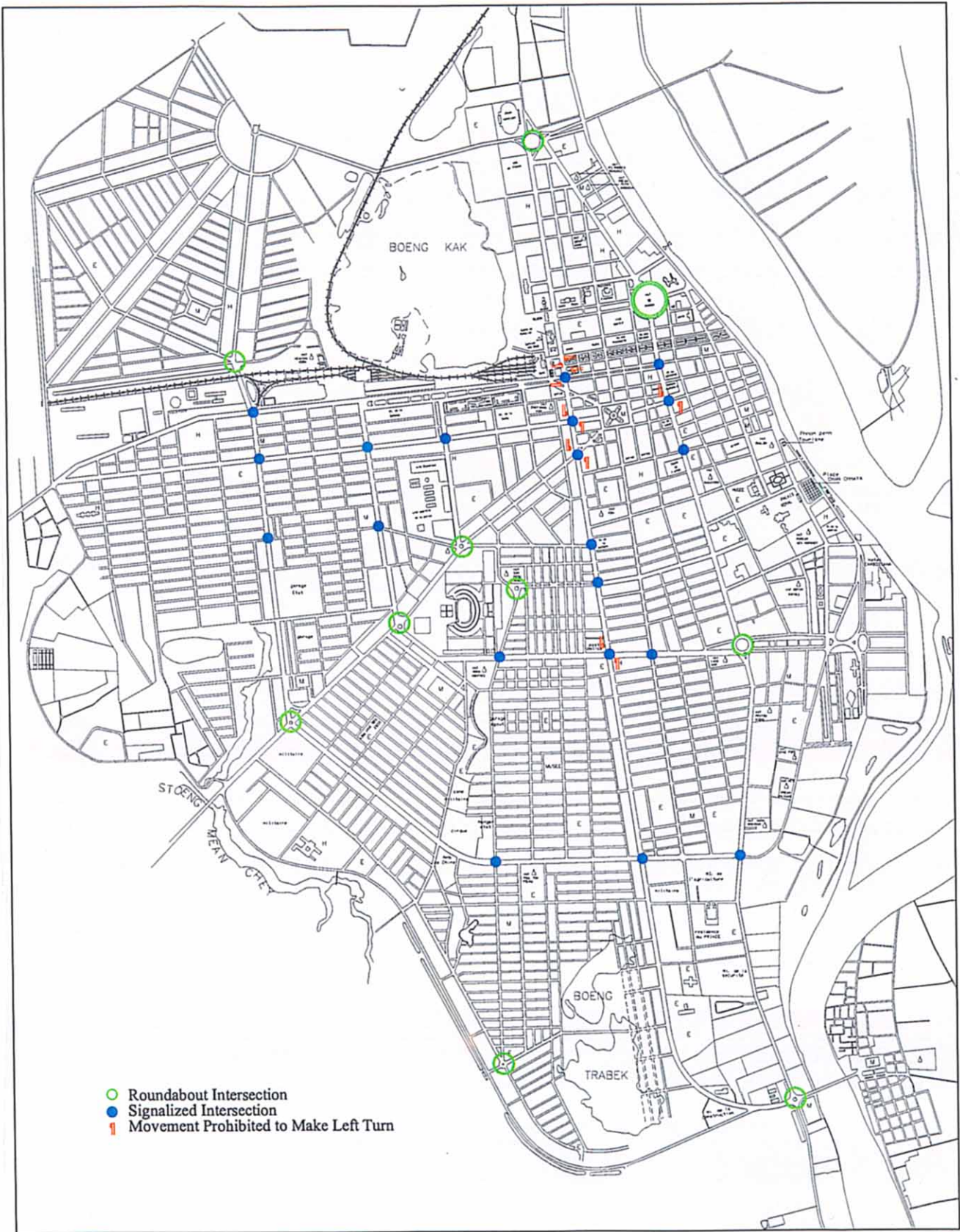


Figure 1.3.1: Locations of Roundabout, Signalized Intersection and Movements with No Left Turn

This prohibition is controlled using only a regulatory sign (a left turning prohibition sign) installed at the right curb of the approach road. Due to the poor choice of its location, such sign is not very noticeable to on-coming vehicles. There is no other regulatory signs or control device such as pavement markings to warn drivers who might have failed to notice the turning prohibition sign.

(2) Control measures along road sections

1) One-way operation

One-way operation control is applied to some roads in the center of the city. The one-way streets are either a multi-lane divided road with a wide median planted with trees or turf, or paved as foot path and adorned with decoration lighting; or simple undivided two lane roads function in pairs.

Figure 1.3.2 shows the location of these streets with the one-way operation in the city. Traffic signs are installed to indicate this traffic control measure in the form of 'NO ENTRY' sign as well as 'ONE WAY' signs at both ends of the designated street. The 'ONE WAY' signs are also posted on the cross roads to the designated street.

