

THE KINGDOM OF CAMBODIA
MINISTRY OF PUBLIC WORKS AND TRANSPORT

THE FEASIBILITY STUDY
ON
CONSTRUCTION OF THE MEKONG BRIDGE
IN
THE KINGDOM OF CAMBODIA

FINAL REPORT

VOLUME 3: APPENDIX

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JULY 1996

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1. The first part of the document discusses the importance of understanding the underlying structure of data. It emphasizes that simply looking at the surface-level information is not enough; one must delve into the relationships and patterns that govern the data. This is particularly true in the context of machine learning, where the model's ability to generalize from training data to new, unseen data is crucial. The document suggests that a deep understanding of the data's structure can lead to more accurate and robust models.

2. The second part of the document explores the concept of feature engineering. It argues that the quality of the features used in a model is often more important than the choice of the model itself. Feature engineering involves selecting, creating, and transforming features to better represent the underlying data. This process can be both art and science, requiring a combination of domain knowledge and statistical techniques. The document provides several examples of how feature engineering can improve model performance.

3. The third part of the document discusses the importance of model evaluation. It stresses that a model's performance should be evaluated using a variety of metrics and on a diverse set of data. This helps to ensure that the model is not overfitting to the training data and is capable of generalizing to new data. The document also discusses the importance of understanding the limitations of different models and the impact of hyperparameters on model performance.

4. The fourth part of the document explores the concept of model interpretability. It argues that while complex models can often achieve higher accuracy, they are often difficult to interpret. This can be a problem in many applications, where understanding the model's reasoning is essential. The document discusses various techniques for making models more interpretable, such as using simpler models or applying post-hoc explanation methods.

5. The fifth part of the document discusses the importance of data quality. It emphasizes that even the most sophisticated model is only as good as the data it is trained on. This means that data must be carefully cleaned, pre-processed, and validated before it is used for training. The document also discusses the importance of understanding the sources of bias and error in the data and how to mitigate their effects.

6. The sixth part of the document discusses the importance of model deployment. It stresses that a model's performance is only as good as its ability to be deployed in a real-world setting. This involves considering factors such as the model's size, the availability of resources, and the need for ongoing monitoring and maintenance. The document provides several tips for ensuring a smooth deployment process.

7. The seventh part of the document discusses the importance of model documentation. It argues that keeping a detailed record of the model's development process is essential for reproducibility and collaboration. This includes documenting the data sources, the feature engineering process, the model selection process, and the evaluation results. The document also discusses the importance of keeping the documentation up-to-date as the model evolves.

8. The eighth part of the document discusses the importance of model security. It emphasizes that models can be vulnerable to attacks, such as adversarial examples or data poisoning. This means that models must be designed with security in mind, and appropriate measures must be taken to protect them from such attacks. The document discusses several techniques for improving model security.

9. The ninth part of the document discusses the importance of model ethics. It argues that models can have a significant impact on society, and it is important to consider the ethical implications of their use. This includes issues such as bias, discrimination, and privacy. The document discusses several ways to address these ethical concerns and ensure that models are used responsibly.

10. The tenth part of the document discusses the importance of model transparency. It argues that models should be designed to be transparent, allowing users to understand how they work and how they make decisions. This is particularly important in high-stakes applications, where the model's decisions can have significant consequences. The document discusses several techniques for making models more transparent.

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Note

Following exchange rates are applied in this report :

US\$1.00=Yen 104.85=Baht25.19

As of February 1966

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APPENDIX 1

INTRODUCTION

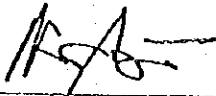
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Appendix 1.1

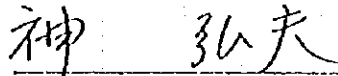
Scope of Work

SCOPE OF WORK
FOR
THE FEASIBILITY STUDY ON CONSTRUCTION OF MEKONG BRIDGE
IN
THE KINGDOM OF CAMBODIA
AGREED UPON BETWEEN
MINISTRY OF PUBLIC WORKS AND TRANSPORT
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

PHNOM PENH DECEMBER 7, 1994



H.E. MR. ING KIETH
DEPUTY PRIME MINISTER,
MINISTER OF PUBLIC WORKS AND TRANSPORT



MR. HIROO JIN
LEADER,
PREPARATORY STUDY TEAM,
JAPAN INTERNATIONAL
COOPERATION AGENCY

I. INTRODUCTION

In response to the request of the Royal Government of Cambodia (hereinafter referred to as "Cambodia"), the Government of Japan decided to conduct the Feasibility Study on Construction of Mekong Bridge (hereinafter referred to as "the Study") in accordance with the relevant laws and regulations in force in Japan.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programmes of the Government of Japan, will undertake the Study in close cooperation with the authorities concerned of the Royal Government of Cambodia.

The present document sets forth the scope of work with regard to the Study.

II. OBJECTIVES OF THE STUDY

The objective of the Study is to conduct the feasibility study on the construction of Mekong Bridge including its approaches.

III. STUDY AREA

The study shall cover the areas as follows;

- (1) NEAK LOEUNG
- (2) PREK TAMAK
- (3) KOMPONG CHAM

IV. SCOPE OF THE STUDY

In order to achieve the objective mentioned above, the Study shall cover the following items:

1. Data collection and analysis
 - (1) Socio - Economic Data
 - (2) Traffic and transport Data
 - (3) Soil and Geological Data
 - (4) Climatic and Seismic Data
 - (5) Hydrological Data
 - (6) Topographic Data
 - (7) Development Plans
 - (8) Others



2. Site Surveys
 - (1) Traffic survey
 - (2) Topographic survey
 - (3) Soil and geological survey
 - (4) Hydrological survey
 - (5) Land use survey
 - (6) Other necessary surveys
3. Traffic Forecast
 - (1) Forecast of future socio - economic framework
 - (2) Forecast of future traffic demand
4. Preliminary Comparative Study of Alternatives at 3 Locations
 - (1) Routes
 - (2) Location
5. Evaluation of Alternatives in terms of Above Mentioned Aspects
6. Comparative Study of Alternatives at Location(s)
 - (1) Cost aspect
 - (2) Function aspect
 - (3) Engineering aspect
 - (4) Traffic accident aspect
 - (5) Construction aspect
 - (6) Maintenance Cost aspect
 - (7) View aspect
7. Evaluation of Alternatives in terms of Above Mentioned Aspects
8. Preliminary Design
 - (1) Design Criteria
 - (2) Bridge Design
 - (3) Approach Roads Design
 - (4) Quantity Estimate
9. Planning and Scheduling of Construction Works
10. Maintenance Programme
11. Cost Estimate



VII. UNDERTAKING OF THE ROYAL GOVERNMENT OF CAMBODIA

1. To facilitate smooth conduct of the Study, the Royal Government of Cambodia shall take necessary measures:

- (1) to secure the safety of the Japanese Study team ,
- (2) to permit the members of the Japanese Study team to enter, leave and sojourn in Cambodia for the duration of their assignment therein, and exempt them from foreign registration requirements and consular fees,
- (3) to exempt the members of the Japanese Study team from taxes, duties, fees, and other charges on equipment, machinery and other materials brought into Cambodia and out for the conduct of the Study,
- (4) to exempt the members of the Japanese Study team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Japanese Study team for the services in connection with the implementation of the Study,
- (5) to provide necessary facilities to the Japanese Study team for remittance as well as utilization of the funds introduced into Cambodia from Japan in connection with the implementation of the Study,
- (6) to secure permission for entry into private properties or restricted areas for the implementation of the Study,
- (7) to secure permission for the Japanese Study team to take all data and documents including maps and photographs related to the Study out of Cambodia to Japan, and
- (8) to provide medical services as needed. Its expenses will be chargeable on members of the Japanese Study team.

2. The Royal Government of Cambodia shall bear claims, if any arises, against the members of the Japanese Study team resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful



misconduct on the part of the members of the Japanese Study team.

3. Ministry of Public Works and Transport (hereinafter referred to as "MPWT") shall act as counterpart agency to the Japanese Study team and also as coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.

4. MPWT shall, at its own expense, provide the Japanese Study team with the following, in cooperation with other organizations concerned:

- (1) available data and information related to the Study,
- (2) counterpart personnel,
- (3) suitable office space with necessary office equipment in Phnom Penh,
- (4) credentials or identification cards.

VIII. UNDERTAKING OF JICA

For the implementation of the Study, JICA shall take the following measures:

1. to dispatch, at its own expense, the study team to Cambodia,
2. to pursue technology transfer to the Cambodian counterpart personnel in the course of the Study.

IX. OTHERS

JICA and MPWT, shall consult with each other in respect of any matter that may arise from or in connection with the Study.





TENTATIVE STUDY SCHEDULE

APPENDIX - I

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
WORK IN CAMBODIA																
WORK IN JAPAN																
Report Presentation	IC/R			P/R			IT/R(I)		IT/R(I)	IT/R(II)				DF/R		F/R

IC/R: Inception Report
P/R : Progress Report
IT/R(I): Interim Report
IT/R(II): Interim Report
DF/R: Draft Final Report
F/R : Final Report

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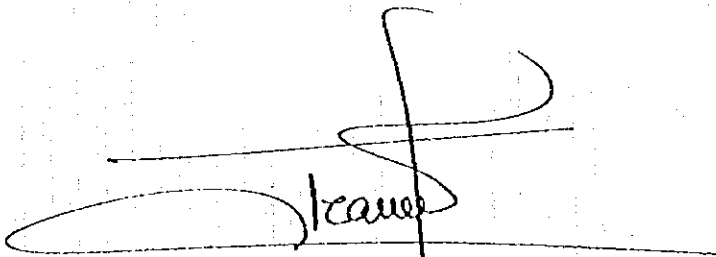
Appendix 1.2

Minutes of Meeting

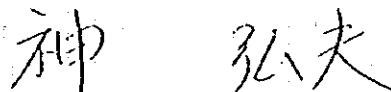
MINUTES OF MEETING
ON
THE INCEPTION REPORT
FOR
THE FEASIBILITY STUDY
ON
THE MEKONG RIVER BRIDGE
IN
THE KINGDOM OF CAMBODIA

AGREED UPON BETWEEN
MINISTRY OF PUBLIC WORKS AND TRANSPORT
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

PHNOM PENH, APRIL 6, 1995



H.E. MR. TRAM V TEK
SECRETARY OF STATE FOR
H.E. MR. ING KIETH
DEPUTY PRIMINISTER,
MINISTRY OF PUBLIC WORKS
AND TRANSPORT



MR. HIROO JIN
LEADER OF ADVISORY TEAM
JAPAN INTERNATIONAL
COOPERATION AGENCY

MINUTES OF MEETING

In accordance with the Scope of Works (hereinafter referred to "S/W") agreed upon on December 6th, 1994 between Japan International Cooperation Agency (hereinafter refer to as "JICA") and the Ministry of Public Works and Transport (hereinafter to "MPWT"), an Inception report for the Feasibility Study on Mekong River Bridge in the Kingdom of Cambodia (hereinafter refer to as "The Study") was submitted by Study Team to the Deputy Priminister, MPWT on April 6, 1995, wherein Mr. Hiroo Jin, Leader of Advisory Team, along with other members of the Study Team conducted a briefing of the Report during the 1st Steering Committee Meeting held on the same day, April 6, 1995.

After a series of discussions between the Study Team and the Steering Committee on the Mekong River Bridge, the following subjects were confirmed and agreed upon by both the Steering Committee and Study Team.

1. Submission of the Inception Report

The Study Team submitted 30 copies of the Inception Report on April 6, 1995 to MPWT in accordance with S/W for study and approval. MPWT acknowledged the receipt of the report and agreed to contents herein.

2. Fundamental Items for Design of Bridge and Road

As for design criteria for bridge the Japanese Standard will be applied to this Project. Fundamental design conditions except navigation clearance are as follows:

Number of lane : two lanes
Bridge width : 13.5 m

Typical cross section is attached in Annex.

These conditions are the almost same as Chroy Chang Va Bridge.

Navigation clearance will be secured by 37.5m height at Neak Loeng site, by 15m height at Prek Tamak and by 15m height at Kompong Cham site for this Study, taking the discussion with the Preparatory Study Team into consideration.

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As for the fundamental design of road, following items will be adopted :

Number of lane : two lanes
Road width : 13.5 m

Typical cross section is attached in Annex.

These conditions are the almost same as Route 6A except total width.

3. Security Problem

Upon request by the Study Team, MPWT will dispatch their personnel accompanying with member of the Study Team and give necessary information to the Study Team through the Ministry of Defense or Interior in order to obtain security during the site survey. These security will include information and protection to the Study Team about mine and unexplored ordnance as well.

4. The Cambodian side strongly requested the Japanese side that this Project be implemented under the Japanese grant aid. The Japanese side promised to convey the request to the Government of Japan.

5. In comply with the Minutes of Meeting on the scope of work, signed December 7, 1994, in which the Cambodian side requested the Japanese side to receive the Cambodian counterparts training in Japan, JICA has already been ready to accept one Cambodian counterpart. The Japanese side requested the Cambodian side to identify this counterpart as soon as possible.

