

Appendices

(1) Member List of the Survey Team

Assignment	Name	Organization
Team Leader	Dr. M. Togawa	Japan International Cooperation Agency
Project Planner	Mr. K. Nishigata	Japan International Cooperation Agency
Chief Consultant /Road Planner	Mr. K. Konno	Oriental Consultants
Institutional Development of Road Maintenance	Mr. K. Takahashi	International Development Center of Japan
Road & Pavement Design-1	Mr. H. Kobayashi	Oriental Consultants
Road & Pavement Design-2/Road Maintenance	Mr. M. Fukuda	Oriental Consultants
Topographic & Geological Survey	Mr. H. Morimoto	Oriental Consultants
Environmental Analysis/Hydrological Survey	Dr. T. Hayashida	International Development Center of Japan
Construction Planning/Cost Estimate	Mr. M. Fujikuma	Oriental Consultants

(2) Survey Schedule

1) 1st Survey (Site Survey)

Duration	Work Contents	Place
Oct 15 - 16	<ul style="list-style-type: none"> Oct 15: Konno, Takahashi, Kobayashi, Morimoto and Fujikuma tripped to Vientiane Internal Meeting, data collection and analysis 	Vientiane
Oct 17 - 23	<ul style="list-style-type: none"> Oct 18: Meeting at JICA Laos Office Oct 19: Kick off meeting with MPWT/DOR, explanation/discussion of Inception Report Data collection, preparation for sub-contract. Oct 20: Hayashida tripped to Vientiane Oct 23: Nishigata tripped to Vientiane 	Vientiane
Oct 24 - 30	<ul style="list-style-type: none"> Oct 24: Move to Savannakhet Oct 25: Courtesy call to DPWT Savannakhet, site survey Oct 26: Meeting with DPWT Savannakhet, courtesy call to Vice Governor of Savannakhet Province, and move to Vientiane Oct 27: Meeting at JICA Laos Office, discussion for Minutes with MPWT/DOR, signing of Minutes, report to Japan embassy Oct 28: Report to JICA Laos Office Oct 29: Nishigata returned to Tokyo 	Vientiane、 Savannakhet
Oct 31 - Nov 6	<ul style="list-style-type: none"> Nov 1: Kobayashi and Morimoto moved to Savannakhet Site survey, preparation of TOR for sub-contract Data collection and interview survey related to road operation & maintenance Nov 5: Agreement of sub-contract (hydrological survey) Nov 4: Kobayashi & Morimoto moved to Vientiane 	Vientiane、 Savannakhet
Nov 7 - 13	<ul style="list-style-type: none"> Nov 7: Kobayashi moved to Savannakhet Nov 10: Morimoto & Hayashida moved to Savannakhet 	Vientiane、 Savannakhet

APPENDICES

	<ul style="list-style-type: none"> Preparation of TOR for sub-contract Nov 12: Workshop for road maintenance at MPWT Nov 13: Morimoto & Hayashida moved to Vientiane 	
Nov 14 - 20	<ul style="list-style-type: none"> Nov 16: Agreement of sub-contract (traffic survey) Nov 16: Bid for sub-contract (topographic survey & pavement condition survey) Nov 17: Morimoto moved to Savannakhet Nov 17: Takahashi & Fujikuma moved to Bangkok Site survey Survey on road maintenance structure in Thailand Nov 20: Takahashi & Fujikuma moved to Vientiane 	Vientiane、 Savannakhet、 ハノイ
Nov 21 - 27	<ul style="list-style-type: none"> Nov 22: Agreement of sub-contract (topographic survey & pavement condition survey, geotechnical survey) Nov 22: Konno, Takahashi, Hayashida and Fujikuma moved to Savannakhet Nov 22: Workshop for road maintenance at DPWT Savannakhet Nov 24: Konno, Takahashi, Kobayashi, Morimoto, Hayashida and Fujikuma moved to Vientiane Preparation of site survey report 	Vientiane、 Savannakhet
Nov 28 - Dec 4	<ul style="list-style-type: none"> Preparation of site survey report Nov 28: Takahashi returned to Tokyo (arrived on Nov 29) Dec 1: Hayashida returned to Tokyo (arrived on Dec 2) Dec 2: Konno & Kobayashi returned to Tokyo (arrived on Dec 3) 	Vientiane
Dec 5 - 11	<ul style="list-style-type: none"> Dec 7: Fujikuma returned to Tokyo (arrived on Dec 8) Preparation of site survey report 	Vientiane
Dec 12 - 18	<ul style="list-style-type: none"> Review of sub-contract reports Preparation of site survey report 	Vientiane
Dec 19 - 23	<ul style="list-style-type: none"> Dec 22: Morimoto returned to Tokyo (arrived on Dec 23) 	Vientiane

2) 2nd Survey (Explanation of Design Policy)

Duration	Work Contents	Place
Feb 1 - 5	<ul style="list-style-type: none"> Jan 30: Fukuda moved to Vientiane Feb 1: Konno, Takahashi & Kobayashi moved to Vientiane Feb 2: Meeting at JICA Lao Office, MPWT and Japan Embassy Feb 3: Internal meeting, preparation of discussion paper Feb 4: Meeting at JICA Laos Office Feb 5: Internal meeting, data collection 	Vientiane
Feb 6 - 13	<ul style="list-style-type: none"> Feb 6: Move to Savannakhet Feb 7: Meeting with DPWT Savannakhet, site survey Feb 8: Move to Vientiane Feb 9: Signing of Minutes, report to JICA Laos Office Feb 9: Konno, Takahashi & Kobayashi returned to Tokyo (arrived on 	Savannakhet Vientiane

	Feb 10), Fukuda returned to Luang Prabang	
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3) 3rd Survey (Explanation of Outline Design)

Duration	Work Contents	Place
May 29 - June 4	<ul style="list-style-type: none"> • May 29: Konno, Takahashi & Kobayashi moved to Vientiane • May 30: Meeting with JICA Laos Office, Japan Embassy, and MPWT • May 31: Discussion for Minutes with MPWT • Jun 1: Discussion for Minutes with MPWT, signing of Minutes • Jun 2-3: Meeting with MPWT on IEE <p>Jun 3-4: Konno, Takahashi & Kobayashi returned.</p>	Vientiane

(3) List of Parties Concerned in the Recipient Country

Name	Position	Organization
Department of Roads, Ministry of Public Works and Transport		
Mr. Pothong NGONPHACHANH	Director General	Department of Roads
Mr. Sak DALAT	Director	Road Administration Division
Mr. Litta KHATTIYA	Deputy Director	Road Administration Division
Mr. Phoukham VONGSAY	Engineer	Road Administration Division
Mr. Silong KINGKEO OUDOM	Engineer	Road Administration Division
Mr. Khamseng	Engineer	Road Administration Division
Mr. Viengvilay SOULINTHONE	Engineer	Road Administration Division
Mr. Chansy LUANGAPHAY	Engineer	Road Administration Division
Mr. Thongvern BUTHICHACK	Engineer	Road Administration Division
Ms. Manivone KHAYAVONG	Deputy Director	Technical & Environment Division
Mr. Bounphraseuth	Engineer	Technical & Environment Division
DPWT Savannakhet, Ministry of Public works and Transport		
Mr. Sengthong	Director	
Mr. Ngampasong MEUANMANY	Deputy Director	
Mr. Akhalar INTHAVONGSA	Engineer	
Mr. Davinh	Deputy Chief	Inland Waterway Office
Savannakhet Province		
Dr. Souphanh KEOMIXAY	Vice Governor	

(4) Minutes of Discussion

1) 1st Survey (Site Survey)


MINUTES OF DISCUSSIONS
ON THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT OF NATIONAL ROAD NO.9
AS EAST-WEST ECONOMIC CORRIDOR
IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC


In response to a request from the Government of the Lao People's Democratic Republic (hereinafter referred to as "Lao PDR"), the Government of Japan decided to conduct a Preparatory Survey on the Project for Improvement of National Road No.9 as East-West Economic Corridor (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to Lao PDR the Preparatory Survey Team (hereinafter referred to as "the Team"), which is headed by Mr. Masato Togawa, Chief Representative, JICA Laos Office, and is scheduled to stay in the country from October 15th to December 3rd, 2010. The Team held discussions with the officials concerned with the Government of the Lao PDR and conducted a field survey in the study area.

In the course of discussions and field survey, both parties confirmed the main items described on the attached sheets. The Team will proceed to further works and prepare the Preparatory Survey Report.

October 27th, 2010


Mr. Masato Togawa
Leader
Preparatory Survey Team
Japan International Cooperation Agency


HE. Mr. Sommad Pholsena
Minister for Public Works and Transport
The Lao People's Democratic Republic

ATTACHMENT

1. Project Title

Both sides agreed that the project title for this survey was “the Project for Improvement of National Road No.9 as East-West Economic Corridor”.

2. Objective of the Project

The objective of the Project is to improve National Road No.9 to fulfill the satisfactory function as an international transport corridor.

3. Project site

The site of the Project is located on National Road No.9 (Savannakhet – Den Savan) as shown in ANNEX 1.

4. Responsible and Implementing Entity

The responsible and implementing entity for the Project is the Ministry of Public Works and Transport (MPWT).

5. Confirmation of the items requested by the Government of the Lao PDR

After discussions with the Team, the requested components were confirmed as below.

- Improvement of National Road No.9 (Savannakhet – Den Savan Section)

JICA will assess the appropriateness of the request with the following policy and will recommend to the Government of Japan for approval.

- determine respective section as “the improvement section” for a large-scale construction work covered by Japan’s grant aid and “the maintenance & repair section” for maintenance work conducted by the Lao side.

- exclude the rehabilitation of bridges.

- apply the asphalt concrete pavement for the improvement section, in principle.

6. Japan's Grant Aid Scheme

6-1. Lao side understands the Japan's Grant Aid Scheme explained by the Team, as described in ANNEX 2.

6-2. Lao side will take the necessary measures, as described in ANNEX 3, for smooth implementation of the Project.

7. Schedule of the Study

7-1. The 2nd preparatory survey team will be dispatched to Laos to explain the result of the 1st survey and design concept around February, 2011.



7-2. JICA will prepare the draft report in English and dispatch a mission in order to explain its contents around May, 2011.

7-3. JICA will finalize the final report and send it to the Government of Laos by the end of July, 2011.

8. Other issues

1) The procedures necessary for the approval of EIA (Environmental Impact Assessment) shall be implemented by the Lao side by the end of June 2011. In the process of EIA, the Government of Lao PDR shall make full explanation to stake holders about environmental impacts of the Project.

