

Project Administration Manual

Project Number: 43309-015
Loan Number: 2839-CAM
September 2016

Kingdom of Cambodia: Provincial Roads Improvement Project–Additional Financing

ABBREVIATIONS

ADB	–	Asian Development Bank
CBF	–	cross-border facility
CBRS	–	community-based road safety
DBST	–	double bituminous surface treatment
DDIS	–	detailed design and implementation supervision
EIA	–	environmental impact assessment
EMP	–	environmental management plan
FIDIC	–	Fédération Internationale des Ingénieurs-Conseil
HHTPP	–	HIV/AIDS and human trafficking prevention program
ICB	–	international competitive bidding
IEE	–	initial environmental examination
km	–	kilometer
LGAP	–	labor and gender action plan
M&E	–	monitoring and evaluation
MEF	–	Ministry of Economy and Finance
MPWT	–	Ministry of Public Works and Transport
NAA	–	National Aids Authority
NCB	–	national competitive bidding
NGO	–	non-government organization
NR	–	national road
NRSAP	–	national road safety action plan
PAM	–	project administration manual
PMU	–	project management unit
PPCR	–	pilot program for climate resilience
PPMS	–	project performance and management system
QCBS	–	quality- and cost based selection
RAMC	–	rural asset management consultant
RRP	–	report and recommendation of the president
RSC	–	resettlement sub-committee
SOE	–	statement of expenditure
SPS	–	Safeguards Policy Statement
STI	–	sexually-transmitted infections
SEO	–	social and environment office
TOR	–	terms of reference
UNIAP	–	UN Interagency Project on Trafficking
UXO	–	unexploded ordnance
WIM	–	weigh in motion

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Project Administration Manual Purpose and Process

1. The project administration manual (PAM) describes the essential administrative and management requirements to implement the project on time, within budget, and in accordance with the policies and procedures of the government and Asian Development Bank (ADB). The PAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the PAM.
2. The Ministry of Public Works and Transport (MPWT) are wholly responsible for the implementation of ADB-financed projects, as agreed jointly between the borrower and ADB, and in accordance with the policies and procedures of the government and ADB. ADB staff is responsible for supporting implementation including compliance by MPWT of their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.
3. At loan negotiations, the borrower and ADB shall agree to the PAM and ensure consistency with the Loan Agreement. Such agreement shall be reflected in the minutes of the loan negotiations. In the event of any discrepancy or contradiction between the PAM and Loan Agreement, the provisions of the Loan Agreement shall prevail.
4. After ADB Board approval of the project's report and recommendations of the President (RRP), changes in implementation arrangements are subject to agreement and approval pursuant to relevant government and ADB administrative procedures (including the Project Administration Instructions) and upon such approval, they will be subsequently incorporated in the PAM.

I. PROJECT DESCRIPTION

1. The Provincial Roads Improvement Project will rehabilitate the pavement of about 157 kilometers (km) of roads in Kampong Chhnang, Kampong Speu, Prey Vang, and Svay Rieng provinces. The rehabilitation program will provide a safer, climate-resilient, and cost-effective provincial road network with all-year access to markets and other social services for provincial centers of southeastern and midwestern Cambodia. A new cross-border facility (CBF) will be constructed at Prey Var, Svay Rieng to facilitate efficient cross-border transport and trade between Cambodia and Viet Nam. The project will support a sustainable road maintenance regime, community-based road safety measures, an HIV/AIDS and human trafficking prevention program, climate-resilient measures, and efficient project management in the Ministry of Public Works and Transport (MPWT), the executing agency. The purpose of the additional financing of \$6 million is to rehabilitate the CBF as the original financing, in Special Drawing Rights (SDR), has depreciated by \$5.7 million.

2. The original financing plan of the project comprised of a loan in various currencies equivalent to \$52.0 million from the Asian Development Bank's (ADB) Special Funds, cofinancing from the Strategic Climate Fund—under the Pilot Program for Climate Resilience, a \$10.0 million loan and a \$7.0 million grant, and the government financing of \$9.8 million. The ADB loan is financing civil works, equipment, related consulting services, project management, interest charge, and contingency. The Strategic Climate Fund is financing civil works and related consulting services, service charge, and contingency. ADB is administering the loan and the grant. The government is financing local taxes, duties, land acquisition and resettlement cost, and contingency.

3. The impact of the project is improved access to markets, jobs, social services in four project provinces of Kampong Chhnang, Kampong Speu, Prey Veng, and Svay Rieng. This impact is consistent with the sector results framework of Cambodia Transport Sector Assessment, Strategy, and Roadmap.¹ The outcome of the project is a safe, climate-resilient and cost effective road network that provides all-year access in the agricultural areas of the project provinces.

4. There are five outputs in the project. The first output is civil works to: (i) rehabilitate 88 km of road to climate resilient paved condition National Road (NR) 13 connecting NRs 8 and 1, between Komchay Mear and Prosot, and NR 314D from Prosot to the border of Vietnam at Prey Var, Svay Rieng; (ii) construct a new CBF at Prey Var, Svay Rieng; and (iii) rehabilitate 69.6 km of road to climate resilient paved condition; NR 150B from Ta Ches to Tek Phos, NR 53 from Khlong Popok to Kampong Speu border, and from there to Amleang (NR 151B). This output includes associated detailed design and implementation supervision (DDIS) consulting services, and land acquisition and resettlement required for the project roads and the CBF.

5. The second output is improved road asset management through axle load control at strategic locations of national and provincial roads which expands and improves MPWT's ongoing axle load control program. Recent interventions by the Asian Development Bank (ADB) to install and operate permanent weighbridges at seven key locations in the country, as well as the establishment of a Permanent Axle Overload Control Committee in MPWT have reduced overloading. The continued interventions of the project are expected to contribute to further reduction in overloading.

¹ ADB. 2011. *Cambodia Transport Sector Assessment, Strategy, and Roadmap*. Manila

6. The third output is increased road safety and social safeguards implementation through: (i) a community-based road safety awareness program in line with the national program; (ii) an HIV/AIDS and human trafficking prevention program (HHTPP); and (iii) a sex-disaggregated baseline socioeconomic survey of beneficiaries.

7. The fourth output is increased climate resilience of the project roads. This output will include an assessment of the vulnerability of MPWT's road network to climate change and vulnerability mapping to improve planning for climate changes and introducing ecosystem-based adaptation strategies. The output will also develop emergency management planning for project roads and planning water capture and storage systems. A mixture of civil works adjustments, hazard mapping, green or ecosystem based measures, and policy and planning activities are included here to manage climate change impacts. The emergency management intervention will be a pilot in Kampong Chhnang province, which will be designed as highly-community based one with participation of Red Cross to sustain the emergency medical facilities.

8. The fifth output is efficient project management support to the entire MPWT. The project will have substantial positive employment and gender impacts in the rural communities. The labor and gender mainstreaming action plan (web-linked document) describes the labor and gender-mainstreaming aspects associated with the project outputs.

9. During the midterm review of the project in April 2015, it was found that the amount of ADB loan, denominated in SDR, had reduced by about \$5.5 million equivalent, from \$52.0 million equivalent to \$46.5 million equivalent, due to sudden depreciation of SDR since late 2014.² This resulted in depletion of contingencies as well. Due to the reduction, the civil works contract for CBF rehabilitation could not be awarded in the 2nd quarter of 2015, as there was not enough uncommitted ADB loan amount left to finance this contract, the price of which had been estimated to be about \$5.3 million. The Government requested additional financing of \$6.0 million, in order to supplement the financing shortfall to achieve the original project outputs, outcomes, and impacts.

10. The project is progressing satisfactorily to meet its outcome; it has awarded almost all major civil works contracts and works are being implemented without much delay. The only major civil works contract yet to be awarded is that of CBF rehabilitation, which could not be awarded due to SDR depreciation. Overall progress rate of the project is 44% and it is expected to achieve the project outputs, except CBF rehabilitation, within the original loans and grant completion date. The project has completed all land acquisition and resettlement compensation, while mitigating the environment impacts during construction satisfactorily. The risks associated with implementation, as identified during project design, have been mitigated to avoid any major issue. Overall, the project performance is rated "on track".

11. The additional financing supports the project's development objectives as the project remains technically feasible, economically viable, and financially sound. The project is still a high government priority, and is included in the current Country Operations and Business Plan.³

12. There are no changes to impact and outcome. The proposed additional financing is intended to fill the shortfall in financing only, due to SDR depreciation.

² During a loan review mission in January 2016, it was confirmed that the latest Special Drawing Rights depreciation is \$5.7 million. Therefore, additional financing amount has been set to \$6.0 million, allowing for further possible depreciation.

³ ADB. 2015. *Country Operations Business Plan: Cambodia, 2016–2018*. Manila.

II. IMPLEMENTATION PLANS

A. Project Readiness Activities

13. PMU3 had been established since 2001. Overall project readiness activities are in Table 2.1.

Table 2.1: Project Readiness Activities

Indicative Activities	2016			2017			Responsible Individual/ Unit/Agency/Government
	Q2	Q3	Q4	Q1	Q2	Q3	
Advance contracting actions		✓					MPWT/MEF and ADB
ADB Board approval			✓				ADB
Loan signing			✓				RGC and ADB
Government legal opinion provided			✓				RGC
Government budget inclusion			✓				RGC
Loan effectiveness				✓			RGC and ADB

ADB = Asian Development Bank, MEF = Ministry of Economy and Finance, MPWT = Ministry of Public Works and Transport, RGC = Royal Government of Cambodia.

Figure 2.1: Overall Project Implementation Plan

	2011				2012				2013				2014				2015				2016				2017				2018																																		
	O	N	D		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N
Additional Financing Processing																																																															
CS1: DDIS, Consulting Services for Design and Construction																																																															
Advance Action (DDIS Recruitment)																																																															
Detailed Design																																																															
UXO and Demining Assessment																																																															
Land and Resettlement																																																															
Procurement CW-A																																																															
Procurement CW-B																																																															
Procurement CW-C																																																															
Community-Based Road Safety Program																																																															
Preparation for a Future Project																																																															
Labor and Gender Action Plan																																																															
CW-A: Road Improvement (NR13)																																																															
UXO and Mine Clearance																																																															
Road improvement CW-A (NR13)																																																															
Improved Reinstatement of Borrow-pits (NR13)																																																															
DDIS Supervision Services for CW-A																																																															
CW-B1: Road Improvement (314D)																																																															
UXO and Mine Clearance																																																															
Road Improvement CW-B (314D)																																																															
Improved Reinstatement of Borrow-pits (314D)																																																															
DDIS Supervision Services for CW-B (314D and CBF)																																																															
CW-B2: CBF Prey Var																																																															
Advertisement and Procurement																																																															
Improvement of CBF																																																															
CW-C: Road improvement (150B, NR53, 151B)																																																															
UXO and Mine Clearance																																																															
Road Improvement CW-C (midwest)																																																															
Improved Reinstatement of Borrow-pits (150B)																																																															
Improved Reinstatement of Borrow-pits (NR53)																																																															
DDIS Supervision Services for CW-C																																																															
CS2: Improved Asset Management through Axle Load Control																																																															
CS3: HHTPP																																																															
HHTPP Recruitment																																																															
HHTPP Implementation																																																															
MPWT Recruitment of Consulting Services for Climate Resilience																																																															
CS4: Consulting Services for Climate Resilience																																																															
CW-D Climate Change Resilience Civil Works																																																															
CW-D1: Rehabilitation of Portanorn, Bakdao, and Srok dikes																																																															
CW-D2: Restoration of Khsaet Lake																																																															
CW-D3: Construction of Kampong Leang Water Supply																																																															
CW-D4: Construction of Emergency Management Center (EMC)																																																															
CD-D5: Tree Seeding and Planting																																																															
PMU3 Efficient Project Management																																																															

CBF = cross-border facility; CS = consulting services; CW = civil works; DDIS = detailed design and implementation supervision; HHTPP = HIV/AIDS and human trafficking prevention program; MPWT = Ministry of Public Works and Transport; NR = national road; PMU = project management unit; UXO = unexploded ordnance.

Source: Asian Development Bank.

III. PROJECT MANAGEMENT ARRANGEMENTS

A. Project Implementation Organizations: Roles and Responsibilities

Project implementation organizations	Management Roles and Responsibilities
<ul style="list-style-type: none"> • Ministry of Public Works and Transport (Executing Agency) 	<ul style="list-style-type: none"> ➤ timely provision of agreed counterpart funds for project activities; ➤ complying with all loan covenants (sector reforms, social and environmental safeguards, economic, and others); and ➤ ensuring project's sustainability during post implementation stage and reporting to ADB on assessed development impacts.
<ul style="list-style-type: none"> • Project Management Unit 3 	<ul style="list-style-type: none"> ➤ overall project implementation, management and coordination; ➤ initiate and coordinate effective communication between all stakeholders of the Project; ➤ establishing the imprest account and managing it; ➤ recruiting consultants; ➤ finalizing surveys, detail design, and bidding documents; ➤ as the chair of the procurement review committee, approve the contract awards; ➤ monitoring and evaluation of project activities and outputs, including periodic review, preparation of review reports reflecting issues and time-bound actions taken (or to be taken); ➤ involving beneficiaries and civil society representatives in all stages of project design and implementation; ➤ public disclosure of project outputs; ➤ quality assurance of works, and services of consultants and counterpart staff; ➤ establishing strong financial management system and submitting timely withdrawal applications to ADB, conducting timely financial audits as per agreed timeframe and taking recommended actions; and ➤ preparing regular periodic progress reports, and project completion report and their timely submission to ADB ➤ ensure that Project implementation complies with Government environmental policies and regulations, ADB's SPS, and provisions of the EMP included in the IEE cleared by ADB.
<ul style="list-style-type: none"> • Ministry of Economy and Finance (MEF) 	<ul style="list-style-type: none"> ➤ signing the loan agreements for the financing required for the Project;

Project implementation organizations	Management Roles and Responsibilities
	<ul style="list-style-type: none"> ➤ monitoring of loan and project implementation; and providing respective coordination and facilitation; ➤ allocating and releasing counterpart funds and oversight body for disbursements and resettlement matters; ➤ being a member of procurement review committee for consultant selection and procurement; ➤ endorsing to ADB the authorized staff with approved signatures for withdrawal application processing; and ➤ processing and submitting to ADB any request when required, for reallocating the loan proceeds.
<ul style="list-style-type: none"> • Inter-Ministerial Resettlement Committee within MEF 	<ul style="list-style-type: none"> ➤ endorsing and implementing the resettlement plans ➤ external monitoring of the resettlement plan implementation
<ul style="list-style-type: none"> • Asian Development Bank 	<ul style="list-style-type: none"> ➤ assist MPWT and its PMU in providing timely guidance at each stage of the project for smooth implementation in accordance with the agreed implementation arrangements and agreed procurement procedures; ➤ review all the documents that require ADB approval; ➤ conduct periodic loan review missions, a mid-term review, and a project completion mission; ➤ ensure compliance of all loan covenants ➤ review and monitoring of project implementation activities and compliance with loan covenants (sector reforms, social and environmental safeguards, economic, and others); ➤ timely process withdrawal applications and release eligible funds; ➤ ensure the compliance of financial audits recommendations; ➤ regularly update the project performance review reports with the assistance of MPWT; and ➤ regularly post on ADB web the updated project information documents for public disclosure, and the safeguards documents as per disclosure provision of the ADB safeguards policy statement.