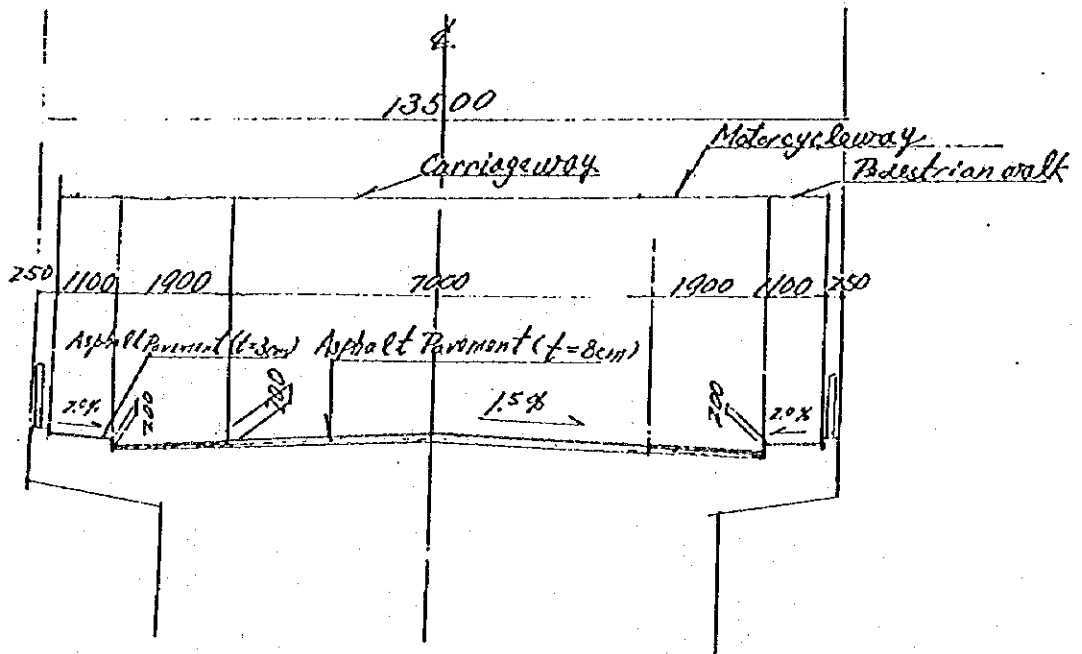
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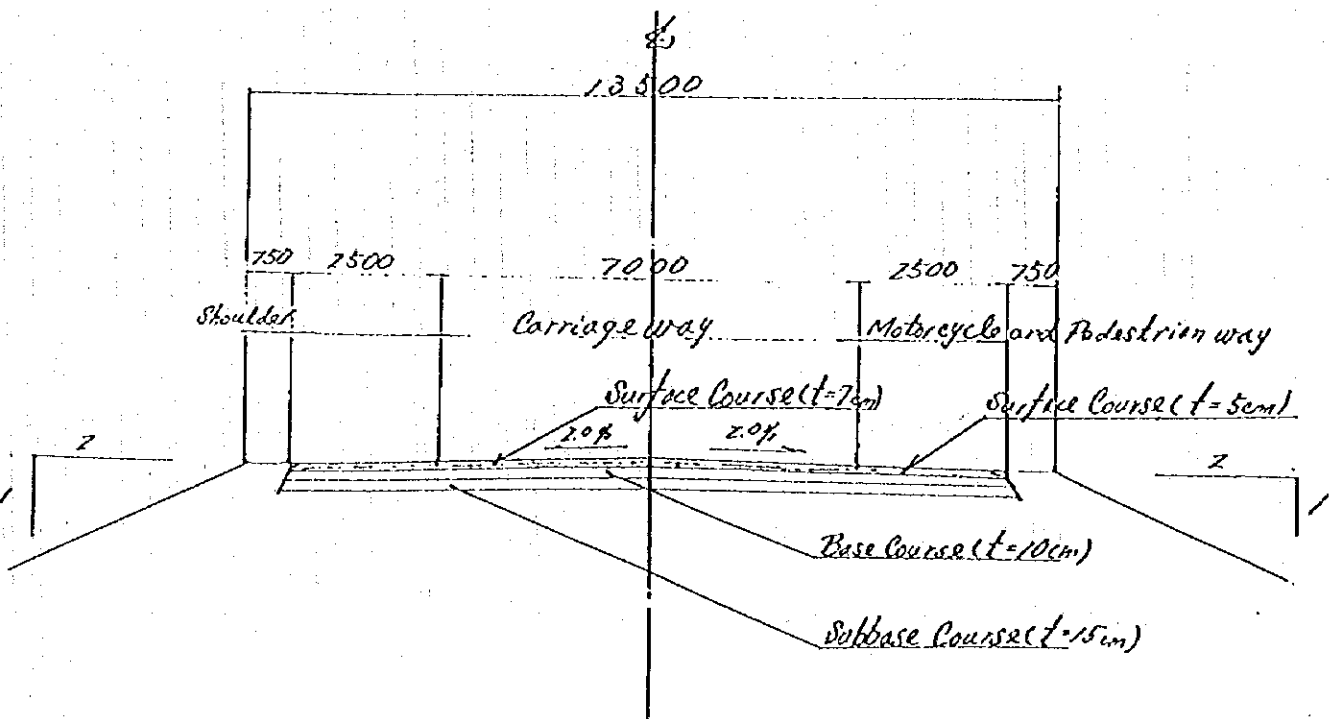
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Typical Crosssection of Bridge



Typical Crosssection of Road

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ATTENDANT LIST

Cambodia Side

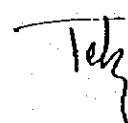
	<u>NAME</u>	<u>POSITION</u>	<u>ORGANIZATION</u>
1.	H.E. Mr. Chin Kim Sreng	Under Secretary of State	Ministry of Public Works and Transport
2.	Mr. Seang Hac	General Director	Ministry of Public Works and Transport
3.	Mr. Tan Hay Sien	Director of Infrastructure Department	Ministry of Public Works and Transport
4.	Mrs. You Ay	Director of International Cooperation	Ministry of Foreign Affair and International Cooperation
5.	Mr. San Norin	Chief of Investment Office	Ministry of Economic and Finance
6.	Mr. He Lim Seng	Director of Bridge Company	Ministry of Public Works and Transport
7.	Mrs. Heng Sokun	Official Representative	Council for Development of Cambodia
8.	Mr. Soum Lou - Y	Deputy Director of Public Investment Office	Ministry of Planning
9.	Mr. Tauch Chankosal	Deputy Director of Road and Bridge Department	Ministry of Public Works and Transport
10.	Mr. Yit Bunna	Deputy Director of Public Works Research Center	Ministry of Public Works and Transport
11	Mr. Sehark	Vice Chief of Planning Office	Ministry of Agriculture

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Japanese Side

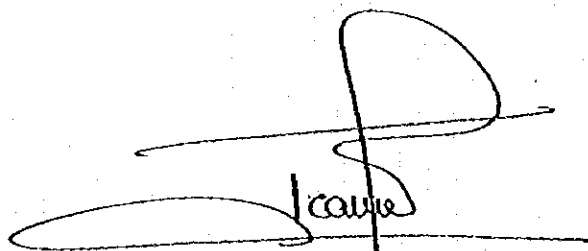
	<u>NAME</u>	<u>POSITION</u>	<u>ORGANIZATION</u>
1.	Mr. Hiroo JIN	Leader of Advisory Team	Honshu-Shikoku Bridge Authority
2.	Mr. Shigemitsu TSUKAMOTO	Second Secretary	Embassy of Japan
3.	Mr. Yoichi YAMAGIWA	Assistant Resident Representative	JICA Cambodia Office
4.	Mr. Hisasi OSHIMA	Leader of the Study Team Bridge Planner	Nippon Coei Co., Ltd.
5.	Mr. Kazumasa TADA	Deputy Leader of the Study Team/Planner (Superstructure)	Nippon Coei Co., Ltd.



MINUTES OF MEETING
ON
THE PROGRESS REPORT
FOR
THE FEASIBILITY STUDY
ON
THE MEKONG RIVER BRIDGE
IN
THE KINGDOM OF CAMBODIA

AGREED UPON BETWEEN
MINISTRY OF PUBLIC WORKS AND TRANSPORT
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

PHNOM PENH, JULY 8, 1995



H.E. MR. TRAM V TEK
SECRETARY OF STATE
MINISTRY OF PUBLIC
WORKS AND TRANSPORT



MR. HISHASHI OSHIMA
LEADER OF STUDY TEAM
JAPAN INTERNATIONAL
COOPERATION AGENCY

MINUTES OF MEETING

In accordance with the Inception Report agreed upon on April 6, 1995, between Mr. Hiroo Jin, Leader of Advisory Team of Japan International Cooperation Agency, and H.E. Mr. Ing Kieth, Deputy Prime Minister, a Progress Report for the Feasibility Study on Mekong River Bridge in the Kingdom of Cambodia was submitted by the Study Team to the Steering Committee of Mekong River Bridge on July 8, 1995, wherein Mr. Hisashi Ohshima, Leader of the Study Team, along with other member of the Study Team, conducted a briefing of the Report during the 2nd Steering Committee.

After discussions between the Study Team and the Steering Committee, the following subjects were confirmed and agreed upon by the Study Team and the Steering Committee.

1. Submission of the Progress Report

The Study Team submitted 30 copies of the Progress Report on July 8, 1995 to the Steering Committee. The Steering Committee acknowledged the receipt of the Report and agreed to contents herein.

2. Selection of the Route

The Cambodia side asked which route would be selected in the Interim Report (I). In response of this question, the Japanese side replied as follow:

The recommended route would be shown in the Interim Report (I) based on comprehensive evaluation which would be investigated on the item of *the Comparison Study of the Alternatives at Location* described in the Inception Report.

The Cambodia side agreed on the reply by the Japanese side.

ATTENDANT LIST

Cambodia Side

	<u>NAME</u>	<u>POSITION</u>	<u>ORGANIZATION</u>
1.	H.E. Mr. Tram Iv Tek	Secretary of State	Ministry of Public Works and Transport
2.	H.E Mr. Seng Oeurn	Secretary of State	Ministry of Environment
3.	Mr. Measketh Kaimirane	General Director	Ministry of Public Works and Transport
4.	Mr. Tan Hay Sien	Director of Infrastructure Department	Ministry of Public Works and Transport
5.	Mr. Tauch Chankosal	Deputy Director of Road and Bridge Department	Ministry of Public Works and Transport
6.	Mr. Yit Bunna	Director of Public Works Research Center	Ministry of Public Works and Transport
7.	Mrs. Pith Nimoll	Vice-Chief of Investment Office	Ministry of Economic and Finance
8.	Mr. He Lim Seng	Director of Bridge Construction Company	Ministry of Public Works and Transport
9.	Mr. Om Tara	Evaluation Project	Cambodia Development Council
10.	Mr. Keo Sam Bath	Deputy Director of Cooperation Department	Ministry of Planning
11.	Mr. Leng Chreang	Officer of Planing Office	Ministry of Agriculture

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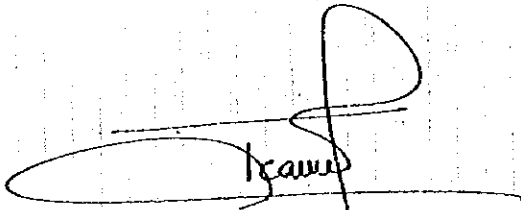
Japanese Side

	<u>NAME</u>	<u>POSITION</u>	<u>ORGANIZATION</u>
1.	Mr. Shigemitsu TSUKAMOTO	Second Secretary	Embassy of Japan
2.	Mr. Yoichi YAMAGIWA	Assistant Resident Representative	JICA Cambodia Office
3.	Mr. Hisasi OSHIMA	Leader of the Study Team Bridge Planner	Nippon Koei Co., Ltd.
4.	Mr. Kazumasa TADA	Deputy Leader of the Study Team/Planner (Superstructure)	Nippon Koei Co., Ltd.


MINUTES OF MEETING
ON
THE INTERIM REPORT (I)
FOR
THE FEASIBILITY STUDY
ON
CONSTRUCTION OF MEKONG BRIDGE
IN
THE KINGDOM OF CAMBODIA

AGREED UPON BETWEEN
MINISTRY OF PUBLIC WORKS AND TRANSPORT
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

PHNOM PENH, OCTOBER 5, 1995



H.E. MR. TRAMIV TEK
SECRETARY OF STATE
MINISTRY OF PUBLIC WORKS
AND TRANSPORT



MR. HISASHI OSHIMA
LEADER OF STUDY TEAM
JAPAN INTERNATIONAL
COOPERATION AGENCY

IN PRESENCE OF



MR. HIROO JIN
LEADER OF ADVISORY TEAM
JAPAN INTERNATIONAL
COOPERATION AGENCY

MINUTES OF MEETING

In accordance with the Scope of Work (hereinafter referred to as "S/W") agreed upon on December 6, 1994 between Japan International Cooperation Agency (hereinafter referred to as "JICA") and the Ministry of Public Works and Transport (hereinafter referred to as "MPWT"), an Interim Report (I) for the Feasibility Study on Construction of Mekong Bridge in the Kingdom of Cambodia (hereinafter referred to as "The Study") was submitted by the Study Team to the Deputy Prime Minister of MPWT on October 5, 1995, wherein Mr. Hisashi Oshima, Leader of Study Team, along with the Advisory Team and other members of the Study Team conducted a briefing of the Report during the 3rd Steering Committee Meeting held on the same day, October 5, 1995.

After a series of discussions between the Study Team and the Steering Committee on construction of the Mekong Bridge, the following subjects were confirmed and agreed upon by both the Steering Committee and the Study Team.

1. Submission of the Interim Report (I)

The Study Team submitted 30 copies of the Interim Report (I) to MPWT for approval on October 5, 1995 in accordance with S/W. MPWT acknowledged the receipt of the report and agreed to contents of the report.

2. The Recommended Route

The Study Team recommended Kompong Cham be selected among the three locations.

The Study Team will make further investigation with respect to the bridge site nearby C-2 Route in the further study.