2) The details of tax exemption procedures, especially for reimbursement of VAT (Value Added Tax) will be informed of the Team through this survey period.

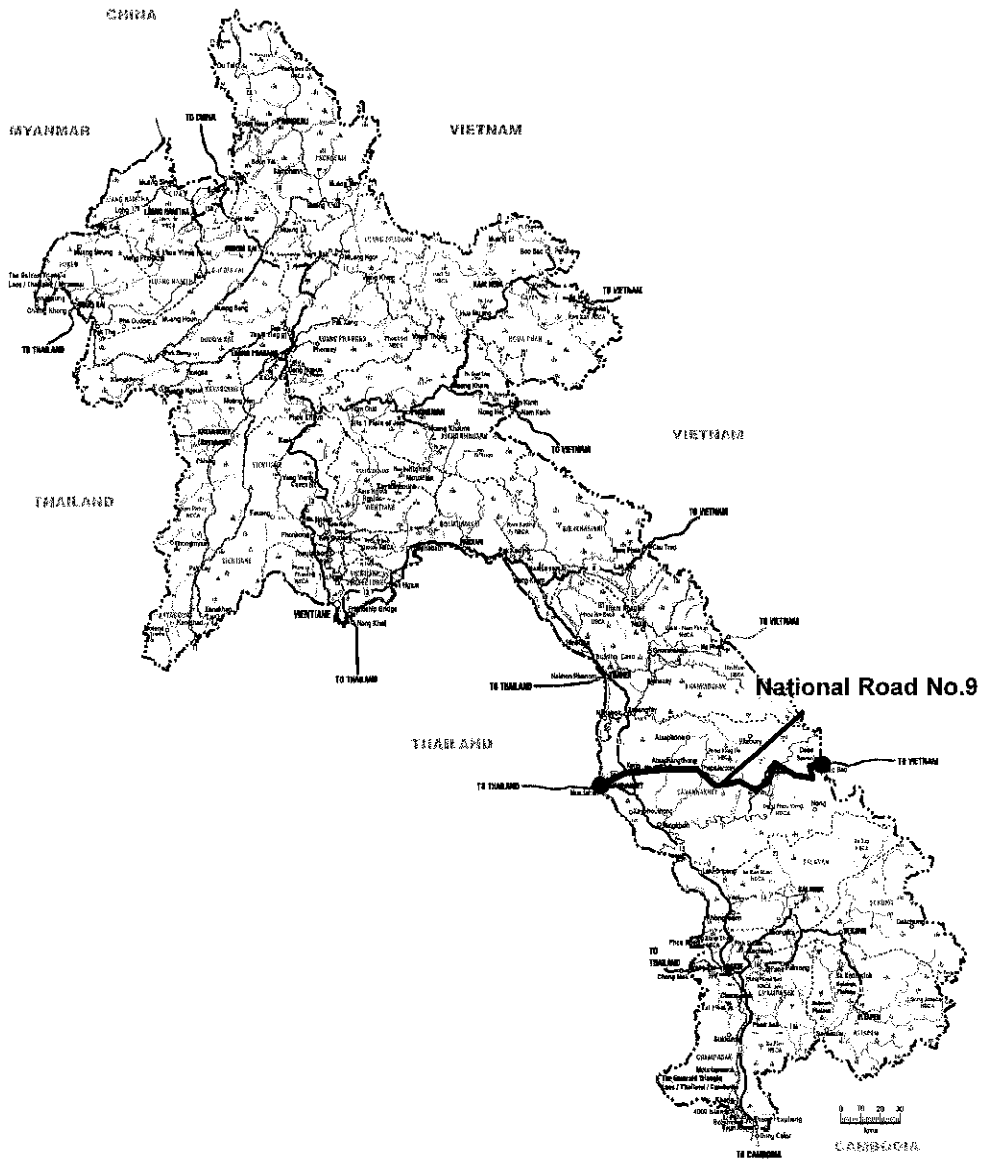
3) The Lao side will submit answers to the Questionnaires, which the Team handed to the Lao side, by 15th November, 2010.

M.J.

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ANNEX 1

Site Map



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JAPAN'S GRANT AID

The Government of Japan (hereinafter referred to as "the GOJ") is implementing the organizational reforms to improve the quality of ODA operations, and as a part of this realignment, a new JICA law was entered into effect on October 1, 2008. Based on this law and the decision of the GOJ, JICA has become the executing agency of the Grant Aid for General Projects, for Fisheries and for Cultural Cooperation, etc.

The Grant Aid is non-reimbursable fund provided to a recipient country to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. The Grant Aid is not supplied through the donation of materials as such.

1. Grant Aid Procedures

The Japanese Grant Aid is supplied through following procedures :

- Preparatory Survey
 - The Survey conducted by JICA
- Appraisal & Approval
 - Appraisal by the GOJ and JICA, and Approval by the Japanese Cabinet
- Authority for Determining Implementation
 - The Notes exchanged between the GOJ and a recipient country
- Grant Agreement (hereinafter referred to as "the G/A")
 - Agreement concluded between JICA and a recipient country
- Implementation
 - Implementation of the Project on the basis of the G/A

2. Preparatory Survey**(1) Contents of the Survey**

The aim of the preparatory Survey is to provide a basic document necessary for the appraisal of the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of relevant agencies of the recipient country necessary for the implementation of the Project.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of a outline design of the Project.



- Estimation of costs of the Project.

The contents of the original request by the recipient country are not necessarily approved in their initial form as the contents of the Grant Aid project. The Outline Design of the Project is confirmed based on the guidelines of the Japan's Grant Aid scheme.

JICA requests the Government of the recipient country to take whatever measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization of the recipient country which actually implements the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA employs (a) registered consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the Report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the appropriateness of the Project.

3. Japan's Grant Aid Scheme

(1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes(hereinafter referred to as "the E/N") will be signed between the GOJ and the Government of the recipient country to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles to implement the Project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

(2) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the recipient country to continue to work on the Project's implementation after the E/N and G/A.

(3) Eligible source country

Under the Japanese Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. When JICA and the Government of the recipient country or its designated authority deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country.



However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals".

(4) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by JICA. This "Verification" is deemed necessary to fulfill accountability to Japanese taxpayers.

(5) Major undertakings to be taken by the Government of the Recipient Country

In the implementation of the Grant Aid Project, the recipient country is required to undertake such necessary measures as Annex.

(6) "Proper Use"

The Government of the recipient country is required to maintain and use properly and effectively the facilities constructed and the equipment purchased under the Grant Aid, to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Grant Aid.

(7) "Export and Re-export"

The products purchased under the Grant Aid should not be exported or re-exported from the recipient country.

(8) Banking Arrangements (B/A)

a) The Government of the recipient country or its designated authority should open an account under the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). JICA will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.

b) The payments will be made when payment requests are presented by the Bank to JICA under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

(9) Authorization to Pay (A/P)

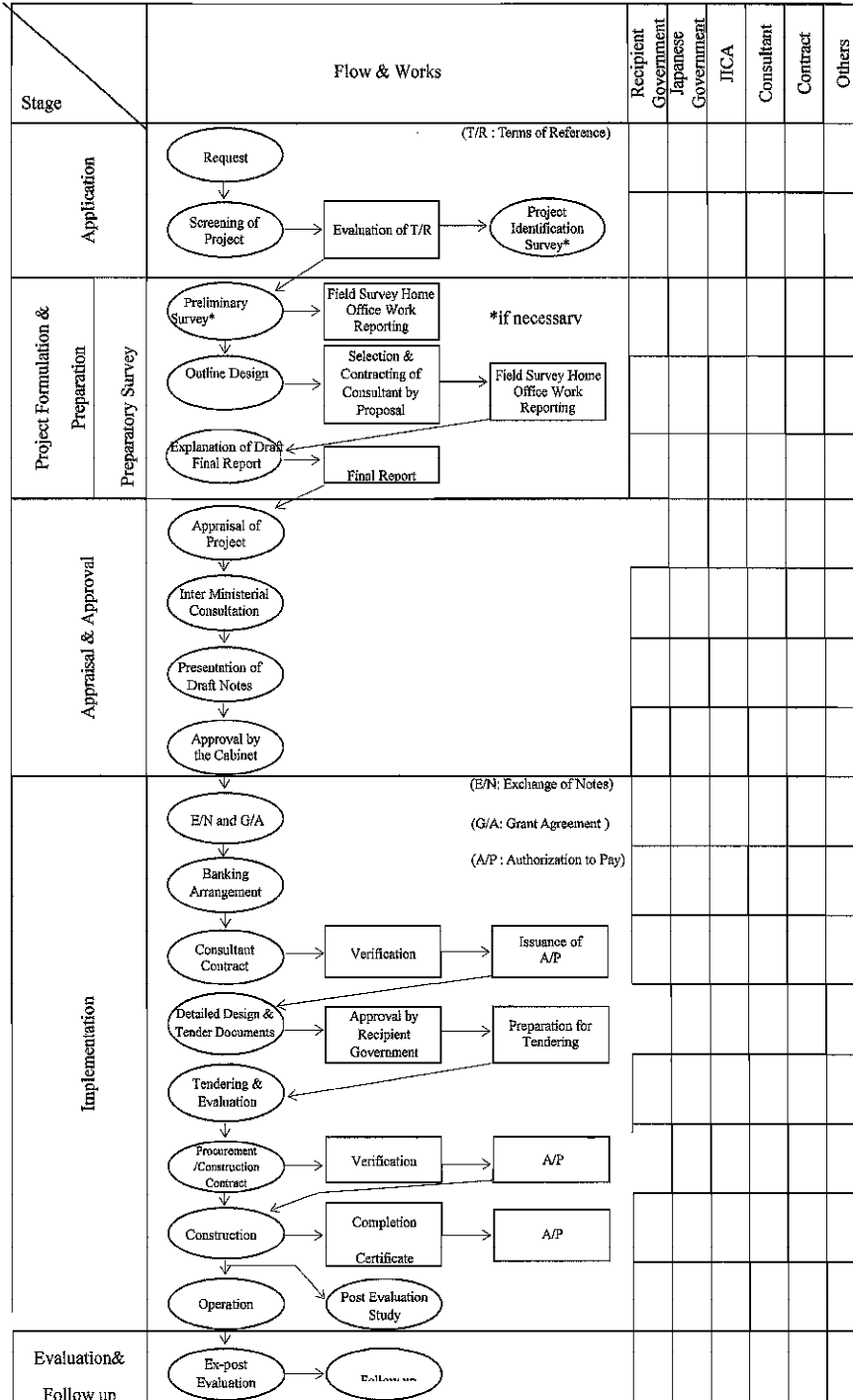
The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions paid to the Bank.