ADB = Asian Development Bank, EMP = environmental management plan, IEE = initial environmental examination, PMU = project management unit, MPWT = Ministry of Public Works and Transport, SPS = safeguards policy statement.

B. Key Persons Involved in Implementation

Executing Agency

Ministry of Public Works and
Transport

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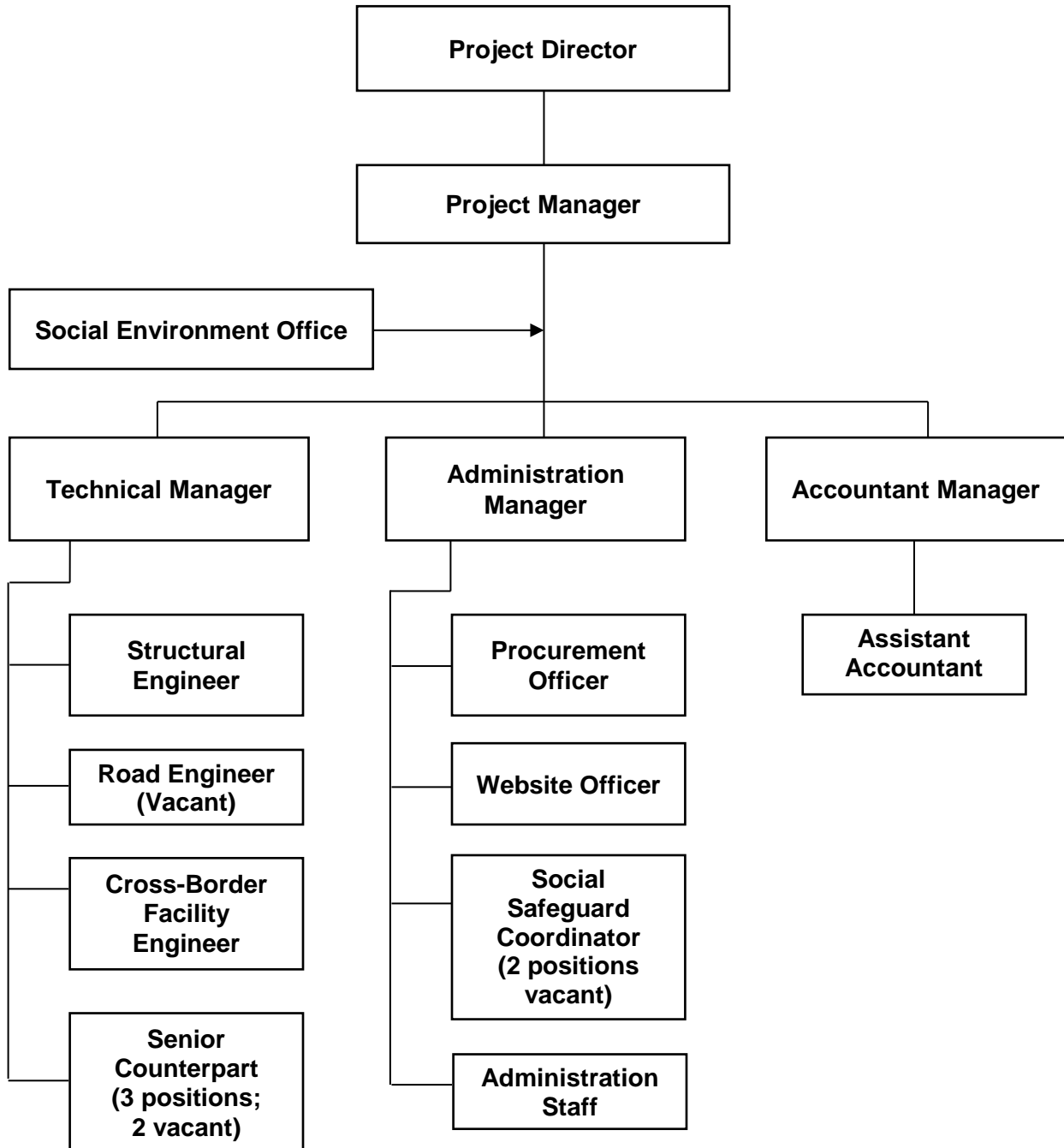
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C. Project Organization Structure

14. MPWT has an already established PMU3 that implement, manage and coordinate project activities. The PMU3 is also equipped with the necessary staff, office space, equipment, and facilities to implement the project efficiently.

Organization Structure for Project Implementation

Ministry of Public Works and Transport Project Management Unit 3 (PMU3)



IV. COSTS AND FINANCING

15. With the additional financing, the project is estimated to cost \$79.68 million, based on the latest allocation of loan and grant proceeds. The revised investment and financing plans are in Tables IV-1 and IV-2.

Table IV-1: Project Investment Plan
(\$ million)

Item	Original Amount ^a	Current Amount ^b	Additional Financing ^c	Total
A. Base Cost^c				
1. Civil works				
a. Improvements of provincial roads and CBF	48.08	51.31	5.30	56.61
b. Land acquisition and resettlement	1.84	1.84	0.00	1.84
c. DDIS consulting services	7.42	7.86	0.00	7.86
2. Improved asset management	1.44	0.40	0.00	0.40
3. Increased road safety and safeguards ^c	0.32	0.48	0.00	0.48
4. Improved climate resilience	5.81	5.81	0.00	5.81
5. Improved project management	2.30	1.79	0.00	1.79
Subtotal (A)	67.21	69.49	5.30	74.79
B. Contingencies^d	10.47	3.19	0.54	3.73
1. Physical contingencies	5.99	1.90	0.53	2.33
2. Price contingencies	4.48	1.29	0.01	1.43
C. Financing Charges During Implementation^e	1.12	1.00	0.16	1.16
Total (A+B+C)	78.80	73.68	6.00	79.68

CBF = cross-border facility; DDIS = detailed design and implementation supervision.

^a Includes taxes and duties of \$7.59 million to be financed from government resources.

^b as of 19 June 2016

^c In mid-2015 prices.

^c Cost of road safety program is included in the detailed design and implementation supervision consulting services.

^d Physical contingencies computed at 10% for civil works, field research and development, training, surveys, and studies. Price contingencies computed for foreign exchange costs and local currency costs based on the annual rates including provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

^e Includes interest charges and service charges. Interest for the Asian Development Bank loan has been computed at 1.0% per annum during the grace period and the service charge for the Strategic Climate Fund loan during construction at 0.1% per annum.

Source: Asian Development Bank.

16. The borrower, the Kingdom of Cambodia, has requested a loan in various currencies equivalent to \$6.0 million from ADB's Special Funds resources to help finance the project's financing gap. For this loan, the repayment period will be 32 years, including a grace period of 8 years, with an interest charge of 1.0% per annum during the grace period and 1.5% per annum thereafter, and such other terms and conditions set forth in the original loan agreement. The proceeds of the loan will be made available by the borrower to MPWT through budgetary allocations.

Table VI-2: Financing Plan

Source	Current^a		Additional Financing		Total	
	Amount (\$ million)	Share of Total (%)	Amount (\$ million)	Share of Total (%)	Amount (\$ million)	Share of Total (%)
Asian Development Bank						
Special Funds resources (loan)	46.88 ^b	63.63	6.00	100.00	52.88	66.37
Strategic Climate Fund (Loan)	10.00	13.57	0.00	0.00	10.00	12.55
Strategic Climate Fund (Grant)	7.00	9.50	0.00	0.00	7.00	8.79
Government	9.80	13.30	0.00	0.00	9.80	12.30
Total	73.68	100.00	6.00	100.00	79.68	100.00

^a Refers to the current amount as the original amount was \$52.0 million (there was no previous additional financing).

^b The original financing has depreciated from \$52.0 million to \$46.88 million as of 19 June 2016.

Source: Asian Development Bank.

A. Detailed Cost Estimates by Financier

(\$ millions)

	ADB				PPCR Loan				PPCR Grant				Government**				Orig. Total Amt.	Current Total Amt.	Total Amt.***			
	Orig. Amt.	%	Current Amt.◇	%	Add'l Financing	%	Orig. Amt.	%	Current Amt. ◇	%	Orig. Amt.	%	Current Amt. ◇	%	Orig. Amt.	%				Current Amt. ◇	%	
A. Base Cost																						
1. Civil Works																						
CW Package A: - Improve NR 13 (62.4 km)	14.43	71.44	16.42	74.00			3.43	16.98	3.43	15.46	-	-	2.34	11.58	2.34	10.55	20.20	22.19	22.19			
CW Package B:	9.28	74.48					1.50	12.04	-		-	-	1.68	13.48			12.46					
- CW-B1: Improve 314D (25.6 km)	6.01	71.04	8.19	76.97			1.50	17.73	**1.50	14.10	-	-	0.95	11.23	**0.95	8.93	8.46	10.64	10.64			
- CW-B2: Improve CBF at Prey Var, Svay Rieng	3.27	81.75	-		5.30	87.89	-	-	-		-	-	0.73	18.25	**0.73	12.11	4.00	0.73	6.03			
CW Package C:	10.54	68.35	12.87	72.51			2.32	15.05	2.32	13.07	0.86	21.39	0.86	4.85	1.70	11.02	1.70	9.58	4.02	17.75	17.75	
- Improve 150B east (5.8 km)	1.93	67.72					0.41	14.39			0.21	7.37			0.30	10.53	0.30	100.00	2.85	0.30		
- Improve 150B west (25.5 km)	5.60	67.39					1.15	13.84			0.65	7.82			0.91	10.95	0.91	100.00	8.31	0.91		
- Improve 150B Alangkae local road (3.1 km)	0.09	69.23					0.02	15.38			-	-			0.02	15.38	0.02	100.00	0.13	0.02		
- Improve NR 53 (31.8 km)	2.50	71.02					0.63	17.90			-	-			0.39	11.08	0.39	100.00	3.52	0.39		
- Improve 151B (3.6 km)	0.32	71.11					0.08	17.78			-	-			0.05	11.11	0.05	100.00	0.45	0.05		
- UXO Clearance for 5 roads and CBF at Prey Var, Svay Rieng	0.10	62.50					0.03	18.75			-	-			0.03	18.75	0.03	100.00	0.16	0.06		
Land Acquisition	-		-				-		-		-	-			1.84	100.00	1.84	100.00	1.84	1.84	1.84	
DDIS Consulting Services	5.48	73.85	5.92	75.33			1.27	17.12	1.27	16.13	-	-			0.67	9.03	0.67	8.54	7.42	7.86	7.86	
- Consulting Services: 5 roads and CBF	4.79	71.81	5.92	75.90			1.27	19.04	1.27	16.28	-	-			0.61	9.15	0.61	7.82	6.67	7.80	7.80	
- Preparation for a Future Project	0.69	92.00	-				-		-		-	-			0.06	8.00	0.06	100.00	0.75	0.06	0.06	
2. Improved Road Asset Management through Axle Load Control																				0.40	0.40	
- Consulting Services	0.67	89.33	0.05	38.82			-		-		-	-			0.08	10.67	0.08	61.18	0.75	0.13	0.13	
- Equipment	0.62	89.86	0.20	74.37			-		-		-	-			0.07	10.14	0.07	25.63	0.69	0.27	0.27	
3. Increased Road Safety and Safeguards																						
- HIV/AIDS and Human Trafficking Prevention Program	0.29	90.63	0.45	93.75			-		-		-	-			0.03	9.38	0.03	6.25	0.32	0.48	0.48	
4. Improved Climate Resilience																						
- Consulting Services	-		-				-		-		2.28	87.02	2.28	87.00	0.34	12.98	0.34	12.98	2.62	2.62	2.62	
- Civil Works Package D	-		-				-		-		2.77	86.83	2.77	87.00	0.42	13.17	0.42	13.17	3.19	3.19	3.19	

	ADB						PPCR Loan				PPCR Grant				Government**				Orig. Total Amt.	Current Total Amt.	Total Amt.***
	Orig. Amt.	%	Current Amt. ◊	%	Add'l. Financing	%	Orig. Amt.	%	Current Amt. ◊	%	Orig. Amt.	%	Current Amt. ◊	%	Orig. Amt.	%	Current Amt. ◊	%			
5. Efficient Project Management	2.05	89.13	1.54											0.25	110.87	0.25	14.29	2.30	1.79	1.79	
- Project Management	1.67	86.98	1.50	85.71			-	-						0.25	13.02	0.25	14.00	1.92	1.75	1.75	
- Priority Operating Costs	0.38	100.00	0.04	100.00			-	-						-		-		0.38	0.04	0.04	
Subtotal (A)	43.36	61.00	45.64	65.68	5.30		8.52	11.96	8.52	12.23	5.91	9.00	5.91	8.50	9.42	13.22	9.42	13.56	71.23	69.49	74.79
B. Contingency																					
1. Physical Contingency	4.33	72.29	0.24	12.63	0.53	21.81	0.85	14.19	0.85	44.74	0.60	10.02	0.60	31.58	0.21	3.51	0.21	11.05	5.99	1.90	2.43
2. Price Contingency	3.21	71.65	0.02	1.55	0.01	0.77	0.61	13.62	0.61	35.00	0.49	10.94	0.49	37.69	0.17	3.79	0.17	13.08	4.48	1.29	1.30
Subtotal (B)	7.54	72.02	0.26		0.54		1.46	13.94	1.46	3.00	1.09	10.41	1.09	34.00	0.38	3.63	0.38		10.47	3.19	3.73
C. Interest During Construction*	1.10	98.21	0.98	98.00	0.16	13.79	0.02	1.79	0.02	1.72	-		-	-		-			1.12	1.00	1.16
Subtotal (C)	1.10	98.21	0.98	98.00	0.16	13.79	0.02	1.79	0.02	1.72	-	-	-	-	-	-	-	-	1.12	1.00	1.16
Total (A+B+C)	52.00	65.74	46.88	58.84	6.00	7.53	10.00	12.69	10.00	12.55	7.00	8.88	7.00	8.79	9.80	12.44	9.80	12.30	78.80	73.68	79.68

ADB = Asian Development Bank, CBF = cross-border facility, CW = civil works; DDIS = detailed design and implementation supervision, km = kilometer; NR = national road, PPCR = pilot program for climate resilience, UXO = unexploded ordnance.