2) Prohibition by vehicle types

a. Passenger car only control

Phnom Penh has so many different types of vehicles on the roads that confusions and congestion inevitably occurred. To ensure smooth traffic flow on certain streets, only certain types of vehicles are allowed to travel on them. Blvd.Norodom is an example. On this street, only passenger cars are allowed while the others (motorcycles, trucks, buses, bicycles, cyclos) are prohibited. Traffic signs indicating 'PASSENGER CAR ONLY' are posted to inform road users of this traffic control measure. Location of this control measure is also indicated in Figure 1.3.3.

b. Bus and truck prohibition control

Buses and trucks are prohibited from passing through the eastern section of Blvd. Sihanouk and Sihanouk and the entire of Blvd. Mao Tseu Toung.

3) Toll collection

There are 4 roads where users have to pay charges for passing through them.

These routes are:

- Blvd. Veng Sreng (between Chom Chao Junction Street and Prey Sor Road)
- Blvd. Road No. 598 (between Russia Road and Road No 5)
- Blvd. Yothapol Khemarak Phoumin (271) (between the cross road of Tep Phan and Blvd. Monivong)
- R. Kob Srov (between RN 4 and RN 5)

The locations of the roads are shown in Figure 1.3.4 and the passing fees are in Table 1.3.1

Table 1.3.1: Amount of Fee for Using the Roads

Type of Vehicle Name of toll Road	Truck two Vehicle	Truck and Dump truck	Pick Up	Minibus and Van
Venn Sreng Highway (between Chom Choa junction Street and Prey Sor Road)	5000 Riels /once	3500 Riels /once	1500 Riels /once	1500 Riels /once
Blvd. Road No. 598 (between Russia Road and Roa No. 5)	8000 Riels /once	5500 Riels /once	2000 Riels /once	3000 Riels /once
Blvd. Yothapol Kamarak Phoumin (271) (between the cross road of Tep Phan and Blvd. Monovong)	20000 Riels /day	10000 Riels /day	-	-
R.Kob Srov (between RN 4 & RN 5)	20000 Riels /day	10000 Riels /day	-	-