(10) Social and Environmental Considerations

A recipient country must carefully consider social and environmental impacts by the Project and must comply with the environmental regulations of the recipient country and JICA socio-environmental guidelines.



FLOW CHART OF JAPAN'S GRANT AID PROCEDURES



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[Signature]

Major Undertakings to be taken by Each Government

No.	Items	To be covered by Grant Aid	To be covered by Recipient Side
1	to secure [a lot]/[lots] of land necessary for the implementation of the Project and to clear the [site]/[sites];		●
2	To ensure prompt customs clearance of the products and to assist internal transportation of the products in the recipient country		
	1) Marine (Air) transportation of the Products from Japan to the recipient country	●	
	2) Tax exemption and custom clearance of the Products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the project site	(●)	(●)
3	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the purchase of the products and the services [be exempted] / [be borne by the Authority without using the Grant]		●
4	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
5	To ensure that the Facilities be maintained and used properly and effectively for the implementation of the Project		●
6	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project		●
7	To bear the following commissions paid to the Japanese bank for banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
8	To give due environmental and social consideration in the implementation of the Project.		●

(B/A : Banking Arrangement, A/P : Authorization to pay)

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2) 2nd Survey (Explanation of Design Policy)

MINUTES OF DISCUSSIONS
ON THE 2nd PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT OF NATIONAL ROAD NO.9
AS EAST-WEST ECONOMIC CORRIDOR
IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC

In October 2010, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a Preparatory Survey Team on the Project for Improvement of National Road No.9 as East-West Economic Corridor (hereinafter referred to as "the Project") to the Lao People's Democratic Republic (hereinafter referred to as "the Lao PDR"), and through discussion and field survey in the Lao PDR, and technical examination of the results in Japan, JICA prepared the report on the concept of the outline design of the Project as the draft report.

In order to explain and to consult with the Lao PDR on the components of the report based on the MINUTES OF DISCUSSIONS on October 27th, 2010, JICA sent the 2nd Preparatory Survey Team (hereinafter referred to as "the Team") to the Lao PDR, headed by Mr. Yoshiharu Yoneyama, Senior Representative of JICA Laos Office from February 1st, 2011 to February 9th, 2011

As a result of discussions, both parties confirmed the main items described on the attached sheets.

February 4th, 2011



Mr. Yoshiharu Yoneyama
Leader
2nd Preparatory Survey Team
Japan International Cooperation Agency



Mr. Laokham Sompheth
Director General
Department of Roads
Ministry of Public Works and Transport
The Lao People's Democratic Republic

ATTACHMENT

1. Project Concept

The Team presented the design concept with several variations as shown in ATTACHMENT 1, and explained their technical advantages and disadvantages to the Lao side. The Lao side finally requested the following project concept to be applied to the Project. In addition, the Lao side strongly requested the Japanese side to complete the Project to satisfy the following design condition.

1-1. Design Condition

The design condition to be applied to the Project was confirmed as below;

- Initial Design Period: 10 years
- Reliability Rate : 80 – 85 percent

1-2. Target Section of the Project

The Team explained the present situation of National Road No.9 (NR-9) and the priority sections to be improved as shown in ATTACHMENT 2. And both sides agreed to determine the target section of the Project based on the following concepts to fulfill the function of NR-9 as the international trunk road;

- Whole section of priority section 1 shall be improved,
- The certain section of priority section 2, where damage is observed very severe, shall be improved, and
- Other sections will be maintained or repaired by Lao side.

In addition, the Team will consider the improvement of the areas with severe pavement destruction, in consultation with the detailed planning survey team on the Project for Improvement of Road Management Capability.

Final target section will be assessed by the Team based on the above concepts.

2. Proper Maintenance of NR-9

As for the road/bridge maintenance and repair issues in the NR-9, the Team recommended the Lao side to take the following actions and requested to report the progress of these actions.

- i. To timely implement daily inspection, routine and periodic maintenance and repair work,
- ii. To prepare the road/bridge maintenance and budget plans through daily inspection/detailed inventory,
- iii. To appropriately monitor and evaluate quality/quantity of the road/bridge maintenance and repair works as agreed in the contract,

- iv. To improve the construction (for contractors) and supervision skill (for public sector) for the maintenance and repair works of the asphalt concrete road, and
- v. To apply the asphalt concrete pavement to rehabilitation of NR-9, instead of Double Bituminous Surface Treatment (DBST).

The Lao side agreed to consider taking the above actions and to report the progress of maintenance by sharing the maintenance report submitted by the Department of Public Works and Transport in Savannakhet Province with JICA Laos Office every quarter of a year.

3. Initial Environmental Examination (IEE)

3-1. IEE procedures

The Lao side explained the IEE procedures may be applied to the Project and usually the IEE procedures are completed within the Ministry of Public Works and Transport. The Team requested the Lao side to provide the detailed procedures of IEE and the Lao side agreed to deliver it to the Team by 9th February, 2011.

3-2. Completion of IEE procedures

Both sides agreed that IEE approval shall be completed by the end of June, 2011.

ATTACHMENT

ATTACHMENT 1: Project Concept Variations Considered by the Team

ATTACHMENT 2: Survey Result of National Road No.9

ATTACHMENT 1

Project Concept Variations Considered by the Team

Plan0: Improvement plan proposed by the Follow-up Study Team in 2010

[Concept]

- Spot rehabilitation work of all damaged areas and overlay of certain section
- Initial Design Period: 8 years
- Reliability Rate: 50% (for rural road)

[Adaptability]

- As the geological survey was not carried out at that time, the whole pavement structure was not also considered to the design.
- The design condition is not suitable for international trunk road.

Plan1: Ramified improvement plan based on cracks/ repair ratio

[Concept]

- Full improvement of all sections more than certain percentage of cracks/ repair ratio.
- Initial Design Period: 10 years
- Reliability Rate: 80-85% (for international trunk road)

[Adaptability]

- Responsibility of warranty against defects is not cleared at the construction boundary between existing section and newly improved section.
- The small damaged section with deteriorated geological condition will not be improved, and the risk of heavy damage in the near future will be high.

Plan2: Target area extension plan with the relaxation of reliability rate

[Concept]

- Full improvement of the whole section in priority rank 1 and priority rank 2 with the relaxation of reliability rate.
- Initial Design Period: 10 years
- Reliability Rate: 50 % (for rural road)

[Adaptability]

- The responsibility is clear with the fully rehabilitation of a certain length of the road.
- Reliability rate is not suitable for international trunk road.

Plan3: Rehabilitation plan recommended by the Team

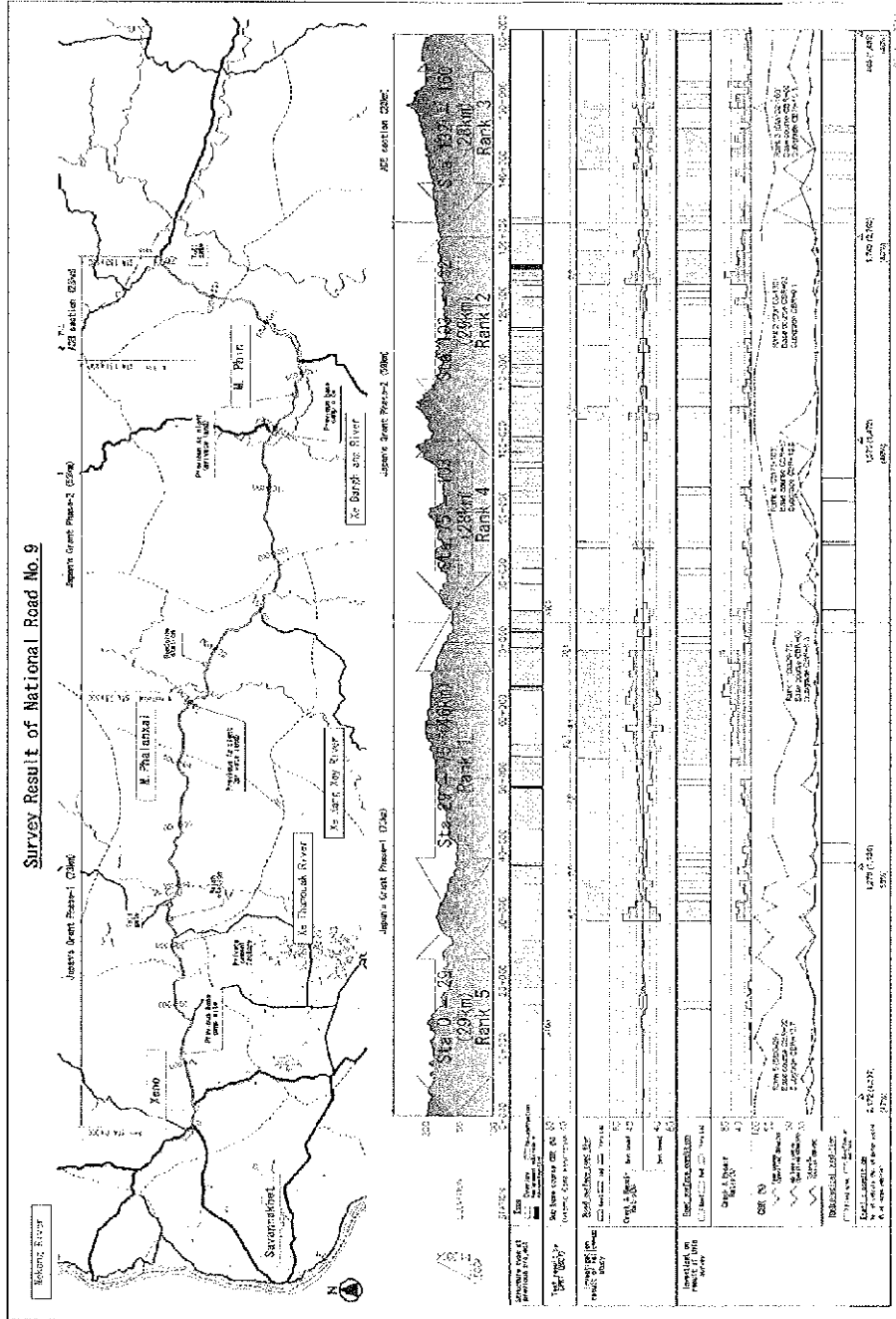
[Concept]

- Full improvement of the whole section in priority rank 1 and the certain section in priority rank 2 with the suitable reliability rate.
- Initial Design Period: 10 years
- Reliability Rate: 80-85% (for international trunk road)

[Adaptability]

- The responsibility is clear with the fully rehabilitation of a certain length of the road.
- The reliability of quality assurance and traffic safety for road users as the international trunk road will be secured. The remaining section shall be properly maintained by the Lao side.