* Includes interest charges and service charges. Interest for ADB loan and service charge for Strategic Climate Fund loan during construction have been respectively computed at 1.0% per annum and 0.1% per annum during the grace period.

** These are original financing and not additional financing.

*** Including additional financing.

+ CW-B is now split into CW-B1 and CW-B2, therefore showing separate percentages.

++ The Government contributions for taxes and duties are through exemptions.

◊ Current amount is as of 19 June 2016 LFIS.

Source: Asian Development Bank

D. Allocation and Withdrawal of Loan Proceeds

17. Table IV-3 shows allocation and withdrawal of loan funds under all the categories of the project.

Table IV-3: Allocation and Withdrawal of Loan Proceeds

CATEGORY			ADB FINANCING
Number	Item	Amount Allocated (USD)	Percentage and Basis for Withdrawal from the Loan Account
		Category	
1	Works		
1B	CBF at Prey Var, Svay Rieng	5,300,000	88% of total expenditure
5	Interest Charge	160,000	100% of amount due
6	Unallocated	540,000	
	Total	6,000,000	

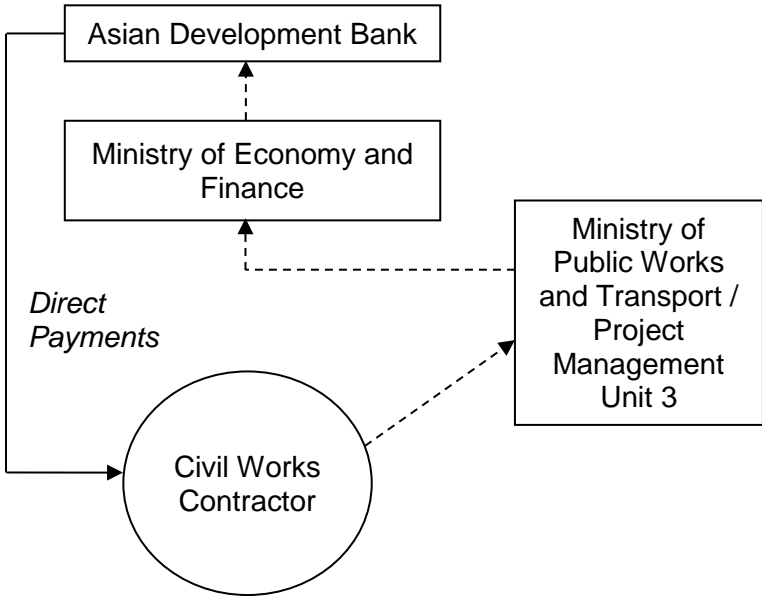
ADB = Asian Development Bank; CBF = cross-border facility

B. Detailed Cost Estimates by Year

(\$ millions)				
	2016	2017	2018	Total
A. Base Cost				
1. Civil Works				
CW Package A: Improve NR 13 (62.4 km)	0.00	-	-	-
CW Package B: Improve 314D (25.6 km) and CBF at Prey Var, Svay Rieng	5.30	-	-	5.30
CW Package C: Improve 150B east (5.8 km), 150B west (25.5 km), 150B Alangkae local road (3.1 km), NR 53 (31.8 km), 151B (3.6 km)	0.00	-	-	-
UXO Clearance for 5 roads and CBF at Prey Var, Svay Rieng	0.00	-	-	-
Land Acquisition	0.00	-	-	-
DDIS Consulting Services		-	-	-
- Consulting Services: 5 roads and CBF	0.00			
- Preparation for a Future Project	0.00			
2. Improved Road Asset Management through Axle Load Control	0.00	-	-	-
3. Increased Road Safety and Safeguards	0.00	-	-	-
4. Improved Climate Resilience	0.00	-	-	-
5. Efficient Project Management:		-	-	
- Project Management; Priority Operating Costs	0.00			-
Subtotal (A)	5.30		-	5.30
B. Contingency		-	-	
1. Physical Contingency	0.53			0.53
2. Price Contingency	0.01			0.01
Subtotal (B)	0.54	-	-	0.54
C. Interest During Construction*	0.16	-	-	0.16
Subtotal (C)	0.16	-	-	0.16
Total (A+B+C)	6.00	-	-	6.00

CBF = cross-border facility, CW = civil works, DDIS = detailed design and implementation supervision, km = kilometer, NR = national road, UXO = unexploded ordnance.

F. Fund Flow Diagram



---> Claims
—> Funds

V. FINANCIAL MANAGEMENT

A. Financial Management Assessment

18. The financial management assessment for the additional financing will be conducted in accordance with ADB's Guidelines for the Financial Management and Analysis of Projects and the Financial Due Diligence: A Methodology Note, in parallel with the processing of the project and will be finalized during the loan negotiations.

B. Disbursement

1. Disbursement Arrangements for ADB

19. The additional financing loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (February 2015, as amended from time to time).⁴ Disbursement for the CBF contract (under ICB procedure), will be through direct payment. Details of direct payment procedure are discussed in Chapter 7 of the LDH and the narrative procedure for direct payment are in Appendix 7C.

20. Online training for project staff on disbursement policies and procedures is available at: <http://wpgr4.adb.org/disbursement> elearning. PMU3 staff are encouraged to avail of this training to help ensure efficient disbursement and fiduciary control.

21. Before the submission of the first withdrawal application for the additional financing, the borrower should submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of the government, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is US\$100,000 equivalent. Individual payments below this amount should be paid by the EA/IA and subsequently claimed to ADB through reimbursement, unless otherwise accepted by ADB.

⁴ Available at: http://www.adb.org/documents/handbooks/loan_disbursement/chap-06.pdf

VI. DISBURSEMENT ARRANGEMENTS FOR COUNTERPART FUND

22. Disbursement arrangements were unchanged from the original project. MPWT/PMU3 will be responsible for: (i) preparing disbursement projections; (ii) requesting budgetary allocations for counterpart funds; (iii) collecting supporting documents; and (iv) preparing and sending withdrawal applications to MEF for submission to ADB. PMU3 will also be responsible for checking and signing off on all disbursement documents prior to submission to MEF.

A. Accounting

23. The PMU3 will maintain separate project accounts and records for funding source for all expenditures incurred on the Project. Project accounts will follow international accounting principles and practices.

B. Auditing and Public Disclosure

24. The PMU3 will cause the detailed consolidated project financial statements to be audited in accordance with International Standards on Auditing, by an independent auditor acceptable to ADB. The audited project financial statements together with the auditor's opinion will be presented in the English language to ADB within 6 months from the end of the fiscal year by the executing agency.

25. The audit report for the project financial statements will include a management letter and auditor's opinions, which cover (i) whether the project financial statements present an accurate and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting standards; (ii) whether the proceeds of the loan were used only for the purpose(s) of the project; and (iii) whether the borrower or executing agency was in compliance with the financial covenants contained in the legal agreements (where applicable).

26. Compliance with financial reporting and auditing requirements will be monitored by review missions and during normal program supervision, and followed up regularly with all concerned, including the external auditor.

27. The government and PMU3 have been made aware of ADB's approach to delayed submission, and the requirements for satisfactory and acceptable quality of the audited project financial statements.⁵ ADB reserves the right to require a change in the auditor (in a manner consistent with the constitution of the borrower), or for additional support to be provided to the auditor, if the audits required are not conducted in a manner satisfactory to ADB, or if the audits are substantially delayed. ADB reserves the right to verify the project's financial accounts to

⁵ ADB's approach and procedures regarding delayed submission of audited project financial statements:

- (i) When audited project financial statements are not received by the due date, ADB will write to the executing agency advising that (a) the audit documents are overdue; and (b) if they are not received within the next 6 months, requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment letters will not be processed.
- (ii) When audited project financial statements are not received within 6 months after the due date, ADB will withhold processing of requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment letters. ADB will (a) inform the executing agency of ADB's actions; and (b) advise that the loan may be suspended if the audit documents are not received within the next 6 months.
- (iii) When audited project financial statements are not received within 12 months after the due date, ADB may suspend the loan.

confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

28. Public disclosure of the audited project financial statements, including the auditor's opinion on the project financial statements, will be guided by ADB's Public Communications Policy 2011.⁶ After the review, ADB will disclose the audited project financial statements and the opinion of the auditors on the project financial statements no later than 14 days of ADB's confirmation of their acceptability by posting them on ADB's website. The management letter, additional auditor's opinions, and audited entity financial statements will not be disclosed.⁷

⁶ Public Communications Policy: <http://www.adb.org/documents/pcp-2011?ref=site/disclosure/publications>

⁷ This type of information would generally fall under public communications policy exceptions to disclosure. ADB. 2011. *Public Communications Policy*. Paragraph 97(iv) and/or 97(v).

VII. PROCUREMENT AND CONSULTING SERVICES

A. Advance Contracting

29. **Advance contracting.** Advance contracting for the improvement of CW-B2 will be undertaken in conformity with ADB Procurement Guidelines (2015, as amended from time to time). The issuance of invitations to bid under advance contracting will be subject to ADB approval. The borrower, PMU3, have been advised that approval of advance contracting does not commit ADB to finance the project.

30. The contract was about to be awarded in January 2015 when PMU3 realized the insufficiency of loan proceeds due to SDR depreciation. PMU3 proposed to down-scope the contract to have minimum facilities of CBD included in the contract. During the midterm review in April 2015, the mission informed PMU3 that ADB Management proposed to retain the same CBF scope, while seeking additional financing to cover the loss of loan proceeds due to SDR depreciation. Therefore, PMU3 has cancelled the procurement process and returned the bids to all bidders. PMU3 restarted the bidding process and ADB approved the IFB and bidding documents on 11 February 2016. This contract award is likely in Q3 2016.

B. Procurement of Goods, Works, and Consulting Services

31. All procurement of goods and works will be undertaken in accordance with ADB's Procurement Guidelines (2015, as amended from time to time).

32. An 18-month procurement plan indicating threshold and review procedures, goods, works, and consulting service contract packages and national competitive bidding guidelines is in Section C.

C. Procurement Plan

Basic Data

Project Name: Provincial Roads Improvement Project		
Project Number: 43309-013		Approval Number: 2839/0278/8254
Country: Cambodia		Executing Agency: Ministry of Public Works and Transport, Ministry of Public Works and Transport (B)
Project Procurement Classification:		Implementing Agency: N/A
Project Procurement Risk:		
Project Financing Amount:	US\$ 78,800,000	Project Closing Date: 30 September 2018
ADB Financing:	US\$ 52,000,000	
Cofinancing (ADB Administered):	US\$ 17,000,000	
Non-ADB Financing:	US\$ 9,800,000	
Date of First Procurement Plan: 16 December 2011		Date of this Procurement Plan: 8 January 2016

A. Methods, Thresholds, Review and 18-Month Procurement Plan

1. Procurement and Consulting Methods and Thresholds

33. Except as the Asian Development Bank (ADB) may otherwise agree, the following process thresholds shall apply to procurement of goods and works.

Procurement of Goods and Works

Method	Threshold	Comments
International Competitive Bidding for Goods	US\$ 1,000,000	
National Competitive Bidding for Goods	Beneath that stated for ICB, Goods	The first english language version of National Competitive Bidding is subject to prior review, thereafter post review.
Shopping for Goods	Below \$100,000	The first english language version of Shopping is subject to prior review, thereafter post review.
International Competitive Bidding for Works	US\$ 3,000,000	country threshold
National Competitive Bidding for Works	Beneath that stated for ICB, Works	The first english language version of National Competitive Bidding is subject to prior review, thereafter post review.
Shopping for Works	Below \$100,000	The first english language version of Shopping is subject to prior review, thereafter post review.

Consulting Services

Method	Comments
Quality- and Cost-Based Selection for Consulting Firm	
Quality-Based Selection for Consulting Firm	

2. Goods and Works Contracts Estimated to Cost \$1 Million or More

34. The following table lists goods and works contracts for which the procurement activity is either ongoing or expected to commence within the next 18 months.

Package Number	General Description	Estimated Value (\$)	Procurement Method	Review (Prior/Post)	Bidding Procedure	Advertisement Date (quarter/year)	Comments
CW-B2	Improvement of Prey Var CBF	5,320,000.00	ICB	Prior	1S1E	Q2 / 2016	Prequalification of Bidders: No Domestic Preference Applicable: Yes Bidding Document: Large Works Comments: ADB/PPCR financing

ADB = Asian Development Bank; CBF = cross-border facility; CW = civil works; ICB = international competitive bidding; PPCR = Pilot Program for Climate Resilience; Q = quarter.