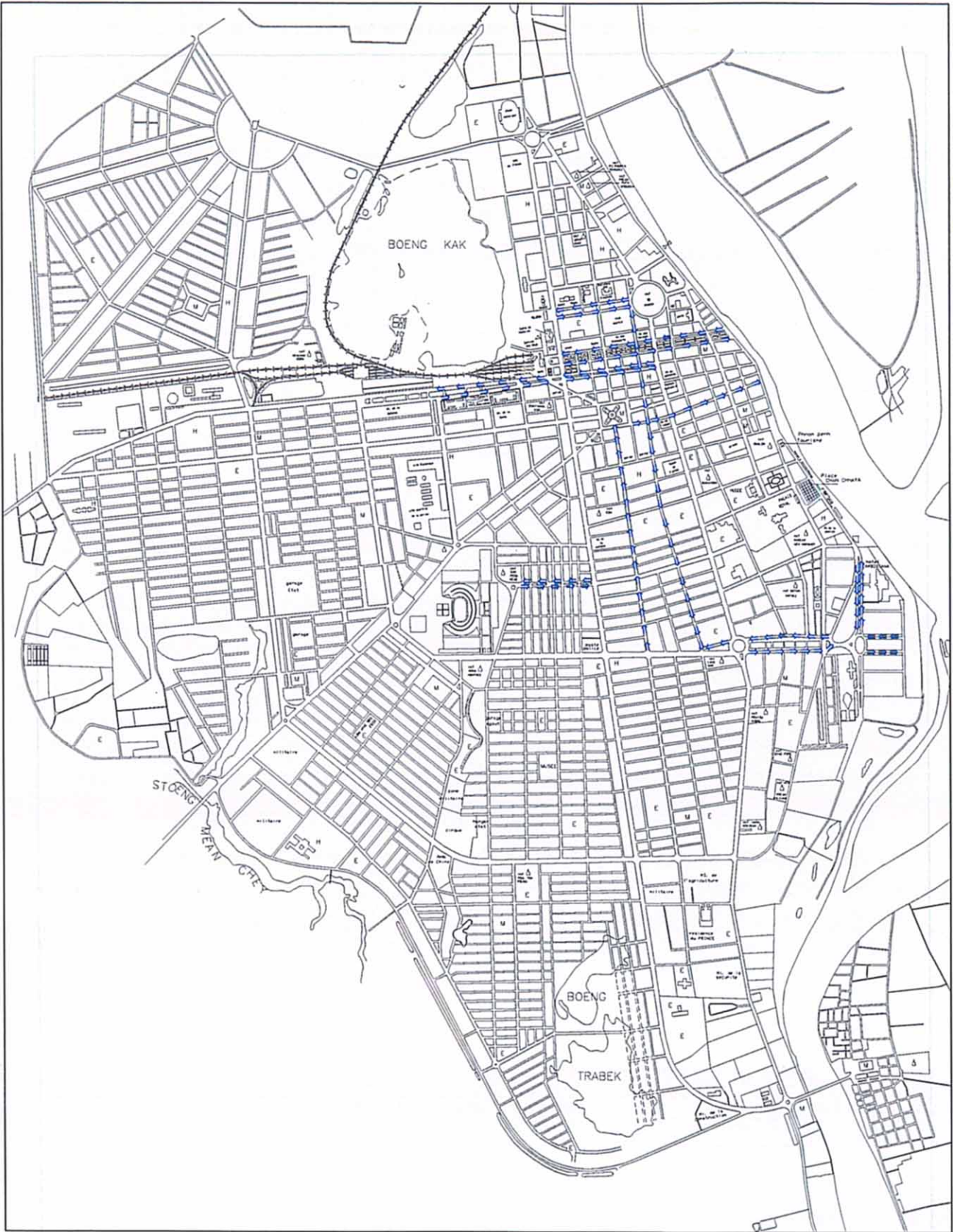


Figure 1.3.2: Locations of Streets with One-Way Operation

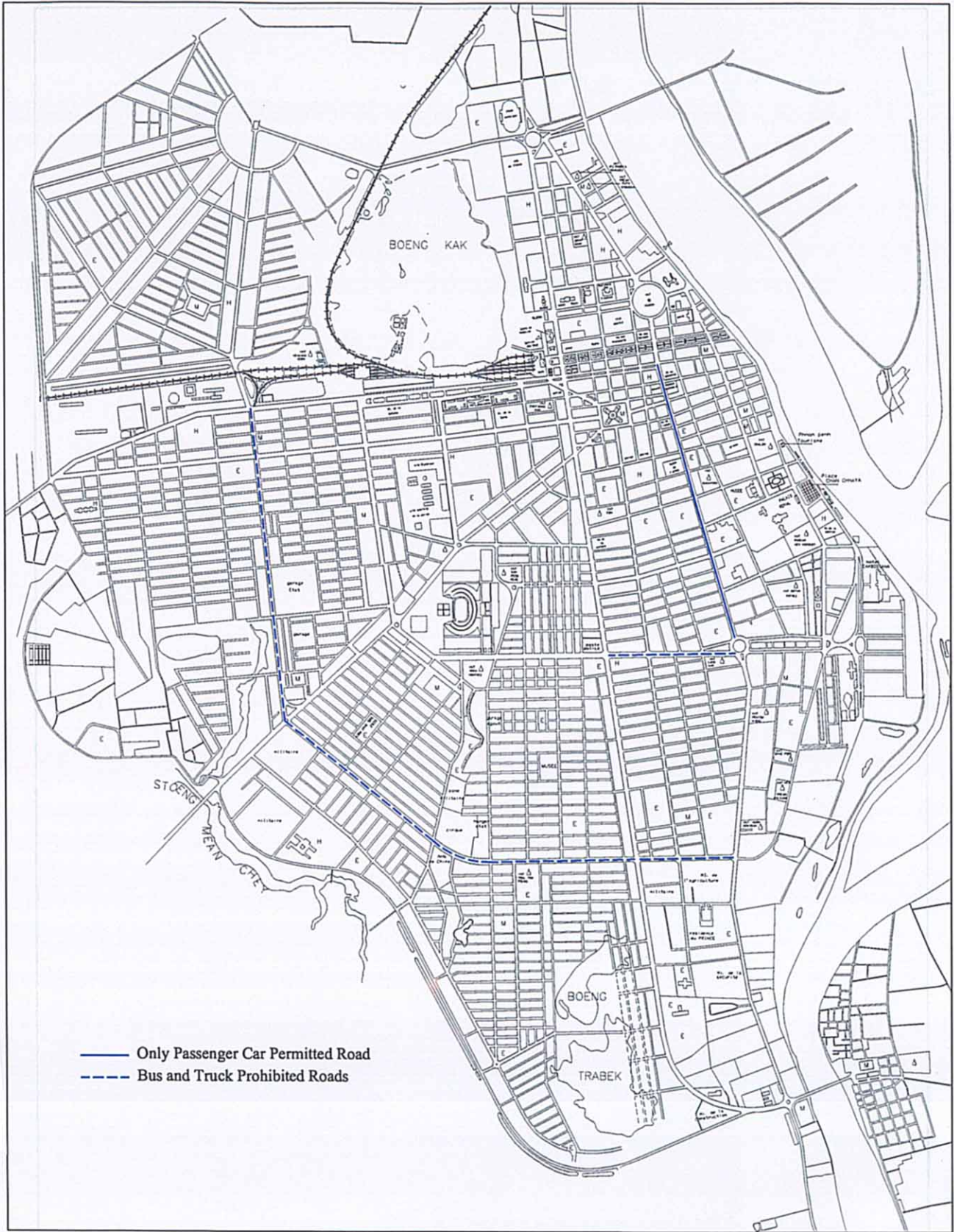


Figure 1.3.3: Locations of Prohibition by Vehicle Types



Figure 1.3.4: Locations of Toll Roads