ATTACHMENT 2



3) 3rd Survey (Explanation of Outline Design)


MINUTES OF DISCUSSIONS
ON THE PREPARATORY SURVEY
ON THE PROJECT FOR IMPROVEMENT OF NATIONAL ROAD NO.9
AS EAST-WEST ECONOMIC CORRIDOR
IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC
(EXPLANATION ON DRAFT FINAL REPORT)

In October 2010 and February 2011, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Preparatory Survey Teams on the Project for Improvement of National Road No.9 as East-West Economic Corridor (hereinafter referred to as "the Project") to the Lao People's Democratic Republic (hereinafter referred to as "the Lao PDR"), and through discussions, field surveys and technical examination of the results of the surveys in Japan, JICA prepared a Draft Final Report of the Outline Design.


In order to explain and to consult with the concerned officials of the Government of the Lao PDR on the component of the Draft Final Report, JICA sent the Lao PDR the Preparatory Survey Team for Draft Final Report Explanation (hereinafter referred to as "the Team"), which is headed by Mr. Masato Togawa, Chief Representative of JICA Laos Office, from May 30th to June 3rd, 2011.

And as a result of discussion, both sides confirmed the main items described on the attached sheets.

Vientiane, June 1st, 2011



Mr. Masato TOGAWA
Leader
Preparatory Survey Team
Japan International Cooperation Agency



Mr. Laokham SOMPHETH
Director General
Department of Roads
Ministry of Public Works and Transport
The Lao People's Democratic Republic

ATTACHMENT

1. Title of the Project

The project title at the implementation stage of the Project was agreed as “the Project for Improvement of National Road No.9 as East-West Economic Corridor of the Mekong Region”.

2. Project Components

After the explanation of the contents of Draft Final Report by the Team, the Lao side and Japanese side agreed the project components included in it.

3. Japan's Grant Aid Scheme

The Lao side understood the Japan's Grant Aid scheme and the necessary measures to be taken by the recipient country as explained by the Team and described in Annex-2 and Annex-3 of the Minutes of Discussions signed by both sides on October 27th, 2010.

4. Schedule of the Study

JICA will complete the final report and send it to the Government of the Lao PDR by the end of July, 2011.

5. Project Cost

The Lao side was informed that the Project cost should not exceed the upper limit of amount agreed on in E/N and G/A and understood that the Project Cost Estimate attached as Annex-1 is not final and is subject to change by the result of examination through revision of the Outline Design.

6. Environment and Social Considerations

(1) Completion of IEE approval procedures

The Lao side explained the IEE study report will be submitted to Water Resources and Environment Administration (WREA) by the middle of June and the approval by WREA may be obtained within one month from the submission of the report.

(2) Environmental check list and monitoring form

Both sides agreed on the contents of environmental check list as shown in Annex-2. And both sides agreed to monitor the procedures in accordance with the monitoring form (Annex-3).

7. Proper Maintenance of National Road No.9

(1) Maintenance of the road sections excluded from the project

The sections not included to the project sections shall be maintained or repaired by the Lao side. And the Team recommended applying the asphalt concrete pavement for repairing.

(2) Operation and maintenance cost

The Team explained the necessary cost for operation and maintenance of the project sections



after the completion of the Project as shown in Article 3, ANNEX 1. The Lao side confirmed the cost and explained that it would be covered by Road Maintenance Fund (RMF). Regarding RMF, the Lao side explained the change of the system of fee collection. The Lao side abandoned the tolling system of national road for RMF, and planned to increase the amount of fuel levy from 350kip/l to 440kip/l. It is enough amounts to secure current RMF.

(3) Soft component plan

The Lao side finally requested the consulting service for the soft component to enhance the capability of the MPWT staffs for the road rehabilitation with the hot-mix asphalt concrete pavement.

(4) Rehabilitation cost for future maintenance

The Team explained the design period of the pavement was 10 years, and the huge rehabilitation of the project sections, such as overlay would be necessary in the future. The Lao side understood and agreed to secure the budget for the future rehabilitation.

8. Other issues

(1) Confidentiality of the Project

The Lao side agreed that all the information related to the Project such as detailed drawings, specifications, and the result of cost estimate shall not be released to a third party before conclusion of all the contract(s) for the Project, because they are confidential documents that contain information related to the tender.

(2) Safety facilities including lighting facilities

As response to the request of the Lao side on lighting facilities, the Team presented the installation plan of safety facilities including lighting facilities. The Lao side agreed the plan and requested the Team to include the description of the safety facilities into the report.

<List of Annex>

Annex-1	Project Cost Estimate (Confidential)
Annex-2	Environmental Check List
Annex-3	Monitoring Form

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ANNEX I

Project Cost Estimate

This cost estimate is provisional and would be further examined by the Government of Japan for the approval of the Grant Aid.

1. Cost to be borne by the Japanese side:

Item	Amount (Million Japanese Yen)
1. Construction cost	
2. Consulting Services Fee	
1) Service for the Design, Tendering and Construction	
2) Soft component	
3. Total (1+2)	

2. Cost to be borne by the Lao side:

Item	Amount(10,000USD)
1. Cost for IEE	25.0
2. Relocation of telegraph pole/main cable	15.0
3. Ensure of temporary construction yard	47.0
4. Exemption from VAT/import tax of materials	210.0
5. Total (1+2+3+4)	297.0

3. Cost to be borne by the Lao side for Operation and Maintenance (every year)

- (1) Repair cost Approximately USD81,200.00
(2) Operation and maintenance cost Approximately USD43,300.00

4. Conditions for estimate

- (1) Time of estimate: December 2010
(2) Foreign exchange rate: USD 1.00 = JPY 86.62
 Kip 1.00 = JPY 0.0108
(3) Others:

The above estimate was carried out in accordance with relevant rules and the guideline of Japan's Grant Aid.

Environmental Checklist (1)

Category	Environmental Item	Main Check Items	Confirmation of Environmental Considerations
1 Permits and Explanation	(1) EIA and Environmental Permits	① Have EIA reports been officially completed? ② Have EIA reports been approved by authorities of the host country's government? ③ Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied? ④ In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	① No. IEE is to be conducted by DoR from March 2011. And WREA approval will be obtained by the end of June. ② So far Lao government has not received any negative comments on the project.
	(2) Explanation to the Public	① Are contents of the project and the potential impacts adequately explained to the public based on appropriate procedures, including information disclosure? Is understanding obtained from the public? ② Are proper responses made to comments from the public and regulatory authorities?	① Yes. During IEE study, explanation to the affected persons have conducted. And after the commencement of the project, Savannakhet authorities will conduct actual resettlement procedures including detail explanation to the affected persons. ② No. This project is to improve the existing road without any expansion. It has obviously minimum impact comparing with other alternatives.
	(3) Alternatives Evaluation	① Have appropriate alternatives been prepared and evaluated?	① Yes. It is expected that ambient air quality will comply with Lao standards. ② No. Any industrial area is not located near the project site.
2 Mitigation Measures	(1) Air Quality	① Is there a possibility that air pollutants emitted from various sources, such as vehicle traffic will affect ambient air quality? Does ambient air quality comply with the country's ambient air quality standards? ② Where industrial areas already exist near the route, is there a possibility that the project will make air pollution worse?	
	(2) Water Quality	① Is there a possibility that soil runoff from the bare lands resulting from earthmoving activities, such as cutting and filling will cause water quality degradation in downstream water areas? ② Is there a possibility that surface runoff from roads will contaminate water sources, such as groundwater? ③ Do effluents from various facilities, such as stations and parking areas/service areas comply with the country's effluent standards and ambient water quality standards? Is there a possibility that the effluents will cause areas that do not comply with the country's ambient water quality standards?	① No. The project includes slope protection, so there is no bare lands section at the newly constructed sections. During the construction phase of the road, soil runoff from construction site should be monitored by the contractor. However, the earthwork will be implemented in dry season only, so soil runoff will be minimized. ② No. The asphalt pavement without any surface runoff will be applied to the road improvement. In addition, roadway drainage will be installed at the terminal flow point by drain facilities in the side ditch. ③ N/A. The project does not include any facilities, such as stations and parking areas/ service areas.
	(3) Noise and Vibration	① Do noise and vibrations from vehicle and train traffic comply with the country's standards?	① Yes. The asphalt pavement is most effective pavement for noise and vibration mitigation.
3 Natural Environment	(1) Protected Areas	① Is the project site located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?	① No. There is no natural protected areas near the objective sections.

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Environmental Checklist (2)

Category	Environmental Item	Main Check Items	Confirmation of Environmental Considerations
3 Natural Environment	(2) Ecosystem and biota	① Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)? ② Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions? ③ If significant ecological impacts are anticipated, are adequate protection measures taken to reduce the impacts on the ecosystem? ④ Are adequate protection measures taken to prevent impacts, such as disruption of migration routes, habitat fragmentation, and traffic accident of wildlife and livestock? ⑤ Is there a possibility that installation of roads will cause impacts, such as destruction of forest, poaching, desertification, reduction in wetland areas, and disturbance of ecosystems due to introduction of exotic (non-native invasive) species and pests? Are adequate measures for preventing such impacts considered? ⑥ In cases where the project site is located at undeveloped areas, is there a possibility that the new development will result in extensive loss of natural environments?	The project is to improve the existing road without expansion, and the site does not encompass primeval forest, tropical rain forest and other important habitats. ① No ② No ③ No ④ Yes. Appropriate safe passage measure for local livestock, such as installation of the culverts at a filling section, is to be taken. ⑤ No. The project is to improve the existing road without any change of alignment. ⑥ No.
	(3) Hydrology	① Is there a possibility that alteration of topographic features and installation of structures, such as tunnels will adversely affect surface water and groundwater flows? ② Is there a soft ground on the route that may cause slope failures or landslides? Are adequate measures considered to prevent slope failures or landslides, where needed? ③ Is there a possibility that civil works, such as cutting and filling will cause slope failures or landslides? Are adequate measures considered to prevent slope failures or landslides? ④ Is there a possibility that soil runoff will result from cut and fill areas, waste soil disposal sites, and borrow sites? Are adequate measures taken to prevent soil runoff?	① No ② Yes. The project includes slope protection to prevent slope failures. ③ Yes. Prevention measure for waste soil disposal sites and borrow sites will be included to the technical specification of the contract with the contractor.
	(4) Topography and Geology		