3. Consulting Services Contracts Estimated to Cost \$100,000 or More

35. The following table lists consulting services contracts for which the recruitment activity is either ongoing or expected to commence within the next 18 months.

Package Number	General Description	Estimated Value (\$)	Recruitment Method	Review (Prior/Post)	Advertisement Date (quarter/year)	Type of Proposal	Comments
CS2	Road Asset Management	850,000.00	QCBS	Prior	Q2 / 2016	FTP	Assignment: International Quality-Cost Ratio: 80:20 Comments: ADB financing

ADB = Asian Development Bank; CS = consulting services; FTP = full technical proposal; QCBS = quality- and cost-based selection; Q = quarter.

4. Goods and Works Contracts Estimated to Cost Less than \$1 Million and Consulting Services Contracts Less than \$100,000 (Smaller Value Contracts)

36. The following table lists smaller-value goods, works and consulting services contracts for which the activity is either ongoing or expected to commence within the next 18 months.

Goods and Works

Package Number	General Description	Estimated Value	Number of Contracts	Procurement Method	Review (Prior/ Post)	Bidding Procedure	Advertisement Date (quarter/ year)	Comments
CW-D1	Rehabilitation of Portanorn, Bakdao and Srok dikes	791,000.00	1	NCB	Prior	1S1E	Q4 / 2015	Prequalification of Bidders: N Domestic Preference Applicable: Y Bidding Document: Small Works Comments: PPCR
CW-D2	Restoration of Khsaet Lake	500,000.00	1	NCB	Prior	1S1E	Q4 / 2015	Prequalification of Bidders: N Domestic Preference Applicable: Y Bidding Document: Small Works Comments: PPCR
CW-D3	Construction of Kampong Leang Water Supply	652,000.00	1	NCB	Prior	1S1E	Q4 / 2015	Prequalification of Bidders: N Domestic Preference Applicable: Y Bidding Document: Small Works Comments: PPCR
CW-D4	Construction of Emergency Management Center	380,000.00	1	NCB	Prior	1S1E	Q4 / 2015	Prequalification of Bidders: N Domestic Preference Applicable: Y Bidding Document: Small Works

B. Indicative List of Packages Required Under the Project

37. The following table provides an indicative list of goods, works and consulting services contracts over the life of the project, other than those mentioned in previous sections (i.e., those expected beyond the current period).

Goods and Works

Package Number	General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Procurement Method	Review (Prior/Post)	Bidding Procedure	Comments
None							

Consulting Services

Package Number	General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Recruitment Method	Review (Prior/Post)	Type of Proposal	Comments
None							

C. List of Awarded and On-going, and Completed Contracts

38. The following tables list the awarded and on-going contracts, and completed contracts.

1. Awarded and Ongoing Contracts

Goods and Works

Package Number	General Description	Estimated Value	Awarded Contract Value	Procurement Method	Advertisement Date (quarter/year)	Date of ADB Approval of Contract Award	Comments
CW-C	Improve 150B, NR53, 151B (69.6km)	17,780,000	18,671,259.25	ICB	Q2 / 2013	14-MAR-14	Gumkang Construction Co. Ltd.- Visvakam Samnang Construction Co. Ltd JV dated 10 April 2014
CW-B1	Improve 314D (25.6km)	9,000,000	10,728,905.58	ICB	Q3 / 2013	19-FEB-14	Sinohydro Corporation Ltd., contract dated 26 March 2014
CW-A	Improve NR13 (62.4km)	23,390,000	22,786,558.44	ICB	Q3 / 2013	19-FEB-14	Sinohydro Corporation Ltd., contract dated 26 March 2014

CW = civil works; ICB = international competitive bidding; NR = national road; Q = quarter

Consulting Services

Package Number	General Description	Estimated Value	Awarded Contract Value	Recruitment Method	Advertisement Date (quarter/year)	Date of ADB Approval of Contract Award	Comments
CS3	HIV Awareness and Prevention Program	350,000	349,940	QBS	Q2 / 2012	24-JAN-14	SBK Research and Development, 25 February 2014
CS1	Detail Design and Implementation Supervision	8,450,000	6,944,430	QCBS	Q4 / 2011	17-OCT-12	Korea Consultants International, etc. dated 13 November 2012
CS-4	Climate Resilience	2,030,000	2,030,000	QCBS	Q2 / 2012	07-MAR-14	Egis International JV, 7 March 2014

CS = consulting services; Q = quarter; QBS = quality-based selection; QCBS = quality- and cost-based selection.

D. National Competitive Bidding

1. Regulation and Reference Documents

39. The procedures to be followed for national competitive bidding (NCB) shall be those set forth for the “National Competitive Bidding” method in the Government’s Procurement Manual issued under Sub-Decree Number 74 ANKR.BK, updated version dated 22 May 2012 with the clarifications and modifications described in the following paragraphs. These clarifications and modifications are required for compliance with the provisions of the Procurement Guidelines.

40. For the procurement of ADB financed contracts under NCB procedures, the use of harmonized NCB (NCB and National Shopping) developed in consultation with development partners including ADB, is mandatory except where the Government and ADB have agreed to amendments to any part of the documents. The Procurement Manual also advises users to check the ADB website from time to time for any update on ADB documents, which form the basis, among others, of the existing harmonized national bidding documents.

2. Procurement Procedures

a. Application

41. Contract packages subject to NCB procedures will be those identified as such in the project Procurement Plan. Any change to the mode of procurement of any procurement package in the Procurement Plan shall be made through updating of the Procurement Plan, and only with prior approval of ADB.

b. Sanctioning

42. Bidders shall not be declared ineligible or prohibited from bidding on the basis of barring procedures or sanction lists, except individuals and firms sanctioned by ADB, without prior approval of ADB.

c. Rejection of all Bids and Rebidding

43. The Borrower shall not reject all bids and solicit new bids without ADB’s prior concurrence. Even when only one or a few bids is/are submitted, the bidding process may still be considered valid if the bid was satisfactorily advertised and prices are reasonable in comparison to market values.

d. Advertising

44. Bidding of NCB contracts shall be advertised on the ADB website via the posting of the Procurement Plan. Borrowers have the option of requesting ADB to post specific notices in the ADB website.

3. Bidding Documents

a. Use of Bidding Documents

45. The Standard NCB Documents provided with the Government’s Procurement Manual shall be used to the extent possible both for the master bidding documents and the contract-

specific bidding documents. The English language version of the procurement documents shall be submitted for ADB review and approval in accordance with agreed review procedures (post and prior review) as indicated in the Procurement Plan. The ADB-approved procurement documents will then be used as a model for all procurement financed by ADB for the project.

b. Bid Evaluation

46. Bidders shall not be eliminated from detailed evaluation on the basis of minor, non-substantial deviations.

47. A bidder shall not be required, as a condition for award of contract, to undertake obligations not specified in the bidding documents or otherwise to modify the bid as originally submitted.

c. Employer's Right to Accept or Reject Any or All Bids

48. The decision of the Employer to accept or reject any or all bids shall be made in a transparent manner and involve an obligation to inform of the grounds for the decision through the bid evaluation report.

d. ADB Policy Clauses

49. A provision shall be included in all NCB works and goods contracts financed by ADB requiring suppliers and contractors to permit ADB to inspect their accounts and records and other documents relating to the bid submission and the performance of the contract, and to have them audited by auditors appointed by ADB.

50. A provision shall be included in all bidding documents for NCB works and goods contracts financed by ADB stating that the Borrower shall reject a proposal for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the contract in question.

51. A provision shall be included in all bidding documents for NCB works and goods contracts financed by ADB stating that ADB will declare a firm or individual ineligible, either indefinitely or for a stated period, to be awarded a contract financed by ADB, if it at any time determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices or any integrity violation in competing for, or in executing, ADB-financed contract.

D. Consultant's Terms of Reference

1. Detailed Design and Implementation Supervision Consultant

a. Introduction

52. The civil works of the Project comprise the improvement of existing earth or gravel-surfaced roads to a bitumen-sealed standard using a double bituminous surface treatment (DBST), including placement, as necessary, of sub-base and road base, using unbound materials or stabilized materials for the road pavement. It is expected that the existing road structure, including the remaining gravel-wearing course, will be reused by applying stabilization techniques. The works also involves replacement or repair of existing cross drainage, and the

placement of some new culverts. It also involves repair replacement of small bridges at existing locations. Bridges that are replaced will be widened.

53. The civil works will be executed through four contract packages. The Consultant will be responsible for the design and supervision of all civil works packages as shown in Table A3.1. The consultant will also be responsible for resettlement, environmental and social safeguards measures, and for coordination of other consulting services packages. The preliminary design developed under Technical Assistance (TA) 7665-CAM will be further developed through surveys and detailed design. This detailed design will be used to prepare the bid documents of civil works contracts. The contract packages must contain subcontract clauses/documentation to ensure that appropriate civil works are carried out by smaller scale contractors or entities including provincial, local contractors and Community Council/Road Maintenance Committees, as appropriate. Following the Fédération Internationale des Ingénieurs-Conseil (FIDIC) conditions, the employer will be MPWT, the employer's representative will be the Director of PMU3 of MPWT, the consultant will be the engineer, and the engineer's representative will be the consultant's team leader.

Table A3.1: Contract Packages

Contract Package and Provinces	No. of Roads	Total Length (km)	Approximate Value (\$ millions)	Completion (months)
CW-A: Improve NR 13 (Prey Veng)	1	62.4	23.39	36
CW-B:	1	25.6	14.32	39
CW-B1: Improve 314D				
CW-B2: CBF at Prey Var, Svay Rieng (Svey Rieng)			5.5	
CW-C: Improve 150B, NR 53 151B (Kampong Chhnang and Kampong Speu)	3	69.6	17.78	36
CW-D: Civil works for Climate resilience (Kampong Chhnang)	–	–	3.70	33

– = not applicable, ADB = Asian Development Bank, CBF = cross-border facility, CW = civil works, km = kilometer, NR = national road.

54. The consultant will be responsible for detailed design, construction supervision, implementation monitoring, as well as project performance monitoring and evaluation. The consultant will also be responsible to work in close association with the resettlement department of the MEF, for resettlement and other social issues, and with the Ministry of the Environment for environment issues.

b. The Consultant

55. The DDIS consulting services comprise:

- (i) detailed design of all contract packages of Table A3.1 covering 157 km of project roads, which will be improved to paved road standard.
- (ii) preparation of suitable bidding documents for tender by international civil works contractors.
- (iii) supervision of all civil works packages.
- (iv) preparation of a future project that will be similar in nature to the preparation for this Project.
- (v) providing coordination and support for other consulting services of asset management, support for road safety, HHTPP and environmental considerations,

and support for implementation of the project's Labor and Gender Action Plan (LGAP).

56. The Team Leader will head the consultants' main office in Phnom Penh to be established at MPWT, and be responsible for two site offices, to provide adequate coverage of the project roads. The main office will be responsible for highway design, benefit monitoring and evaluation, and overall assistance in coordination with MPWT. The site offices will administer the civil works in accordance with the contracts. Following the FIDIC conditions, the employer will be MPWT, the employer's representative will be the Project Director of the PMU3, the consultant will be the engineer, and the Team Leader will be the engineer's representative.

c. The Consultant

57. The consulting services will be provided by a consulting firm, joint venture, or consortium of consulting firms, to be appointed by MPWT in accordance with ADB's *Guidelines on the Use Consultants*. The consultant will provide the staffing, although in preparing the proposals, the consultant may provide comments to improve the quality of the works. The final staffing will be adjusted to suit the actual procurement and implementation schedules. It is a mandatory requirement that all national experts should be sufficiently fluent in English.

d. Implementation Arrangements

58. Under the overall guidance of the Project Director as the head of the PMU3, established to administer all project activities, the consulting services are expected to continue through 59 months, during the entire period of the civil works and other activities, and the level of inputs will depend on the annual work programs.

59. The consultant will establish a main office in Phnom Penh (provided by the MPWT) headed by the team leader; and two site offices in selected project provinces (to be determined during implementation and provided by the civil works contractors) to provide adequate coverage of the project roads. The main office will be responsible for highway design, benefit monitoring and evaluation, and overall assistance in coordination with MPWT. The site offices will administer the civil works in accordance with the contracts.

e. Staffing and Other Inputs

60. The consultant is expected to provide personnel as shown in Table A3.2 for the indicated duration, which is the minimum. The duration of consulting services is 59 months. The details of individual experts' TORs are in Table A3.2.

Table A3.2: Personnel Inputs of Consulting Services

List of Personnel		Person-Months
CS 1: DDIS Consultants		
International	Team Leader (highway engineer)	59
	Road design engineer	7
	Materials engineer	19
	Structural engineer	7
	Resident engineer (3x36 person months)	108
	Environmental specialist	14
	Procurement specialist	6
	Social safeguards specialist	6

List of Personnel	Person-Months
Transport economist	6
Resettlement specialist	9
Road safety specialist	12
National	
Road design engineer (deputy team leader)	8
Materials engineer	43
Structural engineer	43
Surveyor	43
Hydrologist	7
Assistant resident engineer (3x36 person months)	108
Environment specialist	14
Procurement	7
Labor and gender specialist	15
De-mining/UXO specialist	7
Resident inspectors/survey	432
Road engineer	8
Resettlement specialist	24
Road safety specialist	24
CS1: Total	1,036

CS = consulting services, DDIS = detailed design and implementation supervision, UXO = unexploded ordnance.

INTERNATIONAL DDIS TEAM

a. Team Leader (Highway Engineer) – International, 59 person-months

61. As the engineer's representative, the consultant's Team Leader will implement the civil work contracts and ensure that the works are constructed in accordance with its provisions. The consultant will have all the powers defined in the FIDIC Conditions of Contract as the engineer, with the exception the following, which will be retained and exercised by the employer, generally on the advice of the engineer:

- (i) issuing the order to commence the works;
- (ii) approving variation orders that have financial implications;
- (iii) approving significant variations in quantities;
- (iv) approving subletting of any part of the works; and
- (v) approving extensions of time.