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ATTENDANT LIST

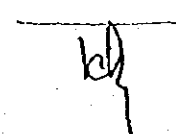
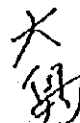

Cambodia Side

	<u>NAME</u>	<u>POSITION</u>	<u>ORGANIZATION</u>
1.	H.E. Mr. Tram Iv Tek	Secretary of State	Ministry of Public Works and Transport
2.	H.E Mr. Seng Oeurn	Secretary of State	Ministry of Environment
3	Mrs. You Ay	Director of International Cooperation Dept.	Ministry of Foreign Affair and Intenational Cooperation
4.	Mr. Fan Hay Sien	Director of Infrastructure Department	Ministry of Public Works and Transport
5.	Mr. Tauch Chankosal	Deputy Director of Road and Bridge Department	Ministry of Public Works and Transport
6.	Dr. Yit Bunna	Director of Public Works Research Center	Ministry of Public Works and Transport
7.	Mr. Ay Kim Chheang	Chief of Investment Office	Ministry of Economic and Finance
8.	Mr. He Lim Seng	Director of Bridge Construction Company	Ministry of Public Works and Transport
9.	Mr. Tetsuro HAMADA	JICA Expert	Cambodia Development Council
10.	Ms. Heng Sokun	Evaluation Project	Cambodia Development Council

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Japanese Side

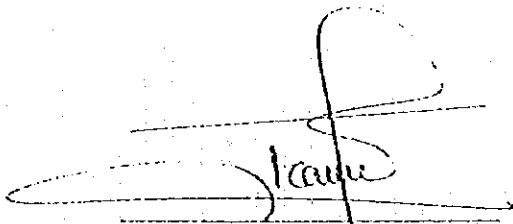
	<u>NAME</u>	<u>POSITION</u>	<u>ORGANIZATION</u>
1.	Mr. Masaki KAWAGUCHI	Third Secretary	Embassy of Japan
2.	Mr. Hiroo JIN	Leader of Advisory Committee	Honshu Shikoku Bridge Authority
3.	Mr. Yutaka MIYAKE	Member of Advisory Committee	Ministry of Construction
4.	Mr. Makoto ASHINO	JICA Headquarters	JICA Headquarters
5.	Mr. Seigo WATANABE	Resident Representative	JICA Cambodia Office
6.	Mr. Yoichi YAMAGIWA	Assistant Resident Representative	JICA Cambodia Office
7.	Mr. Hisashi OSHIMA	Leader of the Study Team	Nippon Koei Co., Ltd.
8.	Mr. Kazumasa TADA	Deputy Leader of the Study Team	Nippon Koei Co., Ltd.
9.	Mr. Akio NAKAMURA	Member of Study Team	PADECO Co., Ltd.
10.	Mr. Toshio ICHIKAWA	Member of Study Team	Nippon Koei Co., Ltd.
11.	Mr. Hiroshi KAWASHIMA	Member of Study Team	PADECO Co., Ltd.

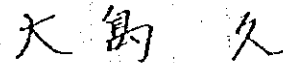
MINUTES OF MEETING
ON
THE INTERIM REPORT (II)
FOR
THE FEASIBILITY STUDY
ON
CONSTRUCTION OF MEKONG BRIDGE
IN
THE KINGDOM OF CAMBODIA

AGREED UPON BETWEEN
MINISTRY OF PUBLIC WORKS AND TRANSPORT
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

PHNOM PENH, DECEMBER 20, 1995



H.E. MR. TRAM TY TEK
SECRETARY OF STATE
MINISTRY OF PUBLIC
WORKS AND TRANSPORT



MR. HISASHI OSHIMA
LEADER OF STUDY TEAM
JAPAN INTERNATIONAL
COOPERATION AGENCY

MINUTES OF MEETING

In accordance with the Scope of Work (hereinafter referred to as "S/W") agreed upon on December 6, 1994 between Japan International Cooperation Agency (hereinafter referred to as "JICA") and the Ministry of Public Works and Transport (hereinafter referred to as "MPWT"), an Interim Report (II) for the Feasibility Study on Construction of Mekong Bridge in the Kingdom of Cambodia (hereinafter referred to as "The Study") was submitted by the Study Team to the Deputy Prime Minister of MPWT on December 20, 1995, wherein Mr. Hisashi Oshima, Leader of Study Team, along with other member of the Study Team conducted a briefing of the Report during the 4th Steering Committee Meeting held on the same day, December 20, 1995.

After a series of discussions between the Study Team and the Steering Committee on construction of the Mekong Bridge, the following subjects were confirmed and agreed upon by both the Steering Committee and the Study Team.

1. Submission of the Interim Report (II)

The Study Team submitted 30 copies of the Interim Report (II) to MPWT for approval on December 20, 1995 in accordance with S/W. MPWT acknowledged the receipt of the report and agreed to contents of the report.

2. The origin and destination point of the Study

The origin and destination point of the Study will be defined as follow :

The origin starts from the round-about of the Kampong Cham city side on the route 7, including partial rehabilitation of existing round-about, and the destination point is at the junction of the Selected Route and Route 7 on the east side of Mekong River, which are illustrated on figure 2.1 as Selected Route for Mekong Bridge of Interim Report (II).

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Japanese Side

	<u>NAME</u>	<u>POSITION</u>	<u>ORGANIZATION</u>
1.	Mr. Hiroaki TAKASHIMA	Deputy Director	JICA Headquarters
2.	Mr. Yoichi YAMAGIWA	Assistant Resident Representative	JICA Cambodia Office
3.	Mr. Hisashi OSHIMA	Leader of the Study Team	Nippon Koei Co., Ltd.
4.	Mr. Kazumasa TADA	Deputy Leader of the Study Team	Nippon Koei Co., Ltd.

(26)

ATTENDANT LIST

Cambodia Side

	<u>NAME</u>	<u>POSITION</u>	<u>ORGANIZATION</u>
1.	H.E. Mr. Tram Iv Tek	Secretary of State	Ministry of Public Works and Transport
2.	H.E. Mr. Chhun Sareth	Under Secretary of State	Ministry of Agriculture
3.	Mr. Tan Hay Sien	Director of Infrastructure Department	Ministry of Public Works and Transport
4.	Mr. Tauch Chankosal	Director of Department of Major Construction	Ministry of Public Works and Transport
5.	Dr. Yit Bunna	Director of Public Works Research Center	Ministry of Public Works and Transport
6.	Ms. Pith Nimul	Deputy Chief of Investment Office	Ministry of Economic and Finance
7.	Mr. He Lim Seng	Director of Bridge Construction Company	Ministry of Public Works and Transport
8.	Mr. Ly Pros	Director of Department of Planing and Public Relation	Ministry of Rural Development
9.	Soeung Sarsochetta	Chief of Bilateral Grand Aid.	Ministry of Planing
10	Ngy San	Officer of International Cooperation Department	Ministry of Foreign Affair and International Cooperation Dept.

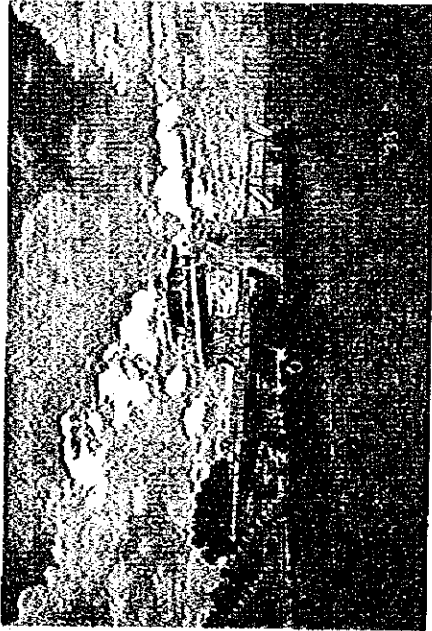
APPENDIX 3.1

Photographic Records around the Alternative Brigde Routes

Photo Sheet No. 1: Neak Loeung Ferry



Embarkation on the "Peace 2" Ferry



Unloaded "Peace 2" Ferry

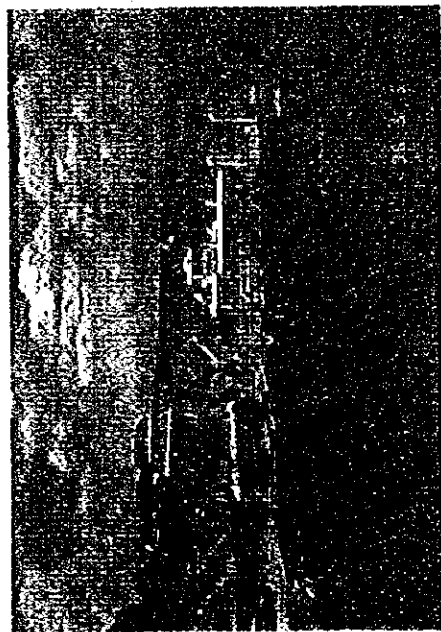


Idle "Peace 2" Ferry



Embarkation on the "Samaki 028" Ferry, East Side

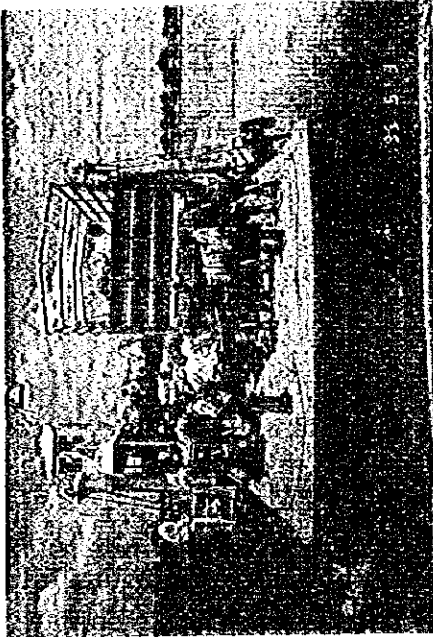
Photo Sheet No. 2: Neak Loeung Ferry (continued)



Bus Entering the "60 T" Ferry



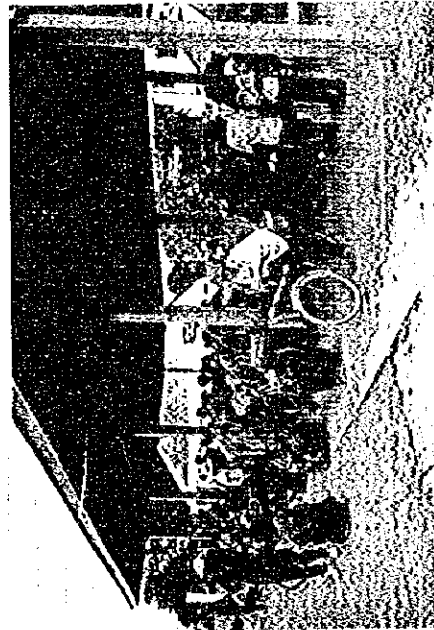
Embarkation on the "60 T" Ferry



Fully Loaded "60 T" Ferry



Guarded Entrance to Waiting Area, East Side

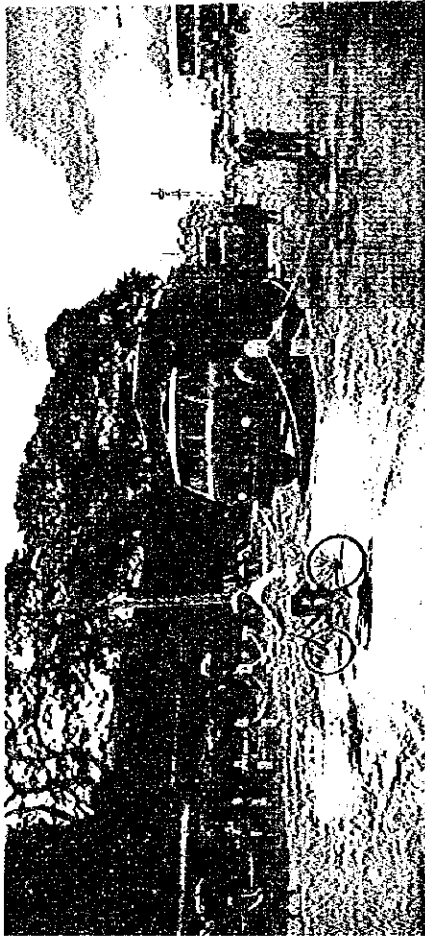


Waiting Area for Passengers, Bicycles, and Motorcycles, East Side



Ticket Booth

Photo Sheet No. 3: Neak Loeung Ferry (continued)