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Environmental Checklist (3)

Category	Environmental Item	Main Check Items	Confirmation of Environmental Considerations
		<p>① Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement?</p> <p>② Is adequate explanation on relocation and compensation given to affected persons prior to resettlement?</p> <p>③ Is the resettlement plan, including proper compensation, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement?</p> <p>④ Does the resettlement plan pay particular attention to vulnerable groups or persons, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples?</p> <p>⑤ Are agreements with the affected persons obtained prior to resettlement?</p> <p>⑥ Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan?</p> <p>⑦ Is a plan developed to monitor the impacts of resettlement?</p>	<p>① Yes. The number of affected households will be under 50 and RAP is not necessary in accordance with Lao regulations. However, Initial Social Assessment will be conducted in conjunction with IEE.</p> <p>② Yes. Explanation on relocation has already been done in the IEE study. Compensation will be given in accordance with Lao regulation.</p> <p>③ Yes. Savannakhet authorities will conduct resettlement procedures based on the result of the IEE report.</p> <p>④ ⑤ Yes. All procedures will be completed in accordance with Lao regulations.</p> <p>⑥ Yes. Savannakhet authorities will conduct resettlement procedures based on the result of the IEE report.</p> <p>⑦ Yes. MPWT will assign the project coordinator and he/she will monitor the resettlement process.</p>
4 Social Environment	(1) Resettlement	<p>① Where roads or railways are newly installed, is there a possibility that the project will affect the existing means of transportation and the associated workers? Is there a possibility that the project will cause significant impacts, such as extensive alteration of existing land uses, changes in sources of livelihood, or unemployment? Are adequate measures considered for preventing these impacts?</p> <p>② Is there a possibility that the project will adversely affect the living conditions of inhabitants other than the affected inhabitants? Are adequate measures considered to reduce the impacts, if necessary?</p> <p>③ Is there a possibility that diseases, including communicable diseases, such as HIV will be introduced due to immigration of workers associated with the project? Are adequate considerations given to public health, if necessary?</p> <p>④ Is there a possibility that the project will adversely affect road traffic in the surrounding areas (e.g., by causing increases in traffic congestion and traffic accidents)?</p> <p>⑤ Is there a possibility that roads and railways will cause impede the movement of inhabitants?</p> <p>⑥ Is there a possibility that structures associated with roads (such as bridges) will cause a sun shading and radio interference?</p> <p>⑦ Is there a possibility that the project will damage the local archaeological, historical, cultural, and religious heritage sites? Are adequate measures considered to protect these sites in accordance with the country's laws?</p>	<p>① N/A. The project is to improve the existing road.</p> <p>② No. The project is to improve the existing road without expansion.</p> <p>③ No. The project is to improve the existing road without expansion.</p> <p>④ No. The project is to improve the existing road without expansion.</p> <p>⑤ No. The project is to improve the existing road without expansion.</p> <p>⑥ No. The project is to improve the existing road without expansion.</p>
	(2) Living and Livelihood		
	(3) Heritage		<p>① No. The project is to improve the existing road without expansion.</p>
	(4) Landscape	<p>① Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?</p>	<p>① No. The project is to improve the existing road without expansion.</p>

Environmental Checklist (4)

Category	Environmental Item	Main Check Items	Confirmation of Environmental Considerations
4 Social Environment	(5) Ethnic Minorities and Indigenous Peoples	<p>① Where ethnic minorities and indigenous peoples are living in the rights-of-way, are considerations given to reduce the impacts on culture and lifestyle of ethnic minorities and indigenous peoples?</p> <p>② Does the project comply with the country's laws for rights of ethnic minorities and indigenous peoples?</p>	<p>① N/A. There are no ethnic minorities and indigenous peoples near the target sections.</p> <p>② N/A. There are no ethnic minorities and indigenous peoples near the target sections.</p>
	(6) working conditions	<p>① Is the project proponent not violating any laws and ordinances associated with the working conditions of the country, which the project proponent should observe in the project?</p> <p>② Are tangible safety considerations in place for individuals involved in the project, such as the installation of safety equipment which prevents industrial accidents, and management of hazardous materials?</p> <p>③ Are intangible measures being planned and implemented for individuals involved in the project, such as the establishment of a safety and health program, and safety training (including traffic safety and public sanitation) for workers etc.?</p> <p>④ Are appropriate measures being taken to ensure that security guards involved in the project do not violate safety of other individuals involved, or local residents?</p>	<p>① No.</p> <p>② Yes. The safety management activities shall be included to the activities of the contractor.</p> <p>③ Yes. The safety management activities shall be included to the activities of the contractor.</p> <p>④ Yes. The safety management activities shall be included to the activities of the contractor.</p>
5 Others	(1) Impacts during Construction	<p>① Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)?</p> <p>② If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts?</p> <p>③ If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts?</p>	<p>① Yes. Adequate mitigation measures are to be developed within EMP of IEE to be conducted by DoR.</p> <p>② N/A. The project is to improve the existing road without expansion.</p> <p>③ N/A. The project is to improve the existing road without expansion.</p>
	(2) Monitoring	<p>① Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts?</p> <p>② Are the items, methods and frequencies included in the monitoring program judged to be appropriate?</p> <p>③ Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)?</p> <p>④ Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?</p>	<p>① Yes. EMP is to be developed within IEE to be conducted by DoR.</p> <p>② Yes. Details such as methods and frequencies are to be specified in EMP, mentioned above.</p> <p>③ Yes. same as above</p> <p>④ No. However, DoR will monitor the environmental issues, using the monitoring form attached on the M/D.</p>

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Environmental Checklist (5)

Category	Environmental Item	Main Check Items	Confirmation of Environmental Considerations
6 Note	Reference to Checklist of Other Sectors	① Where necessary, pertinent items described in the Forestry Projects checklist should also be checked (e.g., projects including large areas of deforestation). ② Where necessary, pertinent items described in the Power Transmission and Distribution Lines checklist should also be checked (e.g., projects including installation of power transmission lines and/or electric distribution facilities).	① N/A ② N/A
	Note on Using Environmental Checklist	① If necessary, the impacts to transboundary or global issues should be confirmed, if necessary (e.g., the project includes factors that may cause problems, such as transboundary waste treatment, acid rain, destruction of the ozone layer, or global warming).	① N/A

1) Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from the World Bank Safeguard Policy as a general rule, or the International Finance Corporation Performance Standards for private sector limited or non-recourse project finance cases, or other standards established by other international financial institutions, or other internationally recognized standards or good practices established by developed countries such as Japan regarding environmental and social considerations, the background and rationale for this deviation, and the measures to rectify it if necessary, are to be confirmed. In cases where local environmental regulations are yet to be established in some areas, considerations should be based on comparisons with international standards such as the World Bank Safeguard Policy, and appropriate standards of other countries (including Japan).

2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which it is located.

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ANNEX 3

MONITORING FORM

- The implementation entity has to implement environmental monitoring based on this monitoring form. In construction phase, the contractor should monitor and report the result to the implementation entity.
- This form could be revised based on the result of IEE study.

1. Pre-construction phase

Monitoring Item	Method	Monitoring Results during Report Period
Adopt implementation resettlement and land acquisition	Interview to PAPs	
Received requests / complaints from PAP*s		
Preparation of resettlement sites/ Progress of payment of compensation		

* PAP: Project Affected Person

2. Construction Phase

- Soil Erosion

Monitoring Item	Method	Measured Value (Occurrence situations)
Occurrence of Soil Erosion from the construction sites (Soil erosion condition)	Visual Check	

- Water Quality

Monitoring Item	Method	Measured Value (Occurrence situations)
Waste water discharge from the construction sites and camp yard (SS, Oil and Grace)	Visual check	

- Noise / Vibration

Item	Method	Measured Value (Occurrence situations)
Construction time (limited or not)	Visual check	(day)
Construction vehicles' speed (under 30km/h)	Visual check	(number)

- Dust

Monitoring Item	Method	Measured Value (Occurrence situations)
Dust at the construction sites	Visual Check	

(5) Soft Component (Technical Assistance) Plan

**Preparatory Survey on the Project for Improvement
of National Road No. 9 as East-West Economic Corridor
in the Lao People's Democratic Republic**

Soft Component (Technical Assistance) Plan

June 2011

Oriental Consultants Co., Ltd.
International Development Center of Japan Inc.

(Basic Information)

Main Project Title	Main Project Title: The Project for Improvement of National Road No. 9 as East-West Economic Corridor
E/N Period	August/2011 – March/2015
Estimated cost	Yen
Implementation Category	Assistance of management Assistance of engineering Assistance of self-implementation project of recipient country
Personnel assignment	<input checked="" type="radio"/> Yes / No
Implementation period	January/2012 – February/2013
Completion date (provisional)	28/Feb/2013
Advance payment	Yes / <input checked="" type="radio"/> No

Preparatory Survey on the Project for Improvement
of National Road No. 9 as East-West Economic Corridor
in the Lao People’s Democratic Republic

Soft Component (Technical Assistance) Plan

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1. Background of the Plan

1.1 Outline of the Main Project

“The Project for Improvement of National Road No.9 as East-West Economic Corridor in Lao PDR” is to improve the pavement structure for the sections of National Road No. 9 (NR-9) where was seriously damaged after completion of upgrading works by the Japan’s grant aid cooperation.

1.2 Current Situation and Issue of the Capacity of Road Maintenance Work in Lao PDR

Ministry of Public Works and Transport (MPWT) is the superintendence organization as well as Department of Public Works and Transport for Savannakhet Province (DPWT Savannakhet) is the implementation agency and will be responsible for its maintenance after completion of the projects. Note that the road maintenance activities are categorized as follows in general.

- Routine maintenance: Daily activities such as inspection, cleaning and minor repair (generally undertaken by force account)
- Periodic maintenance: Large scaled rehabilitation work such as overlay and reconstruction of pavement (generally undertaken by contractor)

Appropriate implementation of routine maintenance activity to advocate “early finding damage & its quick repair” can maintain a good condition of the road with low cost by few labour in general. However, if it is neglected and left minor damage for a long period, the damage would develop and deteriorate deep layer of pavement such as base course, subbase course and subgrade; become similarly a case of NR-9. For now, the situation of NR-9 requires the reconstruction of pavement by spending higher cost for the recovery of serviceability.

DPWT Savannakhet has contracted out to the local contractors for the repair work of pavement in NR-9. However, the lack of budget constrains to undertake appropriate repair works. Currently, DBST (Double Bituminous Surface Treatment) has been applied for the reconstruction of pavement instead of applying asphalt concrete. However, the strength of DBST is quite inferior to asphalt concrete therefore damages were observed on the repaired surfaces soon after completion of repair works. Consequently, it is said that situation still goes bad in spite of spending large cost for repair works.