62. In addition to all of the duties necessary for the adequate supervision of the construction activities on site, the Team Leader's responsibilities as the consultant also include:

- (i) preparation of formal contract documentation; and
- (ii) contract administration.

63. In detail, the Team Leader's responsibilities as the Consultant include:

- (i) assessing the exposure of unexploded ordnance (UXO) in project roads before any works starts through the engagement of national professional expert who will join the DDIS team;
- (ii) assisting PMU3 in procurement activities and approving the contractor's work program, method statements, material sources, etc.;
- (iii) preparing and issuing reports as defined subsequently;

- (iv) approving and/or issuing working drawings, approving the setting out of the works, and instructing the contractor;
- (v) taking measurements and keeping measurement records;
- (vi) maintaining records, correspondence, and diaries;
- (vii) certifying work volume and recommending interim certificates for progress payments;
- (viii) maintaining consolidated project accounts, and preparing of financial statements and withdrawal applications for submission to ADB;
- (ix) certifying completion of part or all of the works;
- (x) inspecting the works at appropriate intervals during the defects liability period and issuing the defects liability certificate;
- (xi) processing the contractor's possible claims;
- (xii) ensuring minimum disruption/damage to the environment and local settlements by approval of contractors' work statement/methodology, including monitoring the impact of construction works on the environment and local settlements and providing information to MPWT and ADB in the monthly progress reports;
- (xiii) providing the employer with complete records and reports, and approving the contractors' as-built drawings for the works;
- (xiv) providing advice and on-the-job training to MPWT staff in contract administration;
- (xv) providing assistance to PMU3 to ensure smooth implementation of resettlement plans of the project; and
- (xvii) carrying out performance monitoring and evaluation for the Project in accordance with the schedule and TOR to be mutually agreed by MPWT and ADB.

64. The Team Leader, through the effective leadership of the DDIS team and effective communication with the PMU3, will be responsible for all aspects of the consulting engineers' services leading to the successful implementation of the project.

65. The Team Leader will lead the DDIS team to undertake the following to achieve the objectives of the Project:

- (i) review the preliminary engineering designs for the project roads and prepare detailed engineering designs, cost estimates and bid documents suitable for ICB, and to assist in the evaluation of bids;
- (ii) function as "the engineer" in administering civil works contracts and ensuring completion of construction, and closure of contracts in accordance with the contract provisions;
- (iii) support MPWT in the implementation of the LGAP;
- (iv) assist the MPWT in ensuring that the Project is implemented consistent with the provisions of the environmental management plan (EMP) and ADB's SPS, assist MPWT in ensuring there is no infringement of the criteria that there will be no resettlement;
- (v) assist MPWT with the updating as necessary and implementing use of its manuals and guidelines for project planning, implementation and procurement and ensuring these are all in line with ADB guidelines on these subjects including preparation of pilot audits and testing audited information using external auditors;
- (vi) assist the MPWT in the implementation of an HHTPP. Separate consultants will be engaged to support this role;
- (vii) provide on-the-job training to MPWT staff in civil works construction, administration and other aspects of professional engineering skills; and

- (viii) carry out performance monitoring and evaluation of the civil works at mid-term and after physical completion.

66. The Team Leader will be an internationally-qualified highway engineer with a minimum of 20 years' experience as the team leader in leading road rehabilitation projects of DBST paving. He/she needs extensive work experience in Cambodia or countries within similar geographical areas in the region. The Team Leader has to be fully aware of the requirements and responsibilities of an ADB-supported Project.

b. Road Design Engineer – International, 7 person-months

67. The road design engineer's role is to provide two inputs: first to prepare the detailed design of the Project roads, and second to prepare the engineering requirements for the preparation of the future project.

68. For the detailed design of the project roads, the road design engineer will undertake the following tasks:

- (i) administer and supervise site investigation and design and documentation activities for road improvement civil works contracts.
- (ii) confirm detailed design guidelines and specifications in collaboration with MPWT.
- (iii) confirm classified traffic counts and axle loading on the project roads together with an estimate of present and future traffic and axle loading as necessary for designing appropriate pavement structures.
- (iv) carry out necessary topographic surveys for design and documentation works; establish control points, benchmarks and reference beacons as required to prepare detailed engineering designs and to enable construction quantities.
- (v) review the need for road safety measures based on the findings of the road safety output and design the road safety features appropriately.
- (vi) recommend specifications for road construction (see MPWT) specifications and apply any modifications that are essential
- (vii) assist in the preparation of construction schedules showing anticipated progress of works and expenditures for the rehabilitation contract package. The schedules will reflect seasonal weather effects at the work sites;
- (viii) assist the Environmental specialist with the preparation of a suitable EMP to mitigate adverse environmental impacts including those encountered during construction;
- (ix) prepare practical and cost-effective pavement designs on the basis of condition surveys, projected traffic levels, pavement structure studies, and axle load considerations, as determined from activities above and from any previous studies.
- (x) prepare detailed engineering designs and bills of quantities, and calculate detailed cost estimates for civil works, broken down into foreign (direct and indirect) and local components as well as taxes and duties for improvement works;
- (xi) ensure deliverables comply with relevant MPWT technical requirements, ADB conditions and the terms of the assumptions in the cost benefit analysis;
- (xii) ensure that the bid documents for road rehabilitation works include specific provisions to avoid resettlement and minimize disruption/damage to local settlements due to construction;

- (xiii) prepare contract drawings for the road works; including road plans, longitudinal profiles, cross-sections, and others for rehabilitation works. Road plans should include all existing features.
- (xiv) preparation of pre-tender estimates for rehabilitation works.
- (xv) assist with the preparation of road improvement bid documents.
- (xvi) assist with preparation of tender documentation suitable for procurement under international competitive bidding and national competitive bidding methods in accordance with ADB's *Procurement Guidelines*.
- (xvii) assist with the appraisal of road improvement bids as part of the bid evaluation process.
- (xviii) assist with the evaluation of the capacity of road improvement contractors.
- (xix) assist with on-the-job training to engineers appointed to the PMU3 and project implementation units.

69. For the preparation of the future project, a strong basis exists from the feasibility study of this project (TA-7665), including the technical specifications and draft road design documents, and suitable pavement design standards, all held by MPWT. In the preparation for this future project, the road design engineer will assist the transport economist to prepare the cost benefit analysis by supplying feasibility cost for improvement civil works.

70. Specific tasks will include:

- (i) in discussion with MPWT, the selection of provinces through an appropriate screening criteria;
- (ii) preparation of an initial list of candidate unpaved roads;
- (iii) selection of project roads based on suitable engineering surveys that should be undertaken as necessary, including the evaluation of pavement condition and strength;
- (iv) assist the transport economist with a review existing traffic data; carry out necessary classified traffic counts, origin/destination application of axle load information leading to a forecast of traffic loading for each road/road section;
- (v) assist the transport economist on the basis of traffic counts and vehicle loading, determine the cost effective means of road improvement for each road or subsection section of road;
- (vi) review road safety implications for each design alternative and design and provide a cost estimate for road safety mitigation measures;
- (vii) estimate the required costs of civil works for each alternative, including foreign exchange and local components, separately identifying taxes and duties;
- (viii) prepare a report on the engineering component of the study.

71. The road design engineer will be an internationally-qualified professional engineer with a minimum of 15 years' experience. He/she should have experience, as the road design engineer, in road rehabilitation projects of DBST paving, and with extensive experience in Cambodia or countries within similar geographical areas in the region.

c. Materials Engineer – International, 19 person-months

72. The civil works comprise the improvement of existing earth or gravel-surfaced roads to a bitumen-sealed standard using a DBST, including placement as necessary of sub-base and road base, using unbound materials or stabilized materials for the road pavement. It is expected that applying stabilization techniques will reuse the existing road structure including the

remaining gravel-wearing course. The works also involves replacement or repair of existing cross drainage and the placement of some new culverts. It also involves repair or replacement of small bridges at existing locations.

73. The materials engineer will be fully experienced in the materials and process involved for the improvement of the project roads including the use of unbound (aggregate and natural materials) and hydraulically-bound pavement materials and the use of bituminous surface treatments.

74. The materials engineer will have worked with recycled and hydraulically-stabilized (and other) materials for the construction of road pavements and will be fully aware of the needs for proving materials in the laboratory, including durability of stabilized materials and construction techniques in the field. The materials engineer will also be familiar with the modern machine-based application of stabilizers (cement lime) to achieve the rapid application of stabilizers into the parent material, and therefore, the rapid achievement of completed road pavement works. The materials engineer will also be familiar with the inherent variability of blending stabilizers with existing materials in the road and the techniques required to successfully achieve consistent blending in the correct proportions to achieve consistent technical requirements.

75. The materials engineer will also be fully experienced with materials selection and processing for cross drainage structures, and for bridge works and all other concrete works.

76. The materials engineer will:

- (i) During the detailed design stage, review existing information and conduct site visits, select potential materials sources and propose their usage for the detailed design.
- (ii) Conduct a suitable laboratory program to test materials as necessary for this stage of the project design, especially for stabilized materials.
- (iii) Establish a testing regime for the construction phase that complies fully with the range of materials that will be used for the project roads
- (iv) During the construction (intermittently) oversee the use of materials to ensure they meet quality standards required.
- (v) Determine the materials requirements for a cement concrete pavement trial to be located on one of the project roads.
- (vi) Work closely with the national materials engineer to ensure at all times that a suitably competent and experienced materials engineer is on-hand to work with the resident engineers.

77. A Materials Engineer with a minimum of 15 years' experience is required. Experience with hydraulically-stabilized materials, and materials used for paved roads and structures are essential. He/she should have experience, as the materials engineer, in road rehabilitation projects of DBST paving, and with extensive experience in Cambodia or countries within similar geographical areas in the region.

d. Structural Engineer – International, 7 person-months

78. There are a number of bridges on the roads that are to be improved. Some are of timber construction and others are very narrow (3 meters [m]), or deteriorated. These will be replaced with wider bridges (8 m). He/she is required to:

- (i) Inspect the bridges and confirm those that require replacement, and any repairs required on other bridges;
- (ii) Work closely with the national hydrological engineer to determine adequacy of the structural design;
- (iii) Prepare the detailed design for the repair or replacement of bridges, as required;
- (iv) Prepare detailed design documentation suitable for bidding documents.

79. The structural engineer will be an internationally-qualified professional engineer with a minimum of 10 years' experience. He/she should have experience, as the structural engineer, in road rehabilitation projects, with extensive experience in Cambodia or countries within similar geographical areas in the region.

e. Resident Engineer (3 persons) – International, 108 person-months total

80. A resident engineer will be assigned to each civil works package, thus three resident engineers are required. The Engineer will be experienced in his responsibilities and legal aspects of the works. The Resident Engineers will report to the Team Leader.

81. Each resident engineer will be an internationally-qualified professional engineer with a minimum of 10 years' experience internationally and preferably with at least 5 years experience in the region. He/she should have experience, as the resident engineer, in road rehabilitation projects of DBST paving, with extensive experience in Cambodia or countries within similar geographical areas in the region. The engineer will be experienced in the supervision of internationally-qualified contractors

f. Environment Specialist – International, 14 person-months

82. For the Project roads, the environment specialist will:

- (i) ensure that an EMP based on the ADB-approved initial environmental examination (IEE) is included in the bid and contract documents for civil works;
- (ii) ensure that environmental design measures specified in the EMP are incorporated in the detailed design;
- (iii) orient resident engineers and resident inspectors on EMP provisions to ensure that they will be able to adequately supervise on a day-to-day basis the contractors and sub-contractors with regard to proper and timely implementation of mitigation measures specified in the EMP;
- (iv) as required in the EMP, monitor implementation of environmental mitigation measures and environmental performance of contractors based on the EMP schedule, and assist MPWT in the preparation of semi-annual environmental monitoring reports for submission to ADB. The monitoring reports shall describe the progress of implementation of each environmental mitigation measure specified in the EMP, compliance issues, and corrective actions, if any;
- (v) undertake field measurements for dust, noise, and water quality as required in the EMP and submit corresponding reports to ADB;
- (vi) coordinate with the Social Development/Safeguards Specialist (international) in preparing environmental training materials and train social and environment office (SEO) staff in the scope and details of their responsibilities so they can inform and train staff of other offices of MPWT;

- (vii) undertake environmental training for the MPWT/SEO staff to build their capacity on environmental management and monitoring. The training will be implemented through on-the-job training and workshops based on the provisions of the EMP.

83. For the future project, to ensure environmental safeguard requirements are met, the specialist will, in accordance with ADB's SPS and *Public Communications Policy* (2005), undertake the following tasks, including preparation of relevant appendixes and sections of a report and recommendation of the president (RRP):

- (i) prepare a Rapid Environmental Assessment for ADB's approval using the ADB sector-specific checklist provided in ADB's website (http://www.adb.org/documents/guidelines/environmental_assessment/eaguidelines002.asp);
- (ii) depending on the project's environmental category (likely to be categorized as environmental B) as approved by ADB, prepare an environmental assessment report (i.e. environmental impact assessment [EIA] for category A and IEE for category B) considering the likely impacts associated with pre-construction and construction activities, as well as the long-term impacts during operation. The environmental assessment report shall be prepared consistent with the requirements of ADB's SPS;
- (iii) as part of the environmental assessment, prepare an EMP detailing environmental mitigation measures to address each identified impact as well as an environmental monitoring program to be implemented during various project phases. The EMP shall identify specific costs, institutional responsibilities, schedule/timeframe, location, and monitoring parameters;
- (iv) conduct consultations with groups to be affected (local residents, local officials, people's organizations, and other stakeholders) by the project and local non-government organizations (NGOs). For category B project, the public consultation shall be conducted at least once, and for category A, consultations shall be carried out at least twice, i.e., once during the early stages of EIA field work; and once when the draft EIA report is available, and prior to loan appraisal by ADB. Document the results of the consultations in the environmental assessment report;
- (v) ensure that the cost for implementing, mitigation measures, monitoring plan, and environmental management capacity strengthening activities are included in the project cost; and,
- (vi) prepare the TOR for any further detailed environmental assessments, if required.