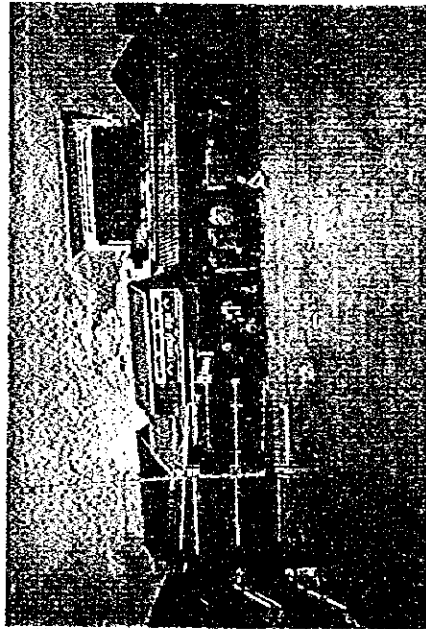
Vehicle Queuing Area, East Side



Office of the Neak Loeung Ferry



Vehicle Queuing Area, West Side

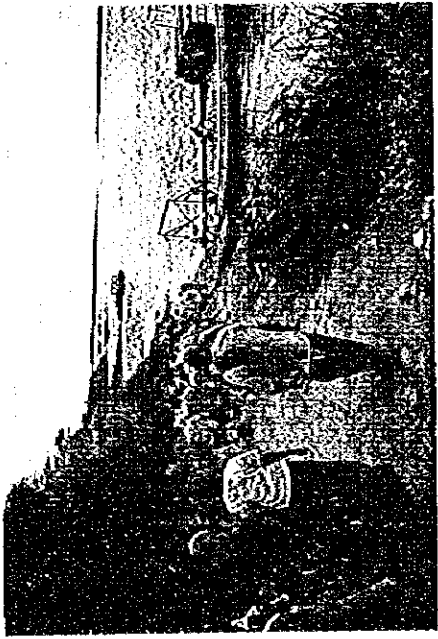


Passenger Waiting Area, West Side

Photo Sheet No. 4: Sway Chrum Ferry, West Side



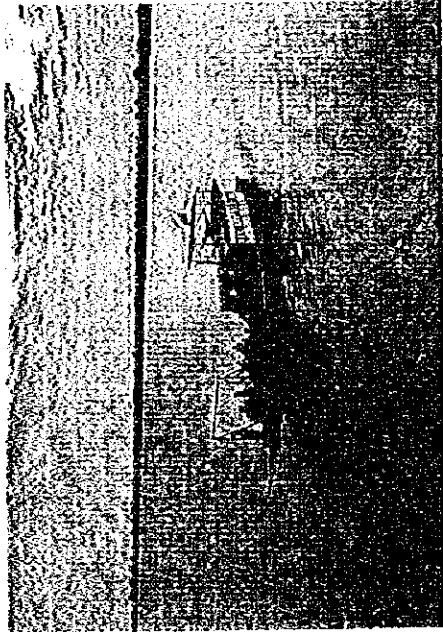
Entrance/ Exit to Ferry Landing



Ferry Landing



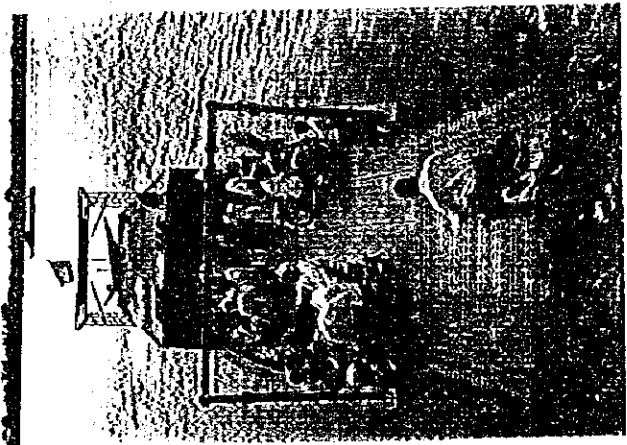
Ferry Landing



Ferry Approaching the West Side

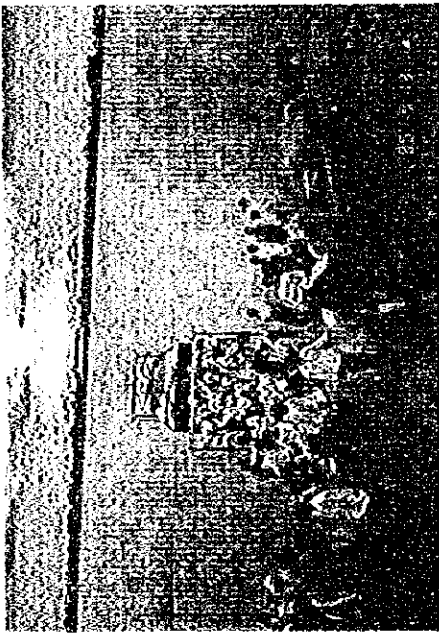


Ferry Landing



Embarkation on the Ferry

Photo Sheet No. 5: Sway Chrum Ferry, East Side



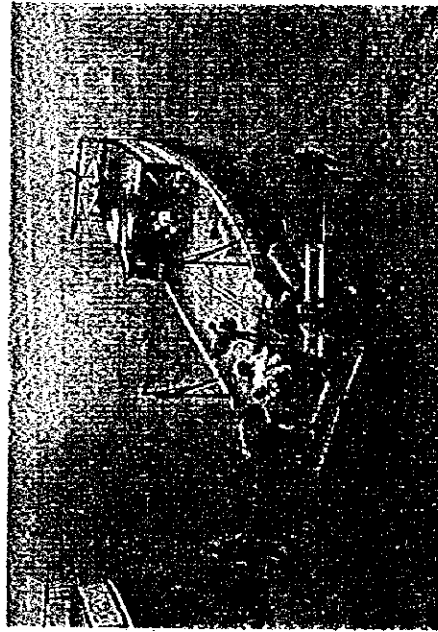
Disembarkation



Ferry Landing Approach



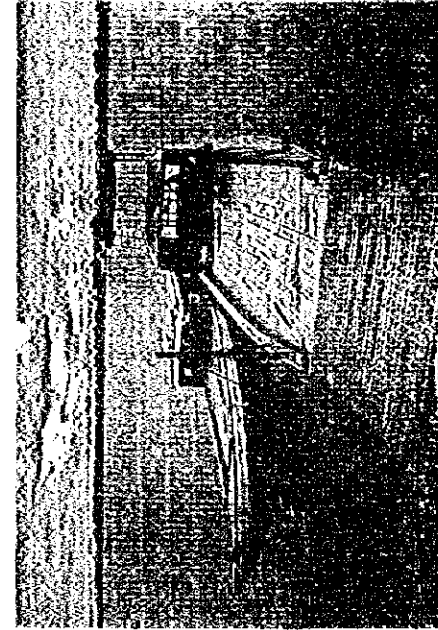
Ferry Landing



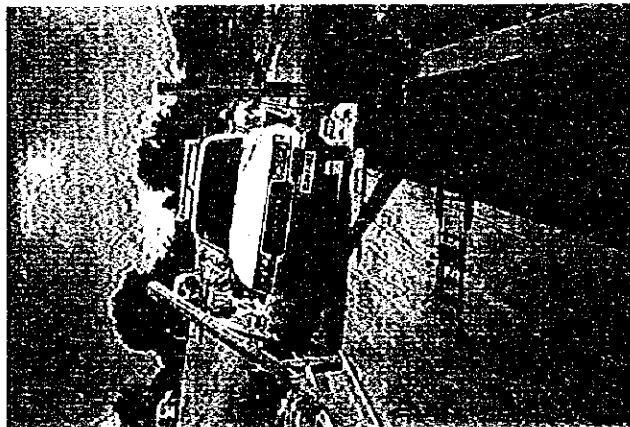
Transshipment of Goods from Horse Cart to Ferry (to Truck)



Ferry Interior

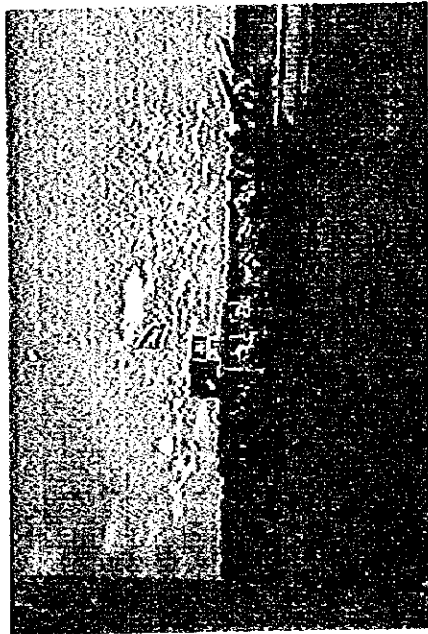


Additional Ferries Available



Boarding the Ferry

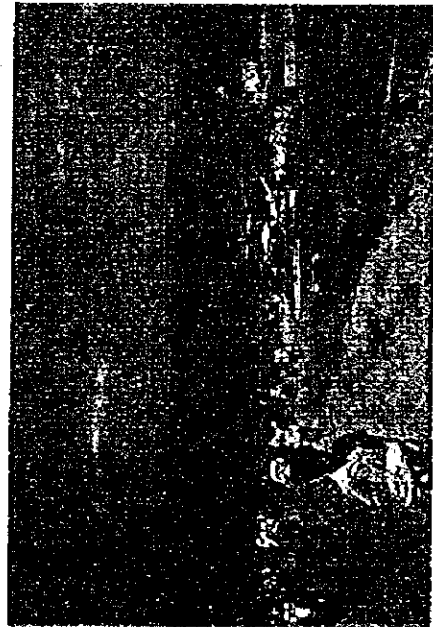
Photo Sheet No. 6: Prek Tamak Ferry



Fully Loaded Ferry



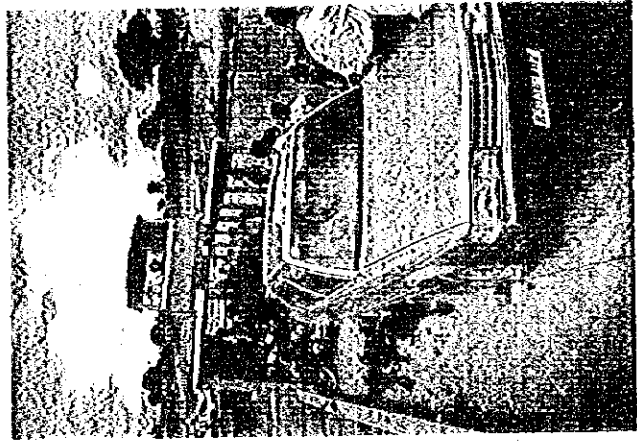
Ferry Landing, East Side



Two Ferries, East Side

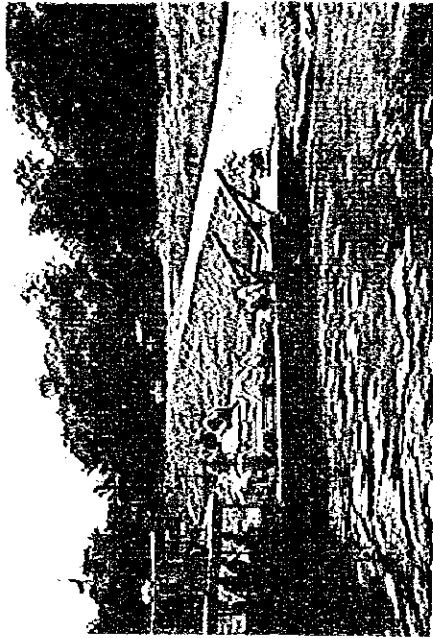
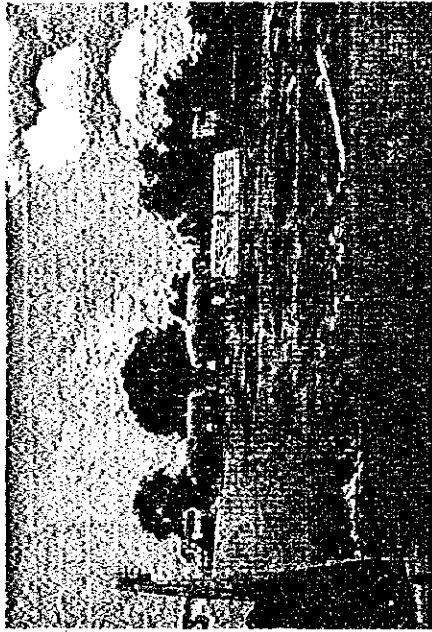
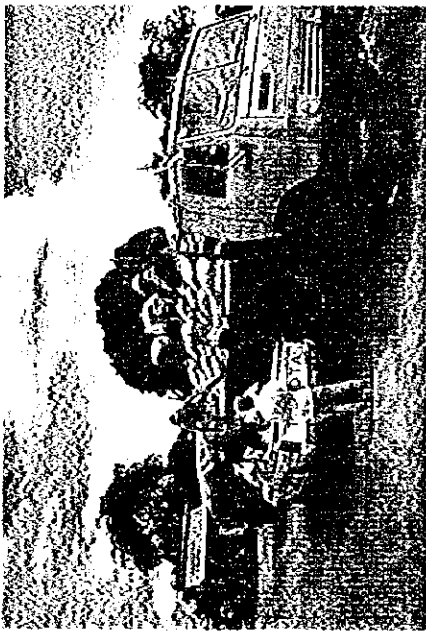


Ferry Carrying Two Vehicles

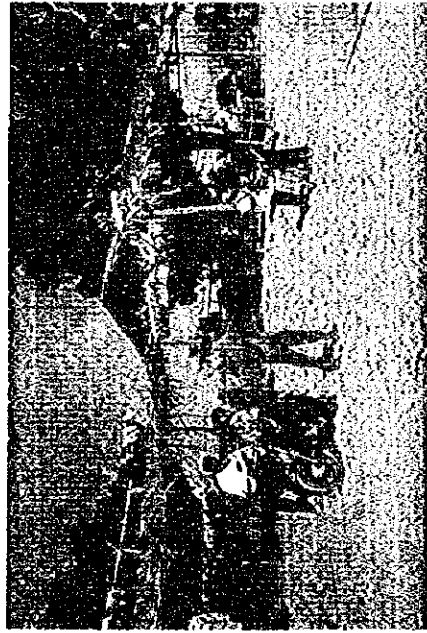
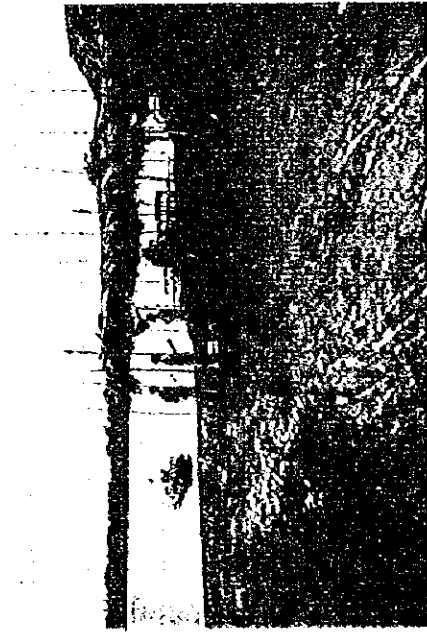


Departing from the West Side

Photo Sheet No. 7: Prek Tamak Ferry (continued)



Transshipment of (Donated) Rice from Three Two-Trailer Trucks to Pickup Crossing the Mekong by Ferry