Maximization of pavement life by appropriate routine maintenance work as well as undertaking substantial periodic maintenance in proper intervention according to the designed pavement life

should break the unfavorable maintenance situation by the inefficient repair works.

Technical cooperation project of JICA will be shortly commenced to develop the capacity of routine maintenance and reform road maintenance cycle. However, there are still limited lengths of road networks paved by asphalt concrete in Lao PDR. The experience, knowledge and capacity of planning maintenance program regarding periodic maintenance for asphalt concrete road (e.g. overlay and full reconstruction of pavement structure) has not been adequately equipped with both sectors of government and private in Lao PDR. It is therefore urgently required that the improvement of the road maintenance capacity and develop the system to sustain the effectiveness of the project in collaboration with the soft component carried out under the Grant Aid Project.

1.3 Necessity for Implementation of Soft Component

As stated above, the implementation capacities for maintenance and repair of asphalt concrete road are insufficient at the required level in both the sectors of government and private. For example, some local contractors own their machineries and equipments to produce asphalt concrete, however the methodologies for quality control of material and construction plan (e.g. as-built dimension and construction schedule) are not secured yet. And also, the experience of DPWT as supervisor to conduct appropriate management and instruction of the project is still insufficient.

Therefore, the capacity building of MPWT and DPWT for construction management of asphalt concrete road will be conducted through technical transfer via On the Job Training (OJT) in the soft-components. Note that the acceptance of Japanese contractor regarding the cooperation and assistance to the soft-components shall be organized before the Contract of the project. In addition, this capacity building will help the appropriate implementation of periodic maintenance in NR-9 as well as the project implementation by applying asphalt concrete on other route in the future. Moreover, the activities between the soft-component and the technical cooperation project stated above are classified to prevent the duplication of scope each other. Partial repair work by applying asphalt concrete also will be conducted in the technical cooperation. Feedback of the component such as experience and knowledge will supplementary assist the activity of the technical cooperation.

- Soft component: Management method of large scaled rehabilitation project by applying asphalt concrete
- Technical cooperation: Method of routine maintenance such as daily inspection, cleaning and minor repair

2. Goal of Soft Component

Goal of the component is as described below.

Goal of Soft Component

MPWT and DPWT will acquire the knowledge of appropriate management for large scaled road rehabilitation project by asphalt concrete.

3. Outcome of Soft Component

Following outcomes are required to achieve the goal.

- (1) DPWT will acquire the knowledge of appropriate project management.
 - (i) To understand appropriate methods of quality control and its supervision (inspection) at material production
 - (ii) To understand appropriate methods of measurement control and its supervision (inspection)
 - (iii) To understand appropriate methods of construction progress control and its supervision
- (2) MPWT and DPWT will acquire the knowledge of appropriate design, construction planning and cost estimate for large scaled road rehabilitation project by asphalt concrete.

Note, it is required that the capacity building is not only for DPWT but also for local contractors to achieve outcome (1) and (2). Therefore, the training opportunities will be provided for the potential contractors at the activities for (1) and (2).

4. Verification Methods to Accomplish Outcomes

Verification methods to accomplish the outcomes at the end of the component are designated as follows.

Outcome		Verification method
(1) DPWT will acquire the knowledge of appropriate project management.	(i) To understand appropriate methods of quality control and its supervision (inspection) at material production	Whether DPWT can review & evaluate quality control plan properly, or cannot. Whether DPWT can review & evaluate mix design result of asphalt mixture properly, or cannot. Whether DPWT can review & evaluate material (asphalt mixture, aggregate) quality test properly, or cannot.
	(ii) To understand appropriate methods of as-built dimension control and its supervision (inspection)	Whether DPWT can review & evaluate inspection result properly, or cannot.

Outcome		Verification method
	(iii) To understand appropriate methods of construction schedule control and its supervision	Whether DPWT can review & evaluate construction schedule plan properly, or cannot.
(2)	MPWT and DPWT will acquire the knowledge of appropriate design, construction planning and cost estimate for large scale road rehabilitation project.	Whether design result reflects design conditions properly, or not. Whether construction period is designated properly concerning construction quantities, or not. Whether purchase plan of equipment & material (type, quantity) is designated properly, or not.

5. Activities of Soft Component (Input Program)

Activities of the component (input program) to accomplish the outcomes are as follows.

Common-1: Draw-up of implementation program and preparation of manuals/guidelines

- 1-1: Draw-up of implementation program for the component
Implementation program including schedule and contents in detail will be drawn up before commencement of the activities.
Involved group: MPWT, DPWT
Japanese side: Expert of pavement technology
Schedule: Jan – Feb in 2012 at detailed design (DD) stage (1.5 month)
(Japan: 1.0month, Laos: 0.5month)
- 1-2: Preparation of manuals & guidelines
Draft manuals namely
- construction supervision manual, and
 - manual for design and construction planning/cost estimate for road rehabilitation
- will be prepared to apply for the activities. These manuals will be revised and finalized concerning the issues borne during the activities.
Involved group: MPWT, DPWT
Japanese side: - Expert of pavement technology at DD stage
- Expert of pavement construction at construction supervision (SV) stage
Schedule: (Draft manual) Jan – Mar in 2012 at DD stage (2.5 month)
(Japan: 1.0month, Laos: 1.5month)
(Finalization) Feb in 2013 at SV stage (1.0 month)
- 1-3: Conduct of workshop
Workshop will be conducted to promote understanding of the activities (e.g. purpose, manuals) and share common understanding among relevant parties.
Involved group: MPWT, DPWT

- Japanese side: - Expert of pavement technology at DD stage
 - Expert of pavement construction at SV stage
- Schedule: - Mar in 2012 at DD stage
 - Feb in 2013 at SV stage

Outcome-1: DPWT will acquire the knowledge of appropriate project management.

1-1: Implement quality control at material production

DPWT will attend at supervision work of the consultant of the main project (the Consultant) to learn quality control method of construction materials (e.g. asphalt mixture, aggregate) those are produced from the plants of the main contractor (the Contractor). Further, local contractors also will be trained by engineers for quality control and plant operation dispatched from the Contractor. Japanese expert will monitor the activities to find issues and instruct for improvement.

Involved group: DPWT, Local contractor (approx. 5 engineers)

Japanese side: Expert of pavement construction

Schedule: Nov in 2012 at SV stage (1.0 month)

(for DPWT)

- Review method of quality control plan 0.5 month
 - Review method of mix design result of asphalt mixture 0.5 month
 - Review method of quality control test result 0.5 month
- (for local contractor)
- Control of plant operation 0.5 month
 - Production control of aggregate 0.5 month
 - Production control of asphalt mixture 0.5 month

1-2: Implement control of construction schedule & measurement of product

DPWT will attend at supervision work of the Consultant to learn control method of construction schedule and measurement of product. DPWT also confirm project management work of the Contractor. In addition, local contractors also will be trained for construction management by the engineer dispatched from the Contractor. Japanese expert will monitor the activities to find issues and instruct for its improvement.

Involved group: DPWT, Local contractor (approx. 5 engineers)

Japanese side: Expert of pavement construction

Schedule: Dec in 2012 at SV stage (1.0 month)

(for DPWT)

- Review method of control plan of construction schedule & measurement of product: 0.5 month
- Inspection method of measurement of product on site: 0.5 month (for local contractor)
- Control method of construction schedule & measurement of product; 0.5 month

1-3: Conduct of workshop
 Workshop will be conducted to understand the contents and important point of the activities before the implementation. Further the common understandings also will be shared among relevant parties at the workshop.
 Involved group: DPWT, Local contractor (approx. 5 engineers)
 Japanese side: - Expert of pavement construction at SV stage
 Schedule: - Nov & Dec in 2012 at SV stage (2 times)

Outcome-2: MPWT and DPWT will acquire the knowledge of appropriate design, construction planning and cost estimate for large scale road rehabilitation project.

2-1: Exercise design, construction planning and cost estimate
 MPWT and DPWT will exercise design, construction planning and cost estimate to develop the capacities for future large scale road rehabilitation project by applying draft design manual
 Involved group: MPWT, DPWT
 Japanese side: Expert of pavement construction
 Schedule: Jan in 2013 at SV stage (1.0 month)

Common-2: Monitor & evaluate the activities

2-1: Prepare monitoring & evaluation report
 The Japanese expert will prepare monitoring and evaluation report based on analysis of monitoring result during the activities. In addition, draft manuals also will be finalized as stated above. Further, the workshop will be held for feedback of the evaluation.
 Involved group: DPWT, MPWT, Local contractor
 Japanese side: Expert of pavement construction
 Schedule: Feb in 2013 at SV stage (0.5 month)

- Prepare monitoring & evaluation report 0.5 month
- Workshop Feb 2013

6. Procurement Program of the Implementation Resource for Soft Component

The soft component will be conducted for capacity building of the personnel in both sectors of government and private regarding large scaled road rehabilitation work by asphalt concrete. Two (2) Japanese experts will be dispatched to the site from the Consultant to support the component.

In addition, the technical manuals and guidelines will be prepared for applying on the activities in collaboration with the assigned counterparts from Lao side in prior to the commencement of the project (during the detailed design stage). Moreover, local staffs namely one (1) pavement engineer and one (1) translator (interpreter) will be employed to support the Japanese experts. Principal tasks of the Japanese experts are as follows.

- (1) Pavement technique
 - Preparation of draft manuals and guidelines
 - Conduct of the workshop
- (2) Pavement construction
 - Training and monitoring of construction supervision (material quality control, construction schedule and measurement of product)
 - Training and monitoring of design, construction planning and cost estimate
 - Finalization of manuals and guidelines
 - Prepare monitoring report
 - Conduct of the workshop

7. Implementation Schedule of Soft Component

Implementation schedule of the component is shown in Table-1

8. Output of Soft Component

Outputs of the component are as follow.