84. The environment specialist will have a suitable international environmental qualification with a minimum of 10 years' experience, have experience on ADB-assisted projects, and demonstrate significant experience on environmentally sensitive areas and issues in Cambodia or countries within similar geographical areas in the region.

g. Procurement Specialist – International, 6 person-months

85. The Project involves the procurement of both goods and civil works. To undertake these activities, to entirely meet the ADB procurement guidelines, an international procurement expert with suitable qualifications and a minimum of 10 years' experience is required. The specialist will be experienced specifically with the ADB requirements for successful procurement and should demonstrate significant experience on procurement issues in Cambodia or countries within similar geographical areas in the region. A national procurement specialist will support the specialist.

86. The activities include but are not limited to:

- (i) The procurement of four civil works packages through international bidding procedures. Within the procurement of these two civil works internationally, suitable and appropriate smaller scale civil works will be specifically identified for procurement under sub-contracting terms under the process of procuring the principal contractor. These sub-contracts will permit works to be undertaken by provincial, local and community-based contracts.
- (ii) In conducting the procurement process, the specialist will prepare a detailed plan showing all of the processes to be adhered to and all time schedules, such that the process is entirely defined. It must also give guidance on what must not be done such that the procurement process could be placed in jeopardy.
- (iii) The specialist will work closely with the DDIS Team Leader and with the PMU3 through the Director and in particular with the MPWT Procurement Officer and with the Procurement committee(s).

h. Social Safeguards Specialist – International, 6 person-months

87. The Project involves the social and safeguards issues/activities like temporary disturbances to residents due to construction, labor and gender requirements (see LGAP), and HIV and human trafficking prevention. A national labor and gender specialist will support this international specialist. Together with the international environmental specialist, this specialist tasks will include:

- (i) Use approximately one month of service supporting the preparation of the future project,
- (ii) Establish links and cooperation between the SEO and MPWT's Gender Working Group, as well as other line ministries such as the Resettlement Department of the Ministry of Finance, inter-ministerial resettlement committee, the Ministry of the Environment and the Ministry of Fine Arts and
- (iii) Design and implement training programs and prepare training materials for SEO specific to consultation and participation, gender and development, social safeguards, and management of social risks and vulnerabilities,
- (iv) Prepare the SEO staff to enable them to train staff of other offices of MPWT
- (v) Ensure systems are set up for effective implementation of the project's LGAP.

88. Document any steps taken to reduce resettlement impacts. Prepare options for discussion with other team members to minimize resettlement effects. Assist the team in the resettlement screening and preparation of resettlement plan, as required, as per agreed Resettlement Framework and SPS, and monitoring and reporting of resettlement-related issues.

89. To undertake these related activities, to entirely meet the ADB safeguards policy requirements, an international Social Development/Safeguards Specialist with suitable qualifications and a minimum of 10 years' experience is required. The specialist will be experienced specifically with the ADB requirements adequately. The specialist should demonstrate significant experience on safeguards issues in Cambodia or countries within similar geographical areas in the region.

i. Transport Economist – International, 6 person-months

90. Under the overall direction of the Team Leader and supported by the International Road Design engineer, the International Transport Economist will lead the feasibility study for the future project. The activities of this position include, but are not limited to, the following:

- (i) Visit the proposed roads for rehabilitation as advised by the DDIS road engineer and discuss with MPWT staff and other development partners, etc. to obtain data necessary for the tasks. As such, the consultant will collect existing traffic volume data of recent years, if any, and in case of absence of such conduct traffic counts on these roads, to determine the daily average traffic volumes, and forecast traffic volume growth.
- (ii) Collect a set of basic road deterioration and road user related data, to determine the economic indicators to suit the current situation and necessary for HDM-4 analysis.
- (iii) Conduct economic analysis of the proposed rural roads based on HDM-4 model, and conduct risk and sensitivity analyses in line with ADB's *Guidelines for Economic Analysis of Projects* (1997).
- (iv) Adopt a life cycle cost approach and make an analysis to determine the most economical rehabilitation method for the current rural roads of MPWT.
- (v) Draft the benefit monitoring framework for the future project along with a design and monitoring framework (DMF).
- (vi) Draft a summary report outlining the issues, the proposed project, its inputs, outputs, outcome and impacts, and its budget and general implementation arrangements as identified by the Road Engineer. The summary report will include relevant annexes summarizing the findings and conclusions of the overall study done by the team.
- (vii) Provide an economic analysis report in the midterm report of the feasibility study of the future project and draft final report of satisfactory quality, to be in the form of main text for a final report and appendixes of an RRP.
- (viii) During project processing at the end of the feasibility study of the future project, fact-finding and appraisal missions, assist the ADB mission to smoothly undertake such missions.
- (ix) Assist the DDIS Team Leader in the coordination of the activities for the future project.
- (x) Based on the current project's DMF, prepare a benefit monitoring evaluation framework, discuss with the PMU3 and ADB, and finalize all monitoring indicators and obtain baseline data for all indicators within 9 months after the loan effectiveness.
- (xi) Conduct benefit monitoring and evaluation during the project's mid-term review.

91. The specialist should have a minimum of 10 years of adequate experience specifically with the ADB requirements on economic analysis. The specialist should demonstrate significant working experience in Cambodia or countries within similar geographical areas in the region.

j. Resettlement Specialist – International, 9 person-months

92. The Project involves resettlement activities including land acquisition, resettlement, and temporary disturbances to residents due to construction. A national resettlement specialist will support this international specialist. This specialist's tasks will include:

- (i) Update the resettlement plans prepared during the feasibility study based on detailed design;
- (ii) Complete the detailed measurement study (DMS) and update the entitlement matrix based on the DMS;
- (iii) Coordinate with resettlement department of MEF and inter-ministerial resettlement committee (IRC) in updating resettlement plans;
- (iv) Ensure that all affected persons receive compensation before construction starts;
- (v) Advise the Engineer when the compensation is complete to start civil works in such road sections;
- (vi) Work with affected persons and other stakeholders in consultations as required;
- (vii) Regarding the future project, assess the extent of land acquisition and resettlement and prepare appropriate resettlement plans in close coordination with PMU3 and IRC; and
- (viii) Ensure Government approvals are obtained for the resettlement plans and the same approvals by ADB to complete the project design of the future project.

93. To undertake these activities to entirely meet the ADB safeguards policy requirements, a Resettlement Specialist with suitable academic qualifications and a minimum of 10 years' experience is required. The specialist will be experienced specifically with the ADB requirements and adequately sufficient knowledge on ADB's SPS. The specialist should demonstrate significant experience on safeguards issues in Cambodia or countries within similar geographical areas in the region.

NATIONAL DDIS TEAM

a. Road Design Engineer (deputy team leader) – National, 8 person-months

94. Duties as the road design engineer will be undertaken to assist in the preparation of the detailed design. The role as Deputy Team Leader will start as the Road Engineer (see below) and will continue as the Materials Engineer, once the Road Engineer completes the detailed design.

95. A nationally qualified professional engineer with 15 years experience will be required to be the road design engineer and to undertake the role of Deputy Team Leader. The expert should have project experience of road rehabilitation with DBST paving and with experience working with international organizations.

b. Materials Engineer – National, 43 person-months

96. The duties as the materials engineer will be to assist in the preparation materials aspects of the detailed design and to guide and undertake laboratory and field investigations to prove the quality of materials used in the Project. The materials engineer will act initially under the direction of the international materials engineer but will be expected to take a leadership role and fully support the Project in the selection, assessment and approval of materials for use by the project.

97. A nationally qualified professional engineer with a minimum of 10 years experience will be required to be the materials engineer (national). Experience of the materials quality requirements for paved roads is essential. Knowledge and experience of working with hydraulically stabilized road building materials is necessary, while the expert should have

project experience of road rehabilitation with DBST paving and with experience working with international organizations.

c. Structural Engineer – National, 43 person-months

98. The structural engineer will work under the direction of the International Structural Engineer, and is expected to be fully competent to independently undertake all aspects of the work.

99. A nationally qualified professional engineer with a minimum of 15 years experience will be required to be the National Structural Engineer. The expert should have project experience of road rehabilitation with DBST paving with a capacity building output, and experience working with international organizations.

d. Surveyor – National, 43 person-months

100. The surveyors' role will be as follows:

- (i) Conduct topographic and other surveys as a component of the detailed design.
- (ii) Support the resident engineers' office at the commencement and completion of civil works at each job site (project road) to determine measurement procedures and accuracies required.

101. A nationally qualified professional surveyor with a minimum of 15 years experience will be engaged under the DDIS team. The experts should have project experience of road rehabilitation with DBST paving with a capacity building output, and experience working with international organizations.

e. Hydrologist – National, 7 person-months

102. The hydrologist will work closely with the Team Leader, international and the national structural engineers, and the road design engineer during the detailed design stage to review documentation, measure, and advise on the adequacy of the existing drainage structures with respect to their position, alignment and capacity to ensure any deficiencies are detected and rectifications are included in the detailed design.

103. The expert should have a minimum of 15 years of project experience of road rehabilitation with DBST paving with a capacity building output, and experience working with international organizations.

f. Assistant Resident Engineer – National (3), 108 person-months

104. An assistant resident engineer will be engaged to assist each international Resident Engineer. The assistant resident engineer will fully support all aspects of the civil works and work closely with and through the International Resident Engineer.

105. The assistant resident engineer will be a nationally qualified engineer with a minimum of 15 years' experience in the improvement of paved roads. The expert should have project experience of road rehabilitation with DBST paving with a capacity building output, and also experience working with international organizations.

g. Environment Specialist – National, 14 person-months

106. The specialist will work under the direction of the International Environment Specialist.

107. The environment specialist will have a suitable qualification in environment, science, engineering or management, and will have 10 years overall experience, including experience on projects assisted by ADB and experience working with other international organizations. The specialist will be fully conversant with the areas and locations of protected and sensitive areas of the country, and will be knowledgeable of the environmental laws of Cambodia and their practical application. The specialist will have experience in the environmental requirements and EMPs and monitoring procedures required during the implementation of civil works.

h. Procurement Specialist – National, 7 person-months

108. The specialist will work under the direction of the International Procurement Specialist.

109. A suitably qualified national procurement specialist with a minimum of 10 years experience in Cambodia will be engaged to support the international procurement specialist in all aspects of the procurement process. The procurement specialist will have significant experience working on ADB-assisted projects in Cambodia as the procurement specialist, and experience working with other international organizations. The specialist will be fully conversant with the national standard operating procedures, financial management procedures and procurement guidelines of the Royal Government of Cambodia (RGC).

i. Labor and Gender Specialist – National, 15 person-months

110. The Provincial Roads Improvement Project is expected to bring significant benefits to rural residents in four Cambodian provinces by reduced travel times, less arduous journeys and better connectivity to the national road network. It is intended that the benefits to local populations are maximized, and to ensure that the benefits are equally shared by men and women.

111. Labor-based road construction and maintenance is an area with significant potential for gender mainstreaming and greater gender equality in road construction and maintenance can provide significant social benefits to the households and communities that are involved. Measures to effectively mainstream gender in rural road activities include:

- (i) capacity development activities to promote better understanding of the differential gender impact of poor infrastructure and of the social benefits of improving it (related to gender differences in the purpose of travel and travel patterns, and in mobility outside the home and outside the village);
- (ii) mandatory recruitment procedures or quotas in minor works contracts, preceded by sensitization activities targeting both men (to encourage them to allow female family members to participate) and women (to inform them of opportunities);
- (iii) a requirement that contractors recruit a new workforce at regular intervals (e.g. every 5 km) to maximize employment creation and to ensure that women are not discouraged by excessive travel distances; and
- (iv) equal pay for equal work for both men and women, with a requirement that contractors to submit time sheets that are disaggregated by gender

112. Implementation arrangements and costs of mainstreaming labor and gender have been integrated into the overall arrangements and total project budget. MPWT as the executing agency will be responsible for implementing and monitoring the LGAP, particularly through the ministry's Gender Working Group. As part of the DDIS team, a national labor and gender specialist will be appointed to:

- (i) work with the Gender Working Group to conduct gender awareness training for the PMU3, and the SEO,
- (ii) establish sex-disaggregated indicators for project performance monitoring and evaluation, and
- (iii) coordinate with other specialists during subproject preparation and implementation.

113. Where appropriate, civil works will be based on the concept of labor-based appropriate technology, and contractors will prioritize (and monitor and report on) the use of local unskilled labor in civil works contracts and through subcontracting. The labor and gender specialist will prepare plans and undertake actions to ensure the following:

- (i) at least 40% of unskilled laborers will be female
- (ii) male and female unskilled workers will receive equal pay for equal work
- (iii) contractors will not employ child labor on civil works contracts
- (iv) road shoulders will have a sealed bituminous surface enabling carts with wheels for carrying water to reduce the burden on women and girls who haul water in rural areas.

114. The Project will also support the preparation of a community-based road safety campaign that will involve community members as facilitators, and ensure that at least 50% of community facilitators will be women

115. The Project will implement HHTPP to mitigate the potential HIV-related impacts of road construction on rural communities. The specialist will assist with ensuring:

- (i) the Project implements an HHTPP; and
- (ii) the baseline socioeconomic survey includes the collection of sex-disaggregated data.

116. Therefore, the labor and gender specialist will have a suitable qualification in social aspects related to labor and gender, and will have a minimum of 10 years overall experience, including experience on projects assisted by ADB and also experience working with other international organizations.

j. De-mining/UXO Specialist – National, 7 person-months

117. A land mine or unexploded ordnance risk is widespread in Cambodia including the provinces in which the proposed project will be conducted. The works are to improve existing roads and much of the work will be carried out within the width of the existing roads. Nevertheless, a risk remains. Deep seated mines may be exploded by heavy construction equipment and shallow ordnance may be uncovered during the works. Although maps exist to give a first indication of the level of risk, and many areas will have already been cleared by the Cambodian authorities and other organizations the evidence of clearance must be established.