O-D Interview Surveys, West Side

O-D Interview Surveys, East Side

Ferry Landing Conditions after Heavy Rainfall, West Side

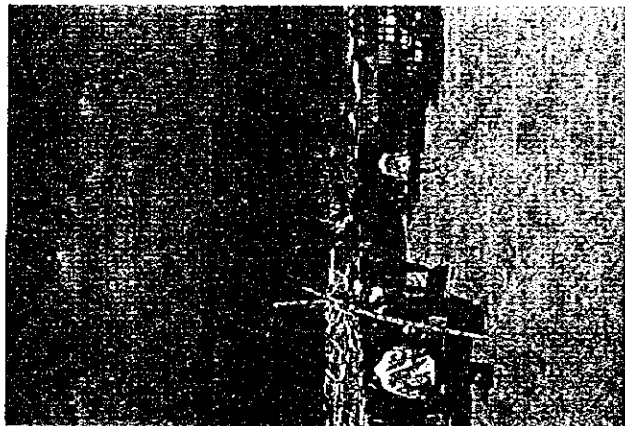
Photo Sheet No. 8: Kampong Cham (Private) Ferry



Disembarkation at the West Side



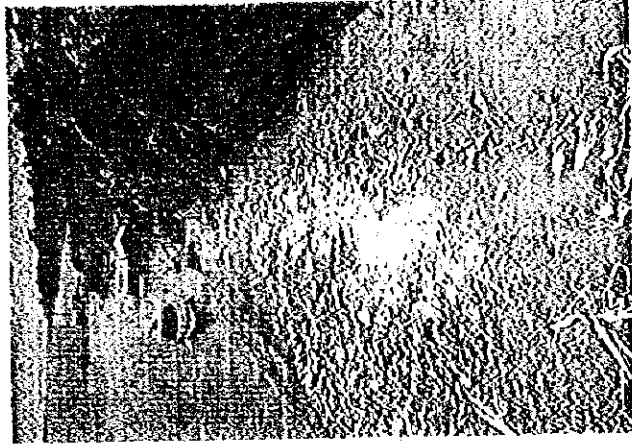
Ferry Landing, West Side



Ferry Landing, West Side

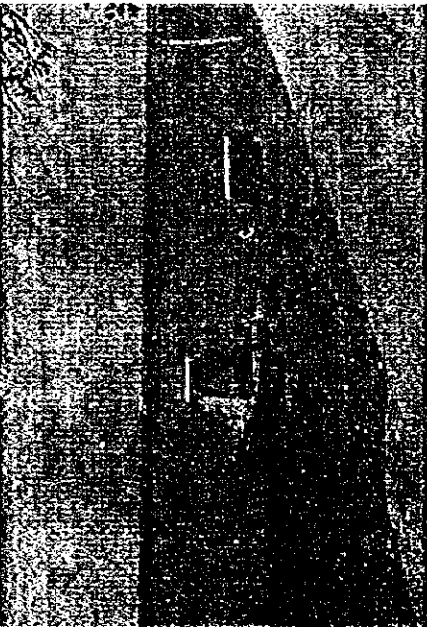


Ferry Landing, West Side

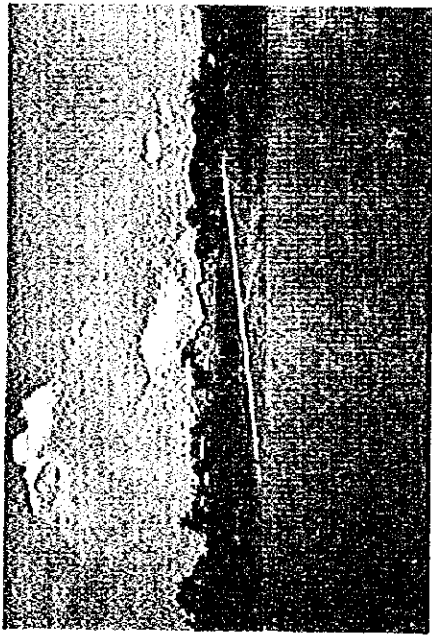


Ferry Landing, East Side

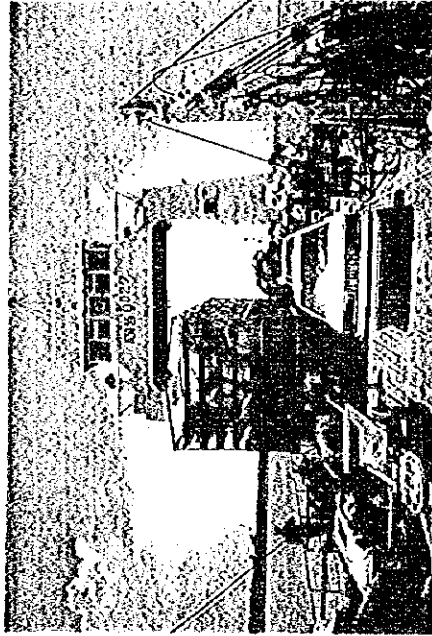
Photo Sheet No. 9: Kampong Cham (MPWT) Ferry



Embarkation on the "027" Ferry, West Side



Ferry Landing, West Side



On-Board the "027" Ferry



Ferry Landing, East Side

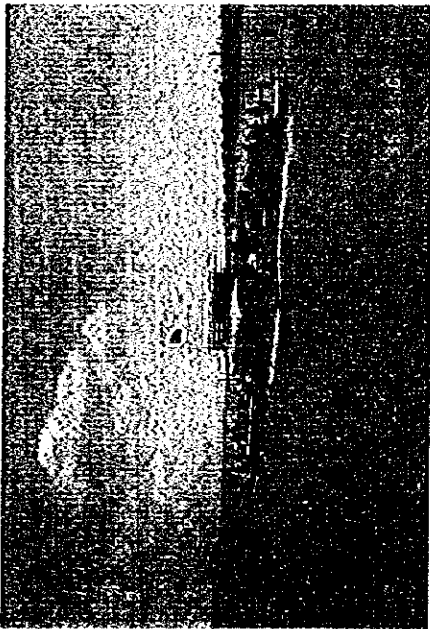


Ferry Landing, East Side



Disembarkation at the East Side

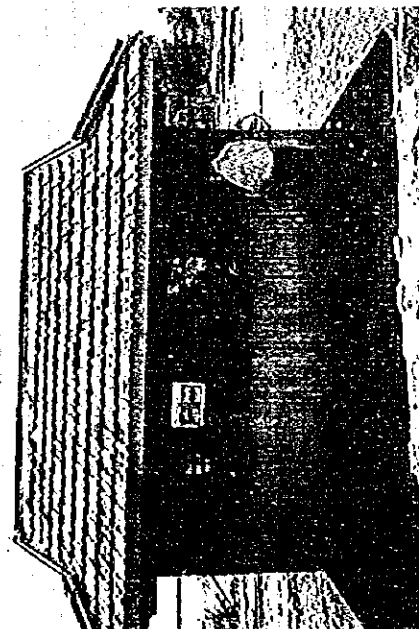
Photo Sheet No. 10: Kampong Cham (MPWT) Ferry (continued)



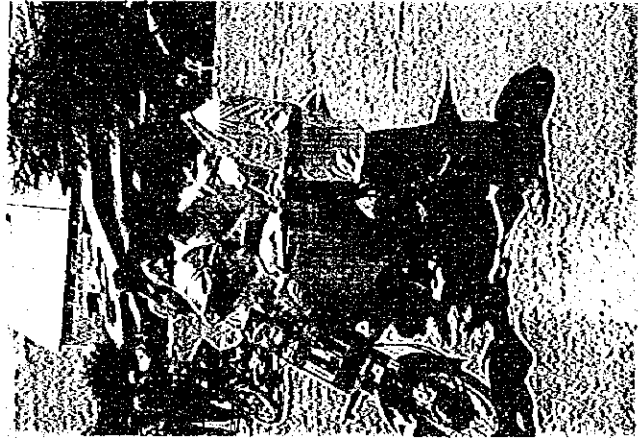
The Tugboat Ferry Traveling West



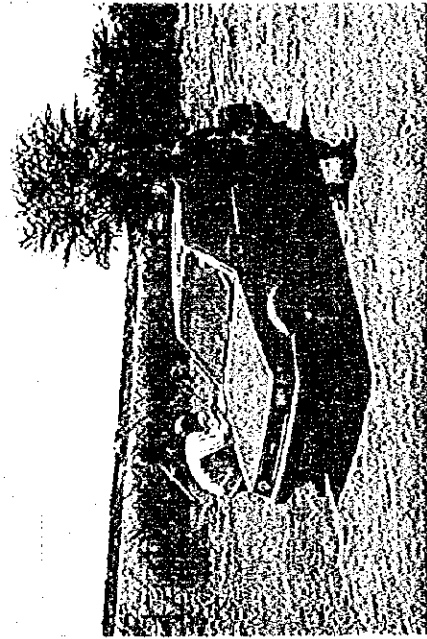
On-Board the Tugboat Ferry



Ticket Booth, East Side



O-D Interview Survey, East Side



O-D Interview Survey, East Side

APPENDIX 4

TRAFFIC FORECASTS

Appendix 4.1

Traffic Count Survey Results

Table 4.1.1: Traffic Count Survey Results
 Location No. 1: Neak Loeung Ferry Station, East Side (Westbound Traffic)

Travel Mode	Time of Day														Total for 06:00-18:00											
	06:00-07:00		07:00-08:00		08:00-09:00		09:00-10:00		10:00-11:00		11:00-12:00		12:00-13:00			13:00-14:00		14:00-15:00		15:00-16:00		16:00-17:00		17:00-18:00		
	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00		20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	24:00-01:00	01:00-02:00	02:00-03:00	03:00-04:00	04:00-05:00	05:00-06:00	
Pedestrian or Passenger	356	806	1,028	599	432	261	154	155	129	118	176	70														
Bicycle	47	46	47	50	33	28	21	16	16	10	12	8														
Bicycle-with-Trailer, Cyclo	3	1	1	1	1	2	1	0	0	0	0	1														
Animal Cart	33	52	64	48	36	30	26	26	25	25	21	10														
Motorcycle	0	0	0	0	0	0	0	0	0	0	0	0														
Motorcycle-with-Trailer	6	16	20	12	12	13	14	12	14	9	12	6														
Sedan	6	14	20	10	6	9	13	10	10	8	6	4														
Public Transport Pickup (Minibus)	8	3	4	4	2	1	2	1	2	1	1	1														
Standard Bus	1	1	2	1	1	1	1	1	1	1	1	1														
4WD, Standard Pickup	2	1	1	2	2	1	1	1	1	1	1	1														
2-Axle Truck (Other Than Pickup)	2	1	1	2	2	1	0	0	1	2	1	2														
3-Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0														
3+ Axle Truck	3	2	1	1	2	3	2	2	2	1	1	1														
Military or Police Vehicle	110	138	162	130	96	89	83	72	73	59	59	33														
Total No. of Vehicles	69	79	97	70	56	55	59	51	52	44	42	26														
Total No. of PCUs																										

Table 4.1.2: Traffic Count Survey Results
 Location No. 2: Neak Loeung Ferry Station, West Side (Eastbound Traffic)

Travel Mode	Time of Day														Total for 06:00-18:00											
	06:00-07:00		07:00-08:00		08:00-09:00		09:00-10:00		10:00-11:00		11:00-12:00		12:00-13:00			13:00-14:00		14:00-15:00		15:00-16:00		16:00-17:00		17:00-18:00		
	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00		20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	24:00-01:00	01:00-02:00	02:00-03:00	03:00-04:00	04:00-05:00	05:00-06:00	
Pedestrian or Passenger	437	530	552	405	249	324	192	241	364	226	235	160														
Bicycle	44	45	40	21	18	20	17	15	15	15	19	16														
Bicycle-with-Trailer, Cyclo	4	2	1	1	1	1	1	1	0	2	2	2														
Animal Cart	48	74	73	58	38	33	33	30	37	28	32	26														
Motorcycle	0	0	0	0	0	0	0	0	0	0	0	0														
Motorcycle-with-Trailer	9	10	16	19	15	8	11	7	11	13	13	9														
Sedan	11	8	7	7	5	5	7	6	9	7	11	7														
Public Transport Pickup (Minibus)	2	2	2	3	1	1	1	3	3	4	3	1														
Standard Bus	2	3	5	5	3	2	1	2	2	2	3	1														
4WD, Standard Pickup	1	0	1	2	1	1	1	1	1	2	1	2														
2-Axle Truck (Other Than Pickup)	1	1	1	1	1	1	1	1	1	1	1	1														
3-Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0														
3+ Axle Truck	1	0	0	0	0	0	0	0	0	0	0	0														
Military or Police Vehicle	123	147	150	119	83	73	76	67	81	74	87	70														
Total No. of Vehicles	65	69	76	73	50	43	49	45	55	55	64	54														
Total No. of PCUs																										

Table 4.1.3: Traffic Count Survey Results
 Location No. 3: Sway Chrom Ferry Station, East Side (Westbound Traffic)

Travel Mode	Time of Day														Total for 06:00-18:00										
	06:00-07:00		07:00-08:00		08:00-09:00		09:00-10:00		10:00-11:00		11:00-12:00		12:00-13:00			13:00-14:00		14:00-15:00		15:00-16:00		16:00-17:00		17:00-18:00	
	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00		20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	24:00-01:00	01:00-02:00	02:00-03:00	03:00-04:00	04:00-05:00	05:00-06:00
Pedestrian	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle, Bicycle-with-Trailer, Cyclo	23	7	2	2	2	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Animal Cart	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycle	83	56	25	15	20	17	15	15	20	17	17	19	22	22	26	23	29	29	29	29	29	29	29	29	29
Motorcycle-with-Trailer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sedan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Transport Pickup (Minibus)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Standard Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4WD, Standard Pickup	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-Axle Truck (Other Than Pickup)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3+ Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Military or Police Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total No. of Vehicles	107	64	28	18	23	23	23	23	23	23	23	23	27	27	32	29	35	35	35	35	35	35	35	35	432
Total No. of PCUS	30	20	8	8	7	7	7	7	7	7	7	7	9	9	11	10	13	13	13	13	13	13	13	13	134