- Construction supervision manual composed of 3 guideline namely material quality control, construction schedule control and as-built dimension control
- Manual of design, construction planning and cost estimate for road rehabilitation work
- Monitoring report
- Work progress report
- Work completion report

Table-1 Implementation Schedule of Soft Component

		Year & Month													
		2011			2012						2013				
	Activity	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Common	1-1														
1	1-2														
	1-3														
	Implement quality control at material production														
	Review method of quality control plan														
	Review method of mix design of asphalt mixture														
	Review method of quality control test results														
	Control of plant operation														
Outcome	Production control of aggregate														
1	Production control of asphalt mixture														
	Implement control of construction schedule & as-built dimensions														
	Review method of control plan of construction schedules & as-built dimensions														
	Inspection method of as-built dimensions on site														
	Control method of construction schedules & as-built dimensions														
	Conduct workshop														
Outcome-2	2-1														
Common	2-1														
2	Conduct workshop														
	Attendance of the counterpart														
	Pavement Technology														
Assign	Pavement Construction														
Schedule	Pavement Engineer														
	Translator (Interpreter)														

9. Preliminary Cost Estimate of Soft Component

Preliminary cost for the component is estimated as shown in Table-2 and 3.

Table-2 Summary of the Cost Estimate

Item	Amount			Remarks
	Kip	US\$	Yen	
Direct labor cost			5,057,000	
Direct expense		51,700.00	3,124,814	
Indirect expense			6,472,960	
Total		51,700.00	14,654,774	
Covert to Yen		4,478,254	14,654,774	
Grand Total			19,133,000	

(Exchange rate)

1.0 Kip = 0.0108 Yen, 1.0 US\$ = 86.62 Yen

Table-3 Breakdown of the Cost Estimate

Item	Spec.	Qty	Unit	Unit rate			Amount			Remarks
				Kip	US\$	Yen	Kip	US\$	Yen	
1. Direct labor cost										
a. DD stage										
Pavement technology	Class 3	2.5	M/M			778,000			1,945,000	
b. SV stage										
Pavement construction	Class 3	4.0	M/M			778,000			3,112,000	
Total-1									5,057,000	
2. Direct expense										
1) Air fare		1	LS			855,734			855,734	
2) Allowance & accommodation		1	LS			2,269,080			2,269,080	
3) Rent a car		1	LS			12,100.00		12,100.00		
4) Local staff		1	LS			23,700.00		23,700.00		
5) Reporting		1	LS			15,900.00		15,900.00		
Total-2						51,700.00		51,700.00	3,124,814	
3. Indirect expense										
1) Sundry expense		1	LS			4,551,300			4,551,300	90% of direct labor cost
2) Technical expense		1	LS			1,921,660			1,921,660	20% of (direct labor +sundry expense)
Total-3						6,472,960			6,472,960	

10. Obligation of Lao PDR

Obligations of Lao PDR for the component are as follows.

- Appropriate appointment of the counterpart personnel
- Provision of training facility
- Provision of administration cost for the component

Further, following attempts are necessarily to be implemented by Lao PDR for the succession and further development of the outcomes after the component.

- Sustainable utilization the manuals and guidelines
- Technical transfer of monitoring technique
- Secure budget for road rehabilitation project
- Capacity building of the local contractor

(6) Environmental Check List

Category	Environmental Item	Main Check Items	Confirmation of Environmental Considerations
1. Permits and Explanation	(1) EIA and Environmental Permits	<ol style="list-style-type: none"> 1) Have EIA reports been officially completed? 2) Have EIA reports been approved by authorities of the host country's government? 3) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied? 4) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government? 	1) No. IEE is to be conducted by DOR from March 2011. And WREA approval will be obtained by end of June. In this section, we don't need to do EIA, because is a Road Improvement Project (NR No. 9). According to Decrees by Prime Ministry Office. WREA (PM.WREA) No 697, dated 12 MARCH 2010 on the kinds of IEE and EIA investment. Then, for NR no9 not need to develop EIA report.
	(2) Explanation to the Public	<ol style="list-style-type: none"> 1) Are contents of the project and the potential impacts adequately explained to the public based on appropriate procedures, including information disclosure? Is understanding obtained from the public? 2) Are proper responses made to comments from the public and regulatory authorities? 	<ol style="list-style-type: none"> 1) Yes. During IEE study, explanation to the affected persons have conducted. And after the commencement of the project, DPWT will conduct actual resettlement procedures including detail explanation to the affected persons. 2) So far Lao government not receives any negative comments on the project.
	(3) Alternatives Evaluation	<ol style="list-style-type: none"> 1) Have appropriate alternatives been prepared and evaluated? 	1) No. This project is to improve the existing road without any expansion. It has obviously minimum impact comparing with other alternatives.
2 Mitigation Measures	(1) Air Quality	<ol style="list-style-type: none"> 1) Is there a possibility that air pollutants emitted from various sources, such as vehicle traffic will affect ambient air quality? Does ambient air quality comply with the country's ambient air quality standards? 2) Where industrial areas already exist near the route, is there a possibility that the project will make air pollution worse? 	<ol style="list-style-type: none"> 1) Yes. It is expected that ambient air quality will comply with Lao standards. 2) No. There is no industrial area along the target route.
	(2) Water Quality	<ol style="list-style-type: none"> 1) Is there a possibility that soil runoff from the bare lands resulting from earthmoving activities, such as cutting and filling will cause water quality degradation in downstream water areas? 2) Is there a possibility that surface runoff from roads will contaminate water sources, such as groundwater? 3) Do effluents from various facilities, such as stations and parking areas/service areas comply with the country's effluent standards and ambient water quality standards? Is there a possibility that the effluents will cause areas that do not comply with the country's ambient water quality standards? 	<ol style="list-style-type: none"> 1) No. The project includes slope protection, so there is no bare lands section at the newly constructed sections. 2) No. The asphalt pavement without any surface runoff will be applied to the road improvement. 3) N/A. The project does not include any facilities, such as stations and parking areas/ service areas.
	(3) Noise and Vibration	<ol style="list-style-type: none"> 1) Do noise and vibrations from vehicle and train traffic comply with the country's standards? 	1) Yes. The asphalt pavement is most effective pavement for noise and vibration mitigation.
3 Natural Environment	(1) Protected Areas	<ol style="list-style-type: none"> 1) Is the project site located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas? 	1) No. There is no natural protected area near the objective sections.
3 Natural Environment	(2) Ecosystem and biota	<ol style="list-style-type: none"> 1) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)? 2) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions? 3) If significant ecological impacts are anticipated, are adequate protection measures taken to reduce the impacts on the ecosystem? 4) Are adequate protection measures taken to prevent impacts, such as disruption of migration routes, habitat fragmentation, and traffic accident of wildlife and livestock? 5) Is there a possibility that installation of roads will cause impacts, such as destruction of forest, poaching, desertification, reduction in wetland areas, and disturbance of ecosystems due to introduction of exotic (non-native invasive) species and pests? Are adequate measures for preventing such impacts considered? 6) In cases where the project site is located at undeveloped areas, is there a possibility that the new development will 	<ol style="list-style-type: none"> 1) No 2) No 3) No 4) Yes. Appropriate safe passage measure for local livestock, such as installation of the culverts at a filling section, is to be taken. 5) No. The project is to improve the existing road without any change of alignment. 6) No.

APPENDICES

Category	Environmental Item	Main Check Items	Confirmation of Environmental Considerations
		result in extensive loss of natural environments?	
	(3) Hydrology	1) Is there a possibility that alteration of topographic features and installation of structures, such as tunnels will adversely affect surface water and groundwater flows?	1) No
	(4) Topography and Geology	1) Is there a soft ground on the route that may cause slope failures or landslides? Are adequate measures considered to prevent slope failures or landslides, where needed? 2) Is there a possibility that civil works, such as cutting and filling will cause slope failures or landslides? Are adequate measures considered to prevent slope failures or landslides? 3) Is there a possibility that soil runoff will result from cut and fill areas, waste soil disposal sites, and borrow sites? Are adequate measures taken to prevent soil runoff?	1) No 2) Yes. The project includes slope protection to prevent slope failures. 3) Yes. Prevention measure for waste soil disposal sites and borrow sites will be included to the technical specification of the contract with the contractor.
4 Social Environment	(1) Resettlement	1) Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement? 2) Is adequate explanation on relocation and compensation given to affected persons prior to resettlement? 3) Is the resettlement plan, including proper compensation, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement? 4) Does the resettlement plan pay particular attention to vulnerable groups or persons, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples? 5) Are agreements with the affected persons obtained prior to resettlement? 6) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan? 7) Is a plan developed to monitor the impacts of resettlement?	1) Yes. The number of affected households will be under 50 and they don't need RAP in accordance with Lao regulation. However, Initial Social Assessment will be conducted in conjunction with IEE. 2) Yes. Explanation on relocation has already been done in the IEE study. Compensation will be given in accordance with Lao regulation. 3) Yes. DPWT will conduct resettlement procedures based on the result of the IEE report. 4) Yes. 5) Yes. 6) Yes. DPWT will conduct resettlement procedures based on the result of the IEE report. 7) Yes. MPWT will assign the project coordinator and he/she will monitor the resettlement process.
	(2) Living and Livelihood	1) Where roads or railways are newly installed, is there a possibility that the project will affect the existing means of transportation and the associated workers? Is there a possibility that the project will cause significant impacts, such as extensive alteration of existing land uses, changes in sources of livelihood, or unemployment? Are adequate measures considered for preventing these impacts? 2) Is there a possibility that the project will adversely affect the living conditions of inhabitants other than the affected inhabitants? Are adequate measures considered to reduce the impacts, if necessary? 3) Is there a possibility that diseases, including communicable diseases, such as HIV will be introduced due to immigration of workers associated with the project? Are adequate considerations given to public health, if necessary? 4) Is there a possibility that the project will adversely affect road traffic in the surrounding areas (e.g., by causing increases in traffic congestion and traffic accidents)? 5) Is there a possibility that roads and railways will cause impede the movement of inhabitants? 6) Is there a possibility that structures associated with roads (such as bridges) will cause a sun shading and radio interference?	1) N/A. The project is to improve the existing road. 2) No. The project is to improve the existing road without expansion. 3) No. The project is to improve the existing road without expansion. 4) No. The project is to improve the existing road without expansion. 5) No. The project is to improve the existing road without expansion. 6) No. The project is to improve the existing road without expansion.
	(3) Heritage	1) Is there a possibility that the project will damage the local archaeological, historical, cultural, and religious heritage sites? Are adequate measures considered to protect these sites in accordance with the country's laws?	1) No. The project is to improve the existing road without expansion.
	(4) Landscape	1) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?	1) No. The project is to improve the existing road without expansion.