118. Construction activities attract the attention of the local communities and children frequently watch the works from nearby. For these and other reasons, a public information program will be undertaken within the local communities to prepare and advise them of the risks. The workers of the implementing consultants and the civil works contractors, as well as others associated with the project, will also be taught and advised of the risks.

- (i) Assessing the exposure of UXO in project roads before any works starts including a suitable sampling survey of the project roads, as necessary and to ensure the safety of the Project site team(s) involved in the detailed design.
- (ii) Preparing the necessary documentation for any clearance that is required which will be undertaken through the civil works contracts, by the engagement by the contractor of qualified local clearance firms.
- (iii) Prepare a suitable information program for project staff and visitors to ensure they are fully aware of any de-mining or UXO risks before they visit (on visiting the work sites).
- (iv) Prepare a suitable information program for the public within the areas where there is a perceived de-mining UXO risk, before the commencement of any works.

119. A Cambodian expert with a minimum of 15 years in-country experience will be engaged within the DDIS team to determine the level of risk for any particular project road or area and advise on the need for clearance. The expert should have project experience of road rehabilitation with DBST paving, and also experience working with international organizations. Clearance must be carried out by expert firms who will certify that areas are cleared.

k. Resident Inspectors/Survey Team – National, 432 person-months

120. A team of resident engineer's inspectors will be assigned to each of the three civil works packages to work under the direction of the Resident Engineer (international). Each team comprises four members.

121. Each inspector/survey person will have a minimum of 10 years experience and also experience working with international organizations. Collectively, they will be experienced in all of the tasks required to ensure the quality of the civil works including but not limited to supervision of the testing laboratory, supervision of field testing to meet end-product specifications, correct use of plant and equipment, and survey of works for the determination of quantity for payment in accordance with the bill of quantities and specifications for the civil works.

I. Road Engineer – National, 8 person-months

122. The road engineer will assist the road design engineer and the Team Leader during the detailed design stages and in the later stages of the implementation of the project. The road engineer will also assist with the preparation of the future project and with the training of the MPWT staff.

123. A nationally qualified professional engineer with a minimum of 15 years experience on the design and construction of paved roads will be engaged on the project. The expert should have project experience of road rehabilitation with DBST paving, and experience working with international organizations.

m. Resettlement Specialist – National, 24 person-months

124. A national resettlement specialist will assist the international specialist in performing all the tasks related to land acquisition and resettlement activities.

125. The national resettlement specialist will be qualified with at least a bachelor degree in a related field of expertise with a minimum of 8 years experience and experience working in international organizations.

126. DDIS consultants are also needed to implement the Community-Based Road Safety (CBRS) Program as part of Road Safety and Safeguards outputs of the project. The following describe the program and consultant requirements.

COMMUNITY-BASED ROAD SAFETY PROGRAM

127. **Background.** Cambodia experiences an extremely high accident rate that is three times that of other countries in the Association of Southeast Asian Nations region, and accidents, casualties, and fatalities have all increased proportionally faster than the growth in road traffic and the population. Consequently, the Government has committed to a national target of reducing road crash fatalities by 30% in 2010. This project will improve selected provincial roads, and the rural communities are aware that paving the roads is likely to lead to an increase in traffic speeds, and have expressed concern over road safety. The project includes a component to address the road safety problem through the provision of road safety experts who will, in concert with existing programs in Cambodia, support the 2011–2020 National Road Safety Action Plan (NRSAP) and deliver practical solutions including public awareness of the road law, road user competence and education and vulnerability awareness.

128. The National Road Safety Committee supports and coordinates road safety action plans throughout Cambodia such as the Cambodia Road Safety Week before Khmer New Year. The 2011–2020 NRSAP is aligned to the United Nations Global Decade of Action for Road Safety and consists of seven pillars: Pillar 1–Road Safety Management; Pillar 2–Infrastructure; Pillar 3–Safe Vehicles; Pillar 4–Safe Road User Behavior; Pillar 5–Post-crash Care; Pillar 6–Legislation and Enforcement; Pillar 7–Driver Licensing. Under the ADB-funded Provincial Roads improvement Project (TA 7665-CAM), baseline studies have been carried out in August 2011 on selected roads. These included helmet surveys, road user surveys, school surveys, hospital surveys, and road safety consciousness surveys. Drawing on these results, the seven pillars of NRSAP are to be applied to CBRS through this consulting service.

129. **CBRS Program Outline.** The program should use available materials and information to develop a program for local communities including school teachers, students, farmers, and other local residents. There are available information boards and leaflets that the program should use. Road safety volunteers should be selected and trained through seminars and mentor programs for women. Focal points at schools for road safety need to focus on road safety for pedestrians and drivers in the community. The CBRS activities will include:

- (i) Road safety seminars
- (ii) Volunteer training
- (iii) Road Safety Training for teachers
- (iv) Road Safety show
- (v) Road Safety information for farmers
- (vi) Local Road Safety Information

- (vii) Annual Road Safety week
- (viii) Road Safety Information Boards
- (ix) Road Safety Focal points at Schools
- (x) Helmets on Our Heads Program
- (xi) Driver training of farm tractors
- (xii) Headlight on in Daytime Program
- (xiii) Mentor Program for women
- (xiv) Enhancing pedestrian safety

130. **Objective.** The objective of the consultancy will be to develop and implement the CBRS Program in the four provinces covered by the project. The CBRS program aims to:

- (i) raise awareness of road safety for all road users in target areas
- (ii) work with local communities, in particular youth and women, to promote road safety
- (iii) support communities in developing road safety planning based on accurate and relevant information

131. **Scope of the Work.** The CBRS program will focus on districts, communes and villages adjacent to project roads. It will be coordinated by the CBRS Management Team at MPWT; District Level facilitators of whom 30% will be female; Commune level facilitators (30% female); and Village level volunteers of whom 40% will be female and the majority youth. A fundamental aim is to ensure long-term sustainability at grass roots level. The consultant will be responsible for supporting the implementation of the CBRS through these stakeholders.

132. These will comprise annual and weekly events, school events, exhibitions and ground-breaking events.

a. Road Safety Expert – International, 12 person-months

133. **Detailed Tasks to be Performed.** The following tasks are to be performed:

- (i) develop and finalize the detailed CBRS program as described in the CBRS program outline, including implementation plan, roles and responsibilities, and timeline; and
- (ii) develop a monitoring plan and monitor and communicate progress regularly

134. **Skills required.** The consultants should have academic qualifications in a relevant field of expertise to CBRS management. The person should have at least 15 years' experience as a road safety specialist working on a minimum of ten projects and programs, including with international organizations. Experience working in the Greater Mekong Subregion is needed and experience in Cambodia in particular is an asset.

b. Road Safety Expert – National, 24 person-months

135. The consultant will provide support to the international consultant for all aspects of the development and implementation of the CBRS program. The consultant will also focus on the implementation of annual and weekly school events, exhibitions and ground-breaking events.

136. **Detailed Tasks to be Performed.** The following tasks to be performed are:

- (i) develop and finalize the detailed CBRS program as described in the CBRS program outline, including implementation plan, roles and responsibilities, and timeline;
- (ii) develop a monitoring plan and monitor and communicate progress regularly; and
- (iii) develop communication materials, events materials and manuals.

137. **CBRS Outputs.** DDIS consultants should submit a separate report on CBRS program as the final report upon completion. However, for inception monthly and quarterly reports, such may be combined in DDIS reports as a separate section.

138. **Skills required.** An academic background related to road safety is a requirement and at least three years' experience working on CBRS issues in Cambodia. In depth knowledge of the various road safety programs and stakeholders in the country is needed.

139. The following table shows the indicative cost estimate of DDIS consulting service.

Table A3.3: Indicative Cost Estimate
(\$'000)

Item	Cost
1. Remuneration and Per Diem	
a. International Consultants	4,800
b. National Consultants	1,500
2. International and local travel	300
3. Training on Road Safety program: CBRS	200
4. Communication	90
5. Reports	50
6. Office expenses	60
7. Contingencies	760
Total	7,760

Source: Asian Development Bank

f. Facilities

140. A furnished main office in Phnom Penh and its utilities for the consultant will be provided by the MPWT. Transport and accommodation of the consultant's full-time, short-term, international, and domestic staff will be financed under the consulting services contract. Two furnished field offices, material testing laboratories, field transport, and their maintenance, as well as utilities will be provided through the two civil works contracts, one in southeastern Cambodia and the other in mid-western Cambodia.

g. Reports

141. The consultant will submit reports to MPWT and ADB as shown in Table A3.3 below.

Table A3.3: Reports to be Submitted to the MPWT and ADB

	MPWT	ADB
Inception Report (month 3)	3	3
Monthly Progress Reports	3	3
Quarterly Reports	3	3
Project Completion Report	3	3

ADB = Asian Development Bank; MPWT = Ministry of Public Works and Transport

2. ROAD ASSET MANAGEMENT CONSULTANT

a. Introduction

142. The Loan includes capacity-building components to improve road asset management capacity of the MPWT through axle load control. Part of the loan proceeds will be applied for eligible payments under a consulting services contract for the Road Asset Management.

143. An essential part of the effective road asset management is the effective control of axle over-loading in arresting deterioration and preserving the road assets. MPWT has built seven weigh stations equipped with advanced vehicle monitoring system through the financial support of ADB. MPWT will be the executing agency for the Project and will be responsible for engaging consulting services for this.

b. Objective

144. The objective of the Road Asset Management component is to improve the capability of MPWT in operating its vehicle monitoring system for axle load control in order to enhance efficiency of the ongoing overload control activities on national roads.

c. Scope of the Assignment

145. The Road Asset Management Consultant (RAMC) will be responsible for enhancing the capacity for road asset management in Cambodia by analyzing the current capability on road asset management, especially in the field of axle load control and the operating status. The RAMC will also be responsible for devising a most suitable improvement plan and facilities necessary for the implementation of the plan. The relevant civil works and supply of goods to facilitate the improvement plan will be procured under the RAMC. The RAMC will design the works and prepare specifications and the procurement plan for the improvement works and facilities. PMU3 will conduct the procurement and select a contractor for this equipment package EQ1. The RAMC will coordinate the procurement and supervise the improvement works.

146. The consulting services will be provided by a consulting firm, joint venture, or consortium of consulting firms, to be appointed by MPWT in accordance with ADB's *Guidelines on the Use Consultants*.

147. The consultant's role and responsibilities will include:

- (i) assist the MPWT in improving its legal document for enforcement of axle load control through weigh stations.
- (ii) review MPWT's current capabilities for road asset management and the methodologies and systems that are in use.
- (iii) devise a most suitable system for operation of the weigh station managed by MPWT.
- (iv) review MPWT's system for annual and long-term budgeting for axle load control, and enhance such systems to ensure national and development partners.
- (v) devise and implement a two-way axle load control system using the existing weigh station facilities and provide design, specifications and supervision for the improvement works.

- (vi) coordinate the procurement of civil works and equipment in relation with the axle load control with the support of DDIS consultant.
- (vii) prepare and deliver effective practical training programs which enhance the capability in operating and maintenance of axle load control system.
- (viii) coordinate all aspects of the program with project stakeholders to inform and ensure the program in complementary in nature to the country-wide effort to achieve durable road infrastructure.

d. Implementation Arrangements

148. It is estimated that the RAMC will provide a total of 12 persons-months from an international expert on an intermittent basis over a period of 3 years. Local consultants will provide a total of 76 person-months of supporting services.

149. MPWT will provide an office with basic utilities. Office equipment and utilities for the consultant will be financed under the RAMC consulting services contract. Transport and accommodation will also be financed under the RAMC consulting services contract.

150. The Road Asset Management output will be undertaken at MPWT under the overall guidance of the Project Director. The consultant will work with the DDIS consultants. The DDIS consultants will provide coordination for the RAMC and provide procurement support for equipment. One equipment package is envisaged to provide portable weighbridges and enforcement patrol vehicles amongst other items. Procurement will be in accordance with *ADB's Procurement Guidelines*.

e. Consultants Services

151. The consultant will be a consulting firm, joint venture, or consortium of consulting firms, with extensive experience in road asset management, training and axle load control with specialist staff holding at least 10 years experience including at least 5 years in the region. The RAMC will be fully conversant with design of axle load control and operation of weigh station, development of software, and maintenance standards, techniques and guidelines, good governance and they will be fully conversant with the engineering links between road maintenance, traffic and axle load control for flexible road pavements. They will also be able to train and guide effectively at a multitude of levels, and communicate clearly and share knowledge with the stakeholders.

152. The composition of consultants and person-month are shown below.

Consultant team	Person-months
International:	
Team Leader/Senior Axle Load specialist	8
Electronic /Software Specialist	4
Subtotal	12
National:	
Axle Load Specialist (2)	62
Electronic /Software Specialist	6
Axle Load Data Analyst	8
Subtotal	76
Total	88

153. The selected consulting firm/individual consultant's team will execute the following tasks, but are not limited to them:

INTERNATIONAL EXPERTS

a. Senior Axle Load Specialist – International, 8 person-months

154. The specialist will undertake the following tasks but will not be limited to them:

- (i) assist the MPWT in improving its legal document for enforcement of axle load control through weigh stations.
- (ii) review MPWT's current capabilities for road asset management and the methodologies and systems that are in use.
- (iii) devise a most suitable system for operation of the weigh stations managed by MPWT.
- (iv) review MPWT's system for annual and long-term budgeting for axle load control, and enhance such systems to ensure national and development partners.
- (v) devise and implement a two-way traffic axle load control system using the existing weigh station facilities and provide design, specifications and supervision for the improvement works.
- (vi) assist PMU3 with the procurement of axle load control equipment (EQ1) in relation with the improvement of axle load control and construction of 2 new weigh stations along the project target road coordinating with the support of DDIS consultant.
- (vii) prepare and deliver effective practical training programs which enhance the capability in operating and maintenance of axle load control system with good governance.
- (viii) coordinate all aspects of the program with project stakeholders to inform and ensure the program in complementary in nature to the country-wide effort to achieve durable road infrastructure.
- (ix) prepare inception report, month and quarterly report, and completion reports.