Average Daily Traffic

Table 4.1.4: Traffic Count Survey Results
 Location No. 4: Sway Chrom Ferry Station, West Side (Eastbound Traffic)

Travel Mode	Time of Day														Total for 06:00-18:00										
	06:00-07:00		07:00-08:00		08:00-09:00		09:00-10:00		10:00-11:00		11:00-12:00		12:00-13:00			13:00-14:00		14:00-15:00		15:00-16:00		16:00-17:00		17:00-18:00	
	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00		20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	24:00-01:00	01:00-02:00	02:00-03:00	03:00-04:00	04:00-05:00	05:00-06:00
Pedestrian	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle, Bicycle-with-Trailer, Cyclo	11	4	4	7	5	5	5	7	5	5	5	3	3	3	4	1	6	6	6	6	6	6	6	6	68
Animal Cart	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycle	18	20	37	32	32	31	32	32	32	31	20	21	19	19	26	34	47	47	47	47	47	47	47	47	337
Motorcycle-with-Trailer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sedan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Transport Pickup (Minibus)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Standard Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4WD, Standard Pickup	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-Axle Truck (Other Than Pickup)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3+ Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Military or Police Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total No. of Vehicles	29	24	42	40	39	36	36	40	39	36	22	24	22	22	30	40	62	62	62	62	62	62	62	62	411
Total No. of PCUS	8	7	14	12	12	10	12	12	12	10	7	7	7	7	9	11	18	18	18	18	18	18	18	18	123

Average Daily Traffic

Table 4.1.5: Traffic Count Survey Results
Location No. 5: Prek Tamak Ferry Station, East Side (Westbound Traffic)

Average Daily Traffic

Travel Mode	Time of Day														Total for 06:00-18:00											
	06:00-07:00		07:00-08:00		08:00-09:00		09:00-10:00		10:00-11:00		11:00-12:00		12:00-13:00			13:00-14:00		14:00-15:00		15:00-16:00		16:00-17:00		17:00-18:00		
	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00		20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	24:00-01:00	01:00-02:00	02:00-03:00	03:00-04:00	04:00-05:00	05:00-06:00	
Pedestrian or Passenger	2	10	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
Bicycle, Bicycle-with-Trailer, Cyclo	27	18	11	7	4	6	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	103
Animal Cart	2	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Motorcycle	84	84	63	37	31	18	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	458
Motorcycle-with-Trailer	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
Sedan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6
Public Transport Pickup (Minibus)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Standard Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4WD, Standard Pickup	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
2-Axle Truck (Other Than Pickup)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
3-Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3+ Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Military or Police Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total No. of Vehicles	115	106	77	46	38	27	30	36	33	39	34	22	602													
Total No. of PCUs	36	34	25	16	13	11	11	14	12	15	14	8	208													

Table 4.1.6: Traffic Count Survey Results
Location No. 6: Prek Tamak Ferry Station, West Side (Eastbound Traffic)

Average Daily Traffic

Travel Mode	Time of Day														Total for 06:00-18:00										
	06:00-07:00		07:00-08:00		08:00-09:00		09:00-10:00		10:00-11:00		11:00-12:00		12:00-13:00			13:00-14:00		14:00-15:00		15:00-16:00		16:00-17:00		17:00-18:00	
	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00		20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	24:00-01:00	01:00-02:00	02:00-03:00	03:00-04:00	04:00-05:00	05:00-06:00
Pedestrian or Passenger	16	24	37	14	12	9	12	5	7	7	6	7	157												
Bicycle, Bicycle-with-Trailer, Cyclo	10	9	7	6	4	9	6	4	9	11	16	15	106												
Animal Cart	0	0	1	0	1	0	1	1	1	0	2	1	8												
Motorcycle	26	46	52	47	38	43	43	35	37	44	34	25	470												
Motorcycle-with-Trailer	0	0	0	0	0	0	0	0	0	0	0	0	1												
Sedan	1	2	3	1	1	1	1	1	2	1	1	0	15												
Public Transport Pickup (Minibus)	0	0	0	0	0	0	0	0	0	0	0	0	5												
Standard Bus	0	0	0	0	0	0	0	0	0	0	0	0	1												
4WD Standard Pickup	0	0	0	0	0	0	0	0	0	0	0	0	9												
2-Axle Truck (Other Than Pickup)	0	0	0	0	0	0	0	0	0	0	0	0	3												
3-Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0												
3+ Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0												
Military or Police Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0												
Total No. of Vehicles	38	59	66	56	47	53	53	42	49	57	54	42	617												
Total No. of PCUs	11	21	25	19	17	17	19	15	16	19	17	13	210												

Table 4.1.7: Traffic Count Survey Results
 Location No. 7: Kompong Cham (Private) Ferry Station, East Side (Westbound Traffic)

Travel Mode	Time of Day														Total for 06:00-18:00											
	06:00-07:00		07:00-08:00		08:00-09:00		09:00-10:00		10:00-11:00		11:00-12:00		12:00-13:00			13:00-14:00		14:00-15:00		15:00-16:00		16:00-17:00		17:00-18:00		
	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00		20:00	21:00	22:00	23:00	24:00	25:00	26:00	27:00	28:00	29:00	30:00
Pedestrian or Passenger	50	55	75	46	39	52	36	54	37	41	43	38	566													
Bicycle, Bicycle-with-Trailer, Cycle	10	6	4	3	4	6	4	9	3	4	6	6	65													
Animal Cart	0	0	0	0	0	0	0	0	0	0	0	0	0													
Motorcycle	15	15	15	9	7	11	10	13	11	12	13	16	146													
Motorcycle-with-Trailer	0	0	0	0	0	0	0	0	0	0	0	0	0													
Sedan	0	0	0	0	0	0	0	0	0	0	0	0	0													
Public Transport Pickup (Minibus)	0	0	0	0	0	0	0	0	0	0	0	0	0													
Standard Bus	0	0	0	0	0	0	0	0	0	0	0	0	0													
4WD, Standard Pickup	0	0	0	0	0	0	0	0	0	0	0	0	0													
2-Axle Truck (Other Than Pickup)	0	0	0	0	0	0	0	0	0	0	0	0	0													
3-Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0													
3+ Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0													
Military or Police Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0													
Total No. of Vehicles	25	22	19	13	11	16	14	22	14	16	19	22	211													
Total No. of PCUs	6	6	5	3	3	4	4	6	4	4	5	6	57													

Table 4.1.8: Traffic Count Survey Results
 Location No. 8: Kompong Cham (Private) Ferry Station, West Side (Eastbound Traffic)

Travel Mode	Time of Day														Total for 06:00-18:00											
	06:00-07:00		07:00-08:00		08:00-09:00		09:00-10:00		10:00-11:00		11:00-12:00		12:00-13:00			13:00-14:00		14:00-15:00		15:00-16:00		16:00-17:00		17:00-18:00		
	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00		20:00	21:00	22:00	23:00	24:00	25:00	26:00	27:00	28:00	29:00	30:00
Pedestrian or Passenger	46	47	46	37	48	33	41	38	34	27	58	45	503													
Bicycle, Bicycle-with-Trailer, Cycle	8	6	6	5	5	5	4	5	5	4	11	11	76													
Animal Cart	0	0	0	0	0	0	0	0	0	0	0	0	0													
Motorcycle	17	17	15	15	14	15	20	17	16	14	27	20	206													
Motorcycle-with-Trailer	0	0	0	0	0	0	0	0	0	0	0	0	0													
Sedan	0	0	0	0	0	0	0	0	0	0	0	0	0													
Public Transport Pickup (Minibus)	0	0	0	0	0	0	0	0	0	0	0	0	0													
Standard Bus	0	0	0	0	0	0	0	0	0	0	0	0	0													
4WD, Standard Pickup	0	0	0	0	0	0	0	0	0	0	0	0	0													
2-Axle Truck (Other Than Pickup)	0	0	0	0	0	0	0	0	0	0	0	0	0													
3-Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0													
3+ Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0													
Military or Police Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0													
Total No. of Vehicles	25	22	20	20	20	20	24	22	21	18	38	31	281													
Total No. of PCUs	7	6	6	6	5	5	7	6	6	5	10	8	77													

Table 4.1.9: Traffic Count Survey Results
 Location No. 9: Kompong Cham (MPWT) Ferry Station, East Side (Westbound Traffic)

Travel Mode	Time of Day														Total for 06:00-18:00
	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00			
Pedestrian or Passenger	107	183	153	71	45	43	33	37	32	30	42	36	812		
Bicycle, Bicycle-with-Trailer, Cycle	30	24	23	11	8	9	7	7	5	5	11	8	147		
Animal Cart	4	4	2	0	0	0	0	0	0	0	0	0	13		
Motorcycle	34	51	39	26	19	16	14	16	17	15	20	13	279		
Motorcycle-with-Trailer	0	0	0	0	0	0	0	0	0	0	0	0	1		
Sedan	3	6	3	3	1	2	1	3	2	1	3	2	30		
Public Transport Pickup (Minibus)	1	5	4	2	1	1	0	1	1	2	1	1	19		
Standard Bus	0	0	0	0	0	0	0	0	0	0	0	0	1		
4WD, Standard Pickup	1	1	1	1	1	1	1	1	1	1	2	1	11		
2-Axle Truck (Other Than Pickup)	0	0	1	1	1	0	0	0	1	0	1	0	6		
3-Axle Truck	0	1	1	1	1	0	0	0	1	0	1	0	6		
3+ Axle Truck	2	1	0	1	1	1	1	1	0	0	0	2	10		
Military or Police Vehicle	0	0	0	0	0	1	1	0	0	1	0	0	4		
Total No. of Vehicles	76	93	74	45	32	29	27	29	27	26	40	28	527		
Total No. of PCUs	36	47	34	25	18	15	16	14	16	16	23	19	277		

Average Daily Traffic

Table 4.1.10: Traffic Count Survey Results
 Location No. 10: Kompong Cham (MPWT) Ferry Station, West Side (Eastbound Traffic)

Travel Mode	Time of Day														Total for 06:00-18:00
	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00			
Pedestrian or Passenger	103	117	145	100	83	74	47	46	58	39	43	11	866		
Bicycle, Bicycle-with-Trailer, Cycle	21	19	26	12	10	12	11	9	9	9	11	3	152		
Animal Cart	1	1	1	0	3	2	1	1	0	0	1	0	13		
Motorcycle	33	34	40	27	28	30	18	19	20	22	24	9	302		
Motorcycle-with-Trailer	0	0	0	0	0	0	0	0	0	0	0	0	0		
Sedan	2	3	3	2	4	4	2	2	3	1	3	1	29		
Public Transport Pickup (Minibus)	1	0	2	4	3	2	2	0	1	0	1	0	16		
Standard Bus	0	0	0	0	0	1	1	0	0	0	0	0	2		
4WD, Standard Pickup	1	0	1	0	2	0	0	2	2	0	1	1	12		
2-Axle Truck (Other Than Pickup)	1	0	0	0	0	0	0	0	1	0	2	0	6		
3-Axle Truck	1	0	1	1	1	2	1	0	0	0	1	0	7		
3+ Axle Truck	1	0	0	0	1	1	0	0	0	0	0	0	3		
Military or Police Vehicle	1	0	0	0	0	0	0	1	0	0	0	0	2		
Total No. of Vehicles	63	58	75	46	53	53	35	35	37	34	43	15	545		
Total No. of PCUs	28	20	29	22	31	30	17	16	18	13	22	7	253		

Average Daily Traffic

Table 4.1.11: Traffic Count Survey Results
Location No. 11: Route 1; 20 km southeast of Phnom Penh (Eastbound Traffic)

Travel Mode	Time of Day														Total for 06:00-18:00											
	06:00-07:00		07:00-08:00		08:00-09:00		09:00-10:00		10:00-11:00		11:00-12:00		12:00-13:00			13:00-14:00		14:00-15:00		15:00-16:00		16:00-17:00		17:00-18:00		
	06:00	07:00	07:00	08:00	08:00	09:00	09:00	10:00	10:00	11:00	11:00	12:00	12:00	13:00		13:00	14:00	14:00	15:00	15:00	16:00	16:00	17:00	17:00	18:00	18:00
Pedestrian	5	10	13	12	6	3	4	8	2	4	2	2	4	2	4	2	4	2	4	2	4	2	4	2	4	68
Bicycle, Bicycle-with-Trailer, Cyclo	24	38	32	31	22	20	24	30	19	23	19	23	30	19	23	19	23	19	23	19	23	19	23	19	23	291
Animal Cart	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Motorcycle	60	167	145	131	109	103	98	93	93	96	93	93	93	93	93	93	93	93	93	96	116	116	116	13	1,224	
Motorcycle-with-Trailer	15	43	45	46	32	33	34	27	28	27	28	27	28	27	28	27	28	27	28	27	38	38	38	4	373	
Sedan	10	40	42	35	28	26	29	26	25	29	26	29	26	25	29	26	29	26	25	29	37	37	37	4	331	
Public Transport Pickup (Minibus)	2	9	7	8	5	8	9	7	8	5	8	9	7	8	5	8	9	7	8	5	11	11	11	1	97	
Standard Bus	2	6	5	4	3	5	7	5	6	4	7	5	6	4	7	5	6	4	7	5	6	6	6	1	62	
4WD, Standard Pickup	3	6	11	5	6	6	3	3	3	6	3	3	3	3	3	3	3	3	3	3	6	6	6	1	60	
2-Axle Truck (Other Than Pickup)	0	0	2	3	2	3	1	1	1	3	1	1	1	1	1	1	1	1	1	1	3	3	3	0	25	
3-Axle Truck	3	6	5	5	5	5	4	5	5	5	4	5	4	5	4	5	4	5	4	5	6	6	6	0	58	
3+ Axle Truck	0	0	0	1	0	0	1	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0	0	0	0	4
Military or Police Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total No. of Vehicles	119	319	295	268	212	212	211	209	194	208	194	208	194	209	194	208	194	208	194	208	259	259	259	24	2,531	
Total No. of PCUs	67	196	189	176	137	147	147	142	152	187	142	152	142	149	152	187	142	152	187	142	187	187	17	1,706		