Category	Environmental Item	Main Check Items	Confirmation of Environmental Considerations
4 Social Environment	(5) Ethnic Minorities and Indigenous Peoples	<p>1) Where ethnic minorities and indigenous peoples are living in the rights-of-way, are considerations given to reduce the impacts on culture and lifestyle of ethnic minorities and indigenous peoples?</p> <p>2) Does the project comply with the country's laws for rights of ethnic minorities and indigenous peoples?</p>	<p>1) N/A. There are no ethnic minorities and indigenous peoples near the target sections.</p> <p>2) N/A. There are no ethnic minorities and indigenous peoples near the target sections.</p>
	(6) working conditons	<p>1) Is the project proponent not violating any laws and ordinances associated with the working conditions of the country which the project proponent should observe in the project?</p> <p>2) Are tangible safety considerations in place for individuals involved in the project, such as the installation of safety equipment which prevents industrial accidents, and management of hazardous materials?</p> <p>3) Are intangible measures being planned and implemented for individuals involved in the project, such as the establishment of a safety and health program, and safety training (including traffic safety and public sanitation) for workers etc.?</p> <p>4) Are appropriate measures being taken to ensure that security guards involved in the project do not violate safety of other individuals involved, or local residents?</p>	<p>1) No.</p> <p>2) Yes. The safety management activities shall be included to the activities of the contractor.</p> <p>3) Yes. The safety management activities shall be included to the activities of the contractor.</p> <p>4) Yes. The safety management activities shall be included to the activities of the contractor.</p>
5 Others	(1) Impacts during Construction	<p>1) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)?</p> <p>2) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts?</p> <p>3) If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts?</p>	<p>1) Yes. Adequate mitigation measures are to be developed within EMP of IEE to be conducted by DOR.</p> <p>2) N/A. The project is to improve the existing road without expansion.</p> <p>3) N/A. The project is to improve the existing road without expansion.</p>
	(2) Monitoring	<p>1) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts?</p> <p>2) Are the items, methods and frequencies included in the monitoring program judged to be appropriate?</p> <p>3) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)?</p> <p>4) Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?</p>	<p>1) Yes. EMP is to be developed within IEE to be conducted by DOR.</p> <p>2) Yes. Details such as methods and frequencies are to be specified in EMP, mentioned above.</p> <p>3) Yes. same as above</p> <p>4) No. However, DOR will monitor the environmental issues, using the monitoring form attached on the M/D.</p>
6 Note	Reference to Checklist of Other Sectors	<p>1) Where necessary, pertinent items described in the Forestry Projects checklist should also be checked (e.g., projects including large areas of deforestation).</p> <p>2) Where necessary, pertinent items described in the Power Transmission and Distribution Lines checklist should also be checked (e.g., projects including installation of power transmission lines and/or electric distribution facilities).</p>	<p>1) N/A</p> <p>2) N/A</p>
	Note on Using Environmental Checklist	<p>1) If necessary, the impacts to trans-boundary or global issues should be confirmed, if necessary (e.g., the project includes factors that may cause problems, such as trans-boundary waste treatment, acid rain, destruction of the ozone layer, or global warming).</p>	<p>1) N/A</p>

- 1) Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from the World Bank Safeguard Policy as a general rule, or the International Finance Corporation Performance Standards for private sector limited or non-recourse project finance cases, or other standards established by other international financial institutions, or other internationally recognized standards or good practices established by developed countries such as Japan regarding environmental and social considerations, the background and rationale for this deviation, and the measures to rectify it if necessary, are to be confirmed. In cases where local environmental regulations are yet to be established in some areas, considerations should be based on comparisons with international standards such as the World Bank Safeguard Policy, and appropriate standards of other countries (including Japan).
- 2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which it is located.

(7) Outline Design Drawings



MINISTRY OF PUBLIC WORKS AND TRANSPORT
LAO PEOPLE'S DEMOCRATIC REPUBLIC

**THE PREPARATORY SURVEY ON
THE PROJECT FOR IMPROVEMENT OF NATIONAL ROAD No.9
AS EAST-WEST ECONOMIC CORRIDOR IN LAO PDR**

DRAWINGS

JUNE 2011



JAPAN INTERNATIONAL COOPERATION AGENCY



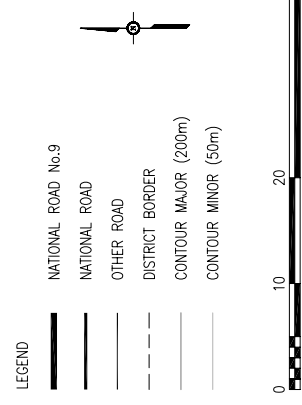
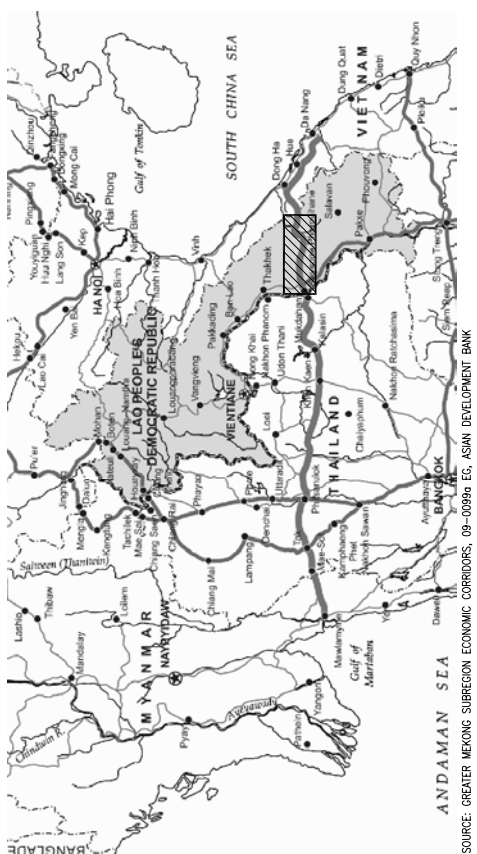
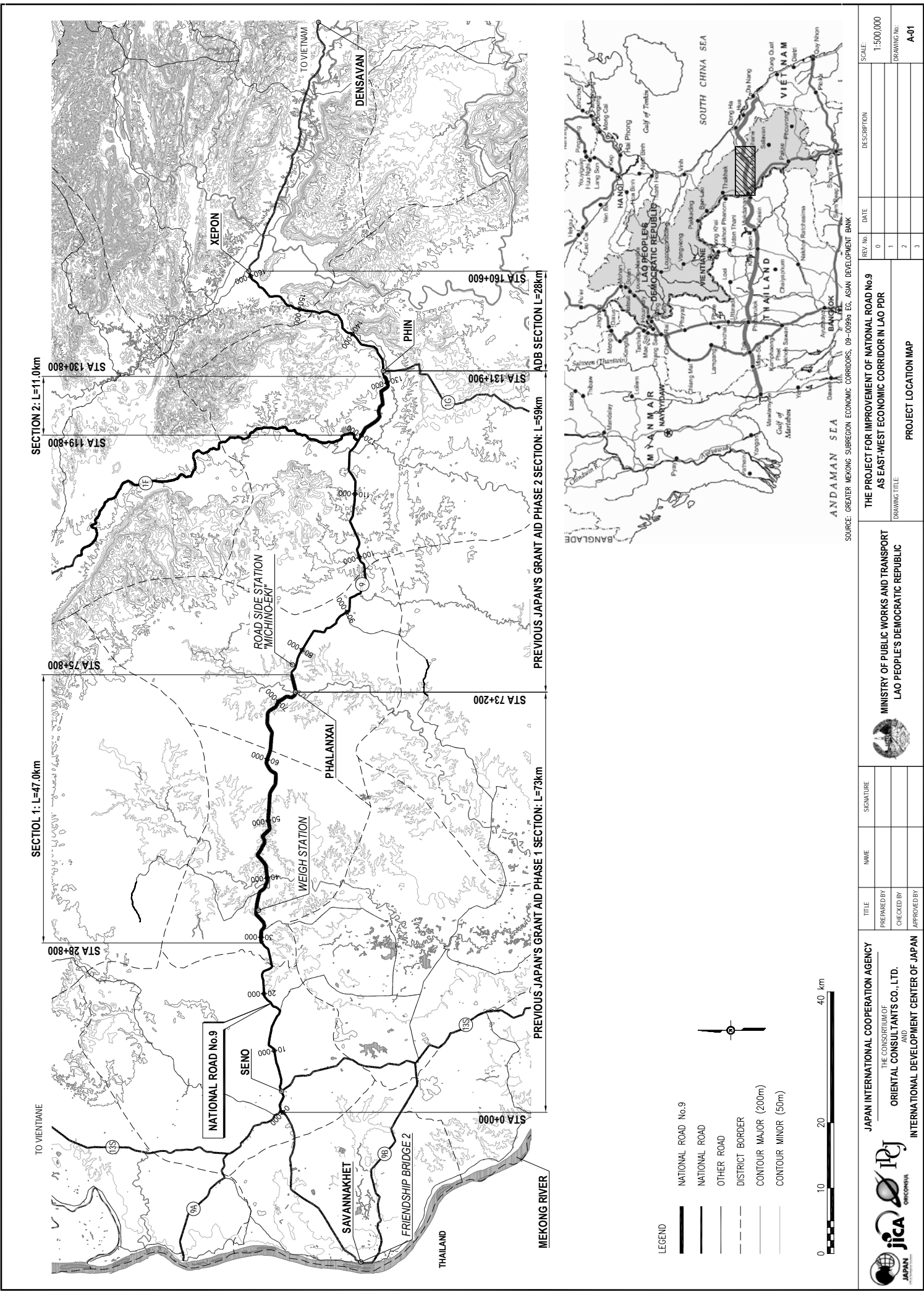
THE CONSORTIUM OF
ORIENTAL CONSULTANTS CO., LTD.

AND



INTERNATIONAL DEVELOPMENT CENTER OF JAPAN INC.





JAPAN INTERNATIONAL COOPERATION AGENCY THE CONSORTIUM OF ORIENTAL CONSULTANTS CO., LTD. INTERNATIONAL DEVELOPMENT CENTER OF JAPAN		MINISTRY OF PUBLIC WORKS AND TRANSPORT LAO PEOPLE'S DEMOCRATIC REPUBLIC		PROJECT LOCATION MAP	
TITLE	NAME	DATE	DESCRIPTION	REV. No.	DATE
PREPARED BY	SIGNATURE	0		1	
CHECKED BY		1		2	
APPROVED BY		2		3	
THE PROJECT FOR IMPROVEMENT OF NATIONAL ROAD No.9 AS EAST-WEST ECONOMIC CORRIDOR IN LAO PDR			SCALE: 1:500,000		
DRAWING TITLE			DRAWING No. A-01		

SOURCE: GREATER MEKONG SUBREGION ECONOMIC CORRIDORS, 09-0096. EG, ASIAN DEVELOPMENT BANK