Table 4.1.12: Traffic Count Survey Results
Location No. 12: Route 6A; 10 km north of Phnom Penh (Northbound Traffic)

Travel Mode	Time of Day														Total for 06:00-18:00											
	06:00-07:00		07:00-08:00		08:00-09:00		09:00-10:00		10:00-11:00		11:00-12:00		12:00-13:00			13:00-14:00		14:00-15:00		15:00-16:00		16:00-17:00		17:00-18:00		
	06:00	07:00	07:00	08:00	08:00	09:00	09:00	10:00	10:00	11:00	11:00	12:00	12:00	13:00		13:00	14:00	14:00	15:00	15:00	16:00	16:00	17:00	17:00	18:00	18:00
Pedestrian	2	11	9	10	12	13	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Bicycle, Bicycle-with-Trailer, Cyclo	27	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	130
Animal Cart	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Motorcycle	158	200	224	184	153	135	132	134	135	140	135	140	135	134	135	140	135	140	135	164	164	164	124	124	1,882	
Motorcycle-with-Trailer	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	22
Sedan	39	59	50	42	30	32	32	32	32	32	32	32	32	32	32	32	32	32	32	26	25	25	16	16	417	
Public Transport Pickup (Minibus)	11	14	7	6	6	8	7	6	6	6	6	6	6	6	6	6	6	6	6	4	3	3	1	1	80	
Standard Bus	4	5	3	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	1	1	1	1	1	33	
4WD, Standard Pickup	10	16	14	10	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	4	4	4	4	4	91	
2-Axle Truck (Other Than Pickup)	3	5	5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	1	1	33	
3-Axle Truck	7	7	8	6	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	1	1	61	
3+ Axle Truck	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	8
Military or Police Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total No. of Vehicles	264	320	320	269	220	208	199	198	200	188	199	200	188	198	200	188	215	188	215	215	215	215	159	159	2,761	
Total No. of PCUs	165	206	184	156	121	123	122	119	121	103	123	103	103	119	121	103	105	103	105	105	105	69	69	69	1,593	

Table 4.1.15: Traffic Count Survey Results
 Location No. 13: Route 7, 45 km west of Kompong Cham; 2 km east of Skon. (Eastbound Traffic)

Travel Mode	Time of Day														Total for											
	06:00-07:00		07:00-08:00		08:00-09:00		09:00-10:00		10:00-11:00		11:00-12:00		12:00-13:00		13:00-14:00		14:00-15:00		15:00-16:00		16:00-17:00		17:00-18:00		06:00-18:00	
	06:00	07:00	07:00	08:00	08:00	09:00	09:00	10:00	10:00	11:00	11:00	12:00	12:00	13:00	13:00	14:00	14:00	15:00	15:00	16:00	16:00	17:00	17:00	18:00	06:00-18:00	06:00-18:00
Pedestrian	3	2	2	2	2	2	2	2	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	10
Bicycle, Bicycle-with-Trailer, Cyclo	42	67	82	49	49	34	35	25	34	35	25	23	23	30	30	30	26	36	36	35	36	35	35	35	484	484
Animal Cart	4	3	6	4	4	4	1	1	1	1	1	1	1	1	1	1	2	2	2	3	2	3	3	3	32	32
Motorcycle	70	89	108	82	82	59	51	45	59	51	45	39	39	53	53	53	48	57	57	46	57	46	46	46	747	747
Motorcycle-with-Trailer	12	15	20	14	14	11	10	6	11	10	6	6	6	8	8	8	7	7	7	9	7	9	9	9	126	126
Sedan	13	23	40	31	31	25	23	19	25	23	19	19	19	22	22	22	18	29	29	22	29	22	22	22	283	283
Public Transport Pickup (Minibus)	4	9	14	11	11	7	6	5	7	6	5	6	6	6	6	6	6	6	6	9	6	9	9	9	95	95
Standard Bus	2	2	3	3	3	2	2	1	2	2	1	2	2	3	3	3	3	3	3	4	3	4	4	4	27	27
4WD, Standard Pickup	2	5	8	8	8	4	4	3	4	4	3	3	3	5	5	5	3	3	3	3	3	3	3	3	49	49
2-Axle Truck (Other Than Pickup)	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	26	26
3-Axle Truck	2	2	3	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	4	4
3+ Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Military or Police Vehicle	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total No. of Vehicles	154	215	288	201	201	151	135	111	151	135	111	106	106	133	133	133	115	156	156	139	156	139	139	139	1,902	1,902
Total No. of PCUs	83	112	168	117	117	94	81	69	94	81	69	73	73	83	83	83	69	103	103	98	103	98	98	98	1,148	1,148

Table 4.1.16: Traffic Count Survey Results
 Location No. 14: Route 151; 2 km north of Svay Chrum (Northbound Traffic)

Travel Mode	Time of Day														Total for											
	06:00-07:00		07:00-08:00		08:00-09:00		09:00-10:00		10:00-11:00		11:00-12:00		12:00-13:00		13:00-14:00		14:00-15:00		15:00-16:00		16:00-17:00		17:00-18:00		06:00-18:00	
	06:00	07:00	07:00	08:00	08:00	09:00	09:00	10:00	10:00	11:00	11:00	12:00	12:00	13:00	13:00	14:00	14:00	15:00	15:00	16:00	16:00	17:00	17:00	18:00	06:00-18:00	06:00-18:00
Pedestrian	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle, Bicycle-with-Trailer, Cyclo	14	14	10	10	10	14	14	6	14	14	6	5	5	6	6	6	8	9	9	10	9	10	10	10	120	120
Animal Cart	4	3	4	2	2	2	2	1	2	2	1	2	2	1	1	1	2	2	2	2	2	2	2	2	25	25
Motorcycle	67	47	39	36	36	26	24	28	24	24	28	34	34	30	30	30	32	51	51	30	51	30	30	30	445	445
Motorcycle-with-Trailer	0	1	1	1	1	1	1	0	1	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	6	6
Sedan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Public Transport Pickup (Minibus)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Standard Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4WD, Standard Pickup	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-Axle Truck (Other Than Pickup)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3+ Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Military or Police Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total No. of Vehicles	87	65	54	49	49	43	39	36	43	39	36	42	42	38	38	42	43	63	63	42	63	42	42	42	600	600
Total No. of PCUs	29	21	19	15	15	14	11	11	14	11	11	14	14	12	12	12	14	21	21	13	21	13	13	13	195	195

Table 4.1.17: Traffic Count Survey Results
 Location No. 14: Route 151; 2 km north of Sway Chrum (Southbound Traffic)

Travel Mode	Time of Day														Total for 06:00-18:00										
	06:00-07:00		07:00-08:00		08:00-09:00		09:00-10:00		10:00-11:00		11:00-12:00		12:00-13:00			13:00-14:00		14:00-15:00		15:00-16:00		16:00-17:00		17:00-18:00	
	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00		20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	24:00-01:00	01:00-02:00	02:00-03:00	03:00-04:00	04:00-05:00	05:00-06:00
Pedestrian	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Bicycle, Bicycle-with-Trailer, Cyclo	23	7	8	8	9	8	8	8	9	8	16	6	4	5	7	8	11	11	11	11	11	11	11	11	111
Animal Cart	2	1	2	2	2	1	2	2	2	1	1	1	2	1	1	0	0	0	0	0	0	0	0	0	16
Motorcycle	21	29	43	33	32	29	29	33	32	29	29	27	30	36	47	38	395	395	395	395	395	395	395	395	395
Motorcycle-with-Trailer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Sedan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Public Transport Pickup (Minibus)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Standard Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4WD, Standard Pickup	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-Axle Truck (Other Than Pickup)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3+ Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Military or Police Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total No. of Vehicles	46	38	55	44	44	39	46	44	44	39	46	35	37	44	56	47	532	532	532	532	532	532	532	532	532
Total No. of PCUs	13	13	18	15	14	12	13	15	14	12	13	11	13	15	18	14	169	169	169	169	169	169	169	169	169

Average Daily Traffic

Table 4.1.18: Traffic Count Survey Results
 Location No. 15: Route 315; 2 km east of Prek Tamak (Westbound Traffic)

Travel Mode	Time of Day														Total for 06:00-18:00										
	06:00-07:00		07:00-08:00		08:00-09:00		09:00-10:00		10:00-11:00		11:00-12:00		12:00-13:00			13:00-14:00		14:00-15:00		15:00-16:00		16:00-17:00		17:00-18:00	
	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00		20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	24:00-01:00	01:00-02:00	02:00-03:00	03:00-04:00	04:00-05:00	05:00-06:00
Pedestrian	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Bicycle, Bicycle-with-Trailer, Cyclo	55	49	22	17	15	7	8	17	15	7	8	4	7	9	13	10	215	215	215	215	215	215	215	215	215
Animal Cart	6	10	3	2	4	0	1	2	4	0	1	1	1	1	1	0	31	31	31	31	31	31	31	31	31
Motorcycle	53	99	62	38	27	22	22	38	27	22	22	22	24	26	27	23	443	443	443	443	443	443	443	443	443
Motorcycle-with-Trailer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sedan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Transport Pickup (Minibus)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Standard Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4WD, Standard Pickup	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-Axle Truck (Other Than Pickup)	1	1	1	1	1	0	0	1	1	0	0	1	1	1	1	0	7	7	7	7	7	7	7	7	7
3-Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2	2	2	2
3+ Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
Military or Police Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total No. of Vehicles	116	160	89	60	48	32	34	60	48	32	34	29	35	38	45	34	720	720	720	720	720	720	720	720	720
Total No. of PCUs	35	53	29	23	19	12	13	23	19	12	13	14	13	15	17	11	254	254	254	254	254	254	254	254	254

Average Daily Traffic

Table 4.1.19: Traffic Count Survey Results
 Location No. 15: Route 315; 2 km east of Prek Tamak (Eastbound Traffic)

Travel Mode	Time of Day														Total for 06:00-18:00	
	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00				
Pedestrian	1	0	0	0	1	2	2	1	1	1	1	1	1	1	1	10
Bicycle, Bicycle-with-Trailer, Cycle	12	36	35	31	24	14	14	16	17	18	13	14	14	14	14	244
Animal Cart	1	2	4	3	4	3	1	2	2	3	4	4	2	2	2	31
Motorcycle	14	49	55	50	45	30	35	31	40	43	41	28	28	28	28	461
Motorcycle-with-Trailer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Sedan	0	1	2	2	1	0	1	1	1	1	1	1	0	0	0	10
Public Transport Pickup (Minibus)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Standard Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4WD, Standard Pickup	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	6
2-Axle Truck (Other Than Pickup)	0	1	1	1	2	1	1	0	1	1	1	0	0	0	0	10
3-Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3+ Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Military or Police Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total No. of Vehicles	29	91	98	88	77	49	51	51	61	67	60	45	45	45	45	766
Total No. of PCUs	10	30	34	29	28	19	16	16	22	24	22	15	15	15	15	264

Table 4.1.20: Traffic Count Survey Results
 Location No. 16: Route 11; 5 km north of Neak Loeng (Northbound Traffic)

Travel Mode	Time of Day														Total for 06:00-18:00	
	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00				
Pedestrian	26	11	6	10	16	8	4	4	7	7	5	5	5	5	5	104
Bicycle, Bicycle-with-Trailer, Cycle	46	20	24	16	17	16	16	11	10	10	9	6	6	6	6	196
Animal Cart	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	5
Motorcycle	72	100	105	86	70	56	49	40	38	40	44	30	30	30	30	731
Motorcycle-with-Trailer	21	28	9	8	8	7	9	5	9	5	3	6	6	6	6	118
Sedan	4	4	6	6	4	5	4	4	4	4	4	4	4	4	4	52
Public Transport Pickup (Minibus)	5	9	10	4	5	2	2	1	2	2	2	1	1	1	1	46
Standard Bus	2	1	0	1	1	0	0	0	0	0	0	0	0	0	0	6
4WD, Standard Pickup	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	19
2-Axle Truck (Other Than Pickup)	1	1	1	5	1	1	1	1	2	2	2	2	2	2	2	20
3-Axle Truck	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	8
3+ Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Military or Police Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total No. of Vehicles	153	168	158	129	109	93	84	67	67	61	68	51	51	51	51	1,210
Total No. of PCUs	74	92	74	65	52	47	42	34	38	32	34	29	29	29	29	612

Table 4.1.21: Traffic Count Survey Results
Location No. 16: Route 11; 5 km north of Neak Loeng (Southbound Traffic)

Average Daily Traffic

Travel Mode	Time of Day														Total for 06:00-18:00	
	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00				
Pedestrian	6	13	12	6	3	2	2	4	2	3	2	3	3	2	3	57
Bicycle, Bicycle-with-Trailer, Cycle	15	30	26	22	15	11	7	10	9	9	11	9	9	11	9	176
Animal Cart	0	0	0	0	1	0	0	0	0	0	0	0	0	3	1	8
Motorcycle	65	80	98	88	86	60	49	47	41	50	50	36	4	5	4	750
Motorcycle-with-Trailer	9	10	9	15	17	11	5	5	5	7	5	4	7	3	3	102
Sedan	2	4	6	6	5	2	3	3	3	5	3	3	3	2	2	49
Public Transport Pickup (Minibus)	0	2	7	6	7	3	4	3	3	2	2	2	2	2	2	46
Standard Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
4WD, Standard Pickup	0	2	4	3	4	1	0	1	2	1	1	1	1	1	1	22
2-Axle Truck (Other Than Pickup)	1	3	2	1	2	3	2	2	1	2	2	1	2	1	1	20
3-Axle Truck	1	1	1	0	1	1	1	1	1	0	0	0	0	0	0	9
3+ Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Military or Police Vehicle	0	0	1	0	0	1	0	0	0	0	0	0	0	1	1	6
Total No. of Vehicles	95	133	155	143	139	98	73	73	69	80	77	59	43	38	31	1,194
Total No. of PCUs	41	58	75	69	75	56	39	38	40	43	38	31	41	31	31	602

Table 4.1.22: Traffic Count Survey Results
Location No. 17: Route 11; at the Route 11/Route 316 Junction in Svay Antor (Northbound Traffic)

Average Daily Traffic

Travel Mode	Time of Day														Total for 06:00-18:00	
	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00				
Pedestrian	46	49	57	118	91	138	81	105	62	80	61	36	36	36	36	924
Bicycle, Bicycle-with-Trailer, Cycle	158	79	56	46	38	42	39	42	35	50	49	48	48	48	48	681
Animal Cart	3	2	3	2	2	1	0	1	2	2	2	1	1	1	1	21
Motorcycle	59	58	65	64	57	55	45	35	38	42	47	50	50	50	50	615
Motorcycle-with-Trailer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Sedan	1	0	1	1	0	1	0	0	1	0	1	0	0	0	0	9
Public Transport Pickup (Minibus)	1	0	0	4	3	6	3	5	3	4	3	1	1	1	1	33
Standard Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4WD, Standard Pickup	0	1	2	1	1	1	1	3	0	0	0	0	0	0	0	10
2-Axle Truck (Other Than Pickup)	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	6
3-Axle Truck	0	2	2	3	2	0	1	2	1	2	1	1	1	1	1	17
3+ Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Military or Police Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total No. of Vehicles	222	143	128	120	105	108	92	89	81	103	104	103	103	103	103	1,396
Total No. of PCUs	56	43	42	46	40	41	35	39	31	41	36	34	34	34	34	483

Table 4.1.23: Traffic Count Survey Results Location No. 17: Route 11; at the Route 316 Junction in Sway Antor (Southbound Traffic)

Travel Mode	Time of Day														Total for 06:00-18:00												
	06:00-07:00		07:00-08:00		08:00-09:00		09:00-10:00		10:00-11:00		11:00-12:00		12:00-13:00			13:00-14:00		14:00-15:00		15:00-16:00		16:00-17:00		17:00-18:00			
	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00		20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	24:00-25:00	25:00-26:00	26:00-27:00	27:00-28:00	28:00-29:00	29:00-30:00		
Pedestrian	112	165	94	72	43	37	31	23	21	21	21	23	23	21	21	21	21	21	21	21	21	21	21	21	21	21	670
Bicycle, Bicycle-with-Trailer, Cyclo	84	102	76	58	47	34	29	26	22	22	22	26	26	30	30	30	30	30	30	30	30	30	30	30	30	30	591
Animal Cart	2	1	1	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Motorcycle	67	87	62	58	42	38	33	27	23	23	23	27	27	29	29	29	29	29	29	29	29	29	29	29	29	29	527
Motorcycle-with-Trailer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Sedan	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Public Transport Pickup (Minibus)	6	8	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	31
Standard Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4WD, Standard Pickup	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
2-Axle Truck (Other Than Pickup)	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
3-Axle Truck	1	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	12
3+ Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Military or Police Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total No. of Vehicles	151	202	150	124	93	75	65	57	49	49	49	57	57	63	63	63	63	63	63	63	63	63	63	63	63	63	1,194
Total No. of PCUs	53	68	56	43	29	24	21	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	400

Average Daily Traffic

Table 4.1.24: Traffic Count Survey Results Location No. 17: Route 316; at the Route 11/Route 316 Junction in Sway Antor (Eastbound Traffic; from Route 11)

Travel Mode	Time of Day														Total for 06:00-18:00												
	06:00-07:00		07:00-08:00		08:00-09:00		09:00-10:00		10:00-11:00		11:00-12:00		12:00-13:00			13:00-14:00		14:00-15:00		15:00-16:00		16:00-17:00		17:00-18:00			
	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00		20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	24:00-25:00	25:00-26:00	26:00-27:00	27:00-28:00	28:00-29:00	29:00-30:00		
Pedestrian	45	34	16	13	15	12	10	8	11	11	12	10	8	11	12	12	12	12	12	12	12	12	12	12	12	12	206
Bicycle, Bicycle-with-Trailer, Cyclo	27	34	23	12	29	13	10	6	8	8	10	6	6	8	15	15	15	15	15	15	15	15	15	15	15	15	222
Animal Cart	1	2	2	1	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Motorcycle	28	33	21	12	14	14	12	13	12	12	12	12	13	12	15	15	15	15	15	15	15	15	15	15	15	15	208
Motorcycle-with-Trailer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sedan	0	1	0	0	0	1	0	0	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	7
Public Transport Pickup (Minibus)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Standard Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4WD, Standard Pickup	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2-Axle Truck (Other Than Pickup)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
3-Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3+ Axle Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Military or Police Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total No. of Vehicles	58	70	48	26	47	28	25	21	23	23	25	21	21	23	32	32	32	32	32	32	32	32	32	32	32	32	460
Total No. of PCUs	18	21	15	9	14	8	10	7	9	9	10	7	7	9	12	12	12	12	12	12	12	12	12	12	12	12	148

Average Daily Traffic



Appendix 4.2

Mekong River Crossing Origin-Destination Survey Results

Figure 4.2.1: Mekong River Crossing Origin-Destination Survey Results, Matrix for Passenger Transport Non-Motorized Vehicles Only

FROM ZONE No. Name	AVERAGE DAILY PASSENGERS TO:																																		Total From:		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
1 Phnom Penh	71																																				84
2 S. Kandal				3	5	2	3																														305
3 E. Kandal				187	89	28																															181
4 N.W. Kandal	71	1	108					1																												113	
5 N. Prey Veng				3			2																													193	
6 S. Prey Veng	3	187																																		99	
7 Svay Rieng (1)	5	89						5																												99	
8 E. Kompong Cham	2	28																																		30	
9 W. Kompong Cham	3			2				245																												250	
10 Kompong Chhneng						5	245																													251	
11 Kompong Spee																																				0	
12 Takeo																																				0	
13 Kampot (2)																																				0	
14 Sihanoukville																																				0	
15 Koh Kong																																				0	
16 Pursat																																				0	
17 Battambang																																				0	
18 B. Meanchey (3)																																				0	
19 S-O Meanchey																																				0	
20 Preah Vihear																																				0	
21 Kompong Thom																																				0	
22 Stung Treng																																				0	
23 Ratanakiri																																				0	
24 Monduliri																																				0	
25 Kratie																																				0	
26 Bante Meanchey																																				0	
27 Poipet																																				0	
28 Thailand (4)																																				0	
29 Bangkok																																				0	
30 Lao PDR																																				0	
31 N. & C. Vietnam																																				0	
32 S. Vietnam (5)																																				0	
33 Ho Chi Minh City																																				0	
34 S.S. Vietnam																																				0	
Total To:	84	305	181	113	193	99	30	250	251	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1506	

Notes:
 (1) Excluding Bante Meanchey
 (2) Excluding Sihanoukville
 (3) Excluding Poipet
 (4) Excluding Bangkok
 (5) Excluding Ho Chi Minh City

Figure 4.2.2: Mekong River Crossing Origin-Destination Survey Results, Matrix for Passenger Transport Motorcycles Only

FROM ZONE No. Name	AVERAGE DAILY PASSENGERS TO:																																		Total From:						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34							
1 Phnom Penh																																							1562	28.4%	
2 S. Kandal																																								250	4.5%
3 E. Kandal																																								1030	18.7%
4 N.W. Kandal																																								135	2.5%
5 N. Prey Veng																																								411	7.5%
6 S. Prey Veng																																								175	3.2%
7 Svay Rieng (1)																																							189	3.4%	
8 E. Kompong Cham																																							889	16.2%	
9 W. Kompong Cham																																								791	14.4%
10 Kompong Chhnang																																								3	0.1%
11 Kompong Spee																																								4	0.1%
12 Takeo																																							0	0.0%	
13 Kampot (2)																																							0	0.0%	
14 Sihanoukville																																							0	0.0%	
15 Koh Kong																																							0	0.0%	
16 Pursat																																							1	0.0%	
17 Battambang																																							0	0.0%	
18 B. Meanchey (3)																																							0	0.0%	
19 S-O Meanchey																																							0	0.0%	
20 Preah Vihear																																							0	0.0%	
21 Kompong Thom																																							1	0.0%	
22 Stung Treng																																							0	0.0%	
23 Ratanakiri																																							0	0.0%	
24 Mondulkiri																																							0	0.0%	
25 Kratie																																							0	0.0%	
26 Bavet/Moc Bai	48	10																																					58	1.1%	
27 Poipet																																							0	0.0%	
28 Thailand (4)																																							0	0.0%	
29 Bangkok																																							0	0.0%	
30 Lao PDR																																							0	0.0%	
31 N. & C. Vietnam																																							0	0.0%	
32 S. Vietnam (5)																																							0	0.0%	
33 Ho Chi Minh City																																							0	0.0%	
34 S.S. Vietnam																																							0	0.0%	
Total To:	1562	250	1030	135	411	175	189	889	791	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58	0		

Notes:
 (1) Excluding Bavet/Moc Bai
 (2) Excluding Sihanoukville
 (3) Excluding Poipet
 (4) Excluding Bangkok
 (5) Excluding Ho Chi Minh City

Figure 4.2.3: Mekong River Crossing Origin-Destination Survey Results, Matrix for Passenger Transport
All Motorized Vehicle Types except Motorcycles (Drivers of Commercial Vehicles Not Included)

FROM-ZONE No. Name	AVERAGE DAILY PASSENGERS TO:																																		Total From:	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
1 Phnom Penh	207	2	207	200	859	707	397																													2572
2 S. Kandal		2		4	7	15	4																												32	
3 E. Kandal																																			19	
4 N.W. Kandal																																			221	
5 N. Prey Veng																																			253	
6 S. Prey Veng																																			866	
7 Sway Rieng (1)																																			736	
8 E. Kompong Cham																																			557	
9 W. Kompong Cham																																			152	
10 Kompong Chhnatop																																			3	
11 Kompong Spee																																			4	
12 Takeo																																			0	
13 Kamport (2)																																			0	
14 Sihanoukville																																			3	
15 Koh Kong																																			0	
16 Pursat																																			0	
17 Battambang																																			0	
18 B. Meanchey (3)																																			1	
19 S-O Meanchey																																			1	
20 Preah Vihear																																			0	
21 Kompong Thom																																			0	
22 Stung Treng																																			4	
23 Ratanakiri																																			0	
24 Monduliri																																			0	
25 Xetris																																			0	
26 Bevet/Moc Bai																																			167	
27 Poipet																																			47	
28 Thailand (4)																																			0	
29 Bangkok																																			0	
30 Lao PDR																																			0	
31 N. & C. Vietnam																																			0	
32 S. Vietnam (5)																																			24	
33 Ho Chi Minh City																																			14	
34 S.S. Vietnam																																			0	
Total To:	2572	32	221	19	253	866	736	557	152	3	4	0	0	3	0	0	1	1	0	0	4	0	0	0	0	0	167	47	0	0	0	24	14	0	5676	

Notes:
 (1) Excluding Bevet/Moc Bai
 (2) Excluding Sihanoukville
 (3) Excluding Poipet
 (4) Excluding Bangkok
 (5) Excluding Ho Chi Minh City

Figure 4.2.4: Mekong River Crossing Origin-Destination Survey Results, Matrix for Tonnage Transport. All Vehicle Types Included

FROM ZONE No. Name	AVERAGE DAILY TONNAGE TO:																																		Total From:	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
1 Phnom Penh	17				80	35	96	41																												380
2 S. Kandal				5	5	1																													6	
3 C. Kandal	9			5				1																											15	
4 N.W. Kandal			10				1																												11	
5 N. Pray Veng	8	3																																	11	
6 S. Pray Veng	31	14																																	45	
7 Svay Rieng [1]	77	1																																	78	
8 E. Kompong Cham	17	1							56												29														103	
9 W. Kompong Cham								79																											79	
10 Kompong Chhnang																																			0	
11 Kompong Spee																																			0	
12 Takeo																																			0	
13 Kamport [2]																																			0	
14 Shanoukville																																			0	
15 Koh Kong																																			11	
16 Pursat																																			0	
17 Battambang																																			0	
18 B. Meanchey [3]																																			0	
19 S-O Meanchey																																			0	
20 Preah Vihear																																			0	
21 Kompong Thom																																			0	
22 Stung Treng																																			0	
23 Ratanakiri																																			0	
24 Mondulokiri																																			0	
25 Kratie																																			0	
26 Bante/Moc Bai	143	1																																	148	
27 Poipect																																			0	
28 Thailand [4]																																			0	
29 Bangkok																																			0	
30 Lao PDR																																			0	
31 N. & C. Vietnam																																			0	
32 S. Vietnam [5]																																			0	
33 Ho Chi Minh City									2																										2	
34 S.S. Vietnam																																			0	
Total To:	285	20	27	5	85	36	107	121	59	1	3	0	0	0	0	0	0	0	0	0	29	0	0	0	0	0	0	0	0	0	0	0	39	23	0	
	32.1%	2.2%	2.0%	0.6%	9.6%	4.0%	12.0%	13.6%	6.0%	0.1%	0.3%										3.3%												4.3%	2.6%	889	

Notes:
 [1] Excluding Bante/Moc Bai
 [2] Excluding Shanoukville
 [3] Excluding Poipect
 [4] Excluding Bangkok
 [5] Excluding Ho Chi Minh City