155. The specialist, through the effective leadership of the RAMC team and effective cooperation with the DDIS consultants, will be responsible for all aspects of the consulting services leading to the successful implementation of the component.

156. The specialist should be an internationally recognized professional with a minimum of 15 years experiences in the engineering fields of planning, installation and operation of axle load control for flexible road pavements. He/she must have a good all-round knowledge of axle load control in Asia Pacific, must have hands-on working experience in axle load control in any developing nation, must have demonstrated success working with wide range of axle load control of government agencies, and ability to work with senior government officials.

b. Electronic/Software Specialist – International, 4 person-months

157. The details of the tasks to be performed are:

- (i) report to the team leader, and support the team leader in developing software for axle load control and capacity building materials;

- (ii) assist team leader in reviewing MPWT's current capabilities for axle load control and asset management and the methodologies and systems that are in use and establish reporting system by providing necessary software;
- (ii) devise and implement a monitoring mechanism between the axle load control data and traffic data from classified traffic counting system;
- (iii) develop IT system such that repetitive violations can be effectively captured and enforced appropriately according to the sub-decree;
- (iv) develop a program such that good governance practices can be effectively applied on the weigh station teams and can be easily monitored by PMU3;
- (iv) prepare procurement plan of additional equipment for improvement of axle load control system;
- (v) as well as technical training provide on-the-job training to the MPWT and the weigh station staffs;
- (vi) assist the team leader in developing its manual for using software of axle load control;
- (vii) provide regular and timely technical assistance and support to the weigh stations.

158. The Electronic/Software Specialist having a bachelor degree of educational background in electronic engineering will be an internationally qualified professional engineer with a minimum of 12 years' experience. He/she should have experience in analyzing and developing software for axle load control devices including low speed weigh in motion (WIM), high speed WIM, and information signal, etc. He/she should have experience in developing software program for automatic calculation of penalty based on the recorded data obtained from the weigh scale of low speed WIM in the weigh stations with extensive experience in Cambodia or tropical weather countries within similar geographical areas in the region.

NATIONAL EXPERTS

a. Axle Load Specialist (2 persons) – National, 62 person-months total

159. The experts will undertake the following tasks but will not be limited to them:

- (i) assist the Team Leader in improving its legal document for enforcement of axle load control through weigh stations.
- (ii) review MPWT's current capabilities for road asset management and the methodologies and systems that are in use.
- (iii) devise a most suitable system for operation of the weigh station managed by MPWT.
- (iv) review MPWT's system for annual and long-term budgeting for axle load control, and enhance such systems to ensure national and development partners.
- (v) devise and implement a two-way axle load control system using the existing weigh station facilities and provide design, specifications and supervision for the improvement works.
- (vi) coordinate the procurement of civil works and equipment in relation with the improvement of axle load control and construction of new weigh station along the project target road with the support of DDIS consultant.
- (vii) prepare and deliver effective practical training programs which enhance the capability in operating and maintenance of axle load control system.
- (ix) coordinate all aspects of the program with project stakeholders to inform and ensure the program in complementary in nature to the country-wide effort to achieve durable road infrastructure.

- (x) prepare monthly and quarterly report when the Team Leader is away from the Project.

160. The expert should be an Axle Load Specialist having a bachelor degree with a minimum of 15 years experiences in the engineering fields of planning, installation and operation of axle load control for flexible road pavements. Must have hands on working experience in road maintenance of national/provincial roads. The deputy team leader will assist the team leader on overall activities of RAMC and works as the acting team leader and carry out administration of the consultant.

b. Electronic/Software Specialist – National, 6 person-months

161. The tasks and responsibilities of the expert are same as the international Electronic/Software Specialist.

162. The Electronic/Software Specialist should have experience a minimum of 10 years' experience with a bachelor degree in electronic engineering. He/she should have experience in analyzing and developing software for axle load control devices or similar fields. He/she should have a similar experience in developing software program for automatic calculation of penalty based on the recorded data obtained from the weigh scale of low speed-WIM in the weigh stations.

c. Axle Load Data Analyst – National, 8 person-months

163. The tasks and responsibilities of this expert are same as the international Electronic/Software Specialist in assisting the international experts tasks.

164. The Axle Load Data Analyst, having a bachelor degree of educational background, will be a qualified professional engineer with a minimum of 10 years' experience. He/she should have similar experience in analyzing data of axle load control and monitoring the performance in axle load control with special experience in axle load control operations.

Cost Estimate (\$'000)

Item	Cost (\$)
Remuneration and per diem	555
International and local travel	80
Communications and reporting	15
Office and administrative expenses	20
Training, etc.	30
Contingencies	70
Total	770
EQ1: Equipment Package supporting road asset management	720
Axle load control equipment provision of 2 permanent weigh stations	

EQ1 will be developed and procured by PMU3 with the assistance of this consultant.

f. Facilities

165. A furnished main office in Phnom Penh and its utilities for the consultant will be provided by MPWT. Operation and maintenance of office, and transport and accommodation of the consultant's full-time, short-term, international, and domestic staff will be financed under the consulting services contract.

g. Reports

166. The RAMC consultants will submit reports to MPWT and ADB as shown in the table below.

Reports for Submission to MPWT and ADB		
Report	MPWT	ADB
Inception Report (after six weeks)	3	3
Monthly Progress Reports	3	3
Quarterly Reports	3	3
Project Completion Report	3	3

ADB =Asian Development Bank; MPWT =Ministry of Public Works and Transport.

3. HIV/AIDS AND HUMAN TRAFFICKING AWARENESS AND PREVENTION PROGRAM CONSULTING SERVICE

a. Introduction

167. Recognizing the potential risk that the road construction may exacerbate the spread of HIV and the risk of human trafficking in the project areas, an integrated prevention and mitigation package is included as part of the road project design. The HHTPP aims to strengthen and scale-up previous and ongoing initiatives in the national umbrella programs.

b. Background

168. **National HIV Situation.** Cambodia has made good progress in containing the HIV epidemic with HIV prevalence falling from 1.2% in 2003 to an estimated 0.9% in 2006. The decline has been attributed to the 100% Condom Use Programme and safe-sex campaigns that have targeted brothel-based sex workers and their clients.⁸ However, a second wave of HIV infections is being seen among most-at-risk populations, including indirect female sex workers⁹, clients of sex workers and their partners, men who have sex with men, and injecting drug users (IDUs).¹⁰ The confluence of unprotected paid sex and sharing of contaminated needles during illicit drug use is flagged as a key driver in the current epidemic, even if HIV prevalence among female sex workers have decreased from 21.4% in 2003 to 12.7% in 2006.¹¹ According to 2006 data, HIV prevalence among IDUs tested was at 14.3%.¹² As male clients of sex workers also have sex with their wives and girlfriends, more traditionally low-risk women are increasingly getting infected. In 2006, among the total number of people living with HIV, 52% were estimated to be women compared to 37% in 1998. In 2005, married women accounted for almost half of new infections.¹³

169. Under the deconcentration and decentralization (D&D) policy of the Government, local governments at district and commune levels are being strengthened to plan, implement and

⁸ Annual reports for 2005 and 2006 and Third Comprehensive Quarterly Report 2007 from the National Centre for HIV/AIDS, Dermatology and STDs in Phnom Penh.

⁹ A person whose primary job is to provide services at the entertainment establishments but she could provide sexual services to clients as an extra job upon mutual agreement (definition as of National AIDS Authority).

¹⁰ Cambodia UNGASS Report, 2008.

¹¹ Footnote 2

¹² From the 2006 Report on Illicit Drug data and Routine Surveillance System in Cambodia prepared by the National Authority for Combating Drugs (NACD), which include data gathered by two NGOs working with drug users in Phnom Penh.

¹³ UNAIDS. 2006. *Overview of the Global AIDS Epidemic for 2006*. Geneva.

manage their community development plans. In 2002, commune councils were established in all of the 1,621 communes in the country, each one receiving a discretionary budget of \$15,000 per year as their community *sangkat* fund. Selected communes are also receiving additional funds from development partners (mainly from United Nations Development Programme, United National Population Fund and United Nations Children's Fund) to create and pilot different committees on social sector issues, e.g. Commune Committee on Women and Children. In line with the D&D policy, National Aids Authority (NAA) mandated the creation of District AIDS Committees and Commune AIDS Committees in 2006. Roll-out of this NAA sub-decree commenced in 2009, but it has been slow due to limited funding.

c. Description of the Program

170. **Impact and Outcome.** The impact of the proposed intervention is to have contributed to achieving the Millennium Development Goal 6, Target 7: to have halted and begun to reverse the spread of HIV/AIDS by 2015 in the Greater Mekong Subregion. The outcome is reduced HIV transmission and prevalence of sexually transmitted infections among workers and communities associated with the Project and prevention of human trafficking. The project will focus on four outputs: (i) community-based risk mitigation package for HIV and human trafficking; (ii) focused HIV initiatives in the work setting/construction sites; (iii) strengthened sexual and reproductive health services at district-level; and (iv) a rigorous monitoring and evaluation system.

171. **Methodology Outputs and Key Activities.** The program will focus on four outputs:

- (i) **Output 1: Community-Based Risk Mitigation Package for HIV and Human Trafficking.** The output will be strengthened capacity of local communities to address HIV and human trafficking issues associated with road construction. In line with the D&D policy, focus will be placed on supporting local communities in designing, implementing and monitoring community-based HIV and human trafficking prevention activities. The consultant will support the commune AIDS committees in reviewing, implementing and updating the strategies and actions plans they developed under Regional TA 6467: Mitigating Risk in the Greater Mekong Subregion, for continued HIV and human trafficking risk mitigation during and after the improvement of subproject roads. The consultant will also coordinate activities under RETA 6448: Integrating Human Trafficking and Safe Migration Concerns for Women and Children into Regional Cooperation, conducted by UN Interagency Project on Trafficking (UNIAP). The activities under this component represented below.
 - (a) A capacity needs assessment will be conducted among the district and commune AIDS committees, village health support groups and commune health centers on what knowledge and skills need to be strengthened in order to effectively implement the community strategies and action plans for HIV, sexually-transmitted infections (STI), safe migration and human trafficking prevention. In collaboration with the provincial AIDS committees, UNIAP, and relevant ministries and task force on anti-human trafficking¹⁴, the program will develop a customized curriculum and

¹⁴ Leading Task Force to Fight Human Trafficking, Smuggling, Exploitation and Sexual Exploitation of Women and Children; National Task Force to Implement Agreements, Memoranda of Understanding between the Royal Government of Cambodia and Relevant Countries on the Elimination of Trafficking in Persons and Assisting Victims of Trafficking, Secretary of State for the Ministry of Women's Affairs, and involved relevant ministries.

conduct training at district-level, clustering nearby commune AIDS committees per training. As one of the main outputs of the training workshop, each commune AIDS committees will be asked (i) to prioritize which prevention activities in the action plans can be supported by the program; and (ii) to develop and update annual work plans, cost estimates and monitoring and evaluation frameworks to implement these. The consultant, in collaboration with the provincial AIDS committees and task force on anti-human trafficking, will be responsible for overall management, coordination, quality assurance, and providing timely technical support to the commune AIDS committees for designing, implementing and monitoring the approved annual work plans.

- (b) Regular awareness and behaviour change activities for HIV and STI prevention, safe migration and anti-trafficking will be integrated into the community action plans, which the consultants will be responsible for implementation. The consultants will use the *For Life, With Love: Training Tool for HIV Prevention in Road Construction Settings and Affected Communities*, developed by ADB and the International Organization for Migration (IOM) in 2009.¹⁵ This consultant will also do on-the-job training for the commune AIDS committees on how to use the *For Life, With Love* training tool.
- (c) Partner with the provincial health authorities and NGOs in the area to ensure condom accessibility, availability and affordability.

(ii) **Output 2: Focused HIV Initiatives in Work Settings.** The output will be effective and gender-responsive HIV and STI prevention services for the construction workforce, entertainment and casino workers, and border police and officials. In collaboration with the local AIDS authorities, NGOs and other relevant government agencies, HIV prevention activities and services should include the activities below.

- (a) For the construction workforce, awareness and behavior change activities will be conducted using the *For Life, With Love Training Tool*. Weekly education and training sessions in the campsites will be conducted targeting supervising consultants, project managers, construction laborers, transport and auxiliary workers, office staff, campsite laborers, etc. These will be done at an appropriate time for men and women to attend, considering the difference in women's duties and work schedules. Condoms will be available to the construction workforce at the sites.
- (b) For entertainment sites (e.g. karaoke bar, casinos, restaurants), awareness and behavior change activities using the *For Life, With Love Training Tool* will be implemented targeting entertainment workers¹⁶ and their clients. Activities will include motivating entertainment owners/managers to support and sustain HIV prevention programs in the workplace, including the 100% Condom Use Program (where appropriate). Interventions should consider the varying nationalities of the entertainment workers and clients (e.g. Vietnamese entertainment workers and Thai clients).

¹⁵ ADB and IOM. 2009. *For Life, With Love: Training Tool for HIV Prevention in the Road Construction Setting and Affected Communities*. Manila.

¹⁶ "Entertainment workers" is a term used in Cambodia to include direct and indirect sex workers.

- (c) Voluntary confidential counseling and testing services will be promoted for HIV and other STIs and a confidential referral system will be established for all target groups throughout the construction period, and afterwards.
 - (d) Partnership with the provincial health authorities and NGOs in the area to ensure condom accessibility, availability and affordability.
- (iii) **Output 3: Strengthened Sexual and Reproductive Health Services at District-Level.** The output will be sexual and reproductive health (SRH) services that are responsive to the needs of men, women and youth in the community, including the construction workforce and other migrant workers. The activities are presented below.
- (a) Follow-up and/or refresher training courses on STI diagnosis and treatment and HIV referral will be provided to public and private health and pharmacy workers near construction camps and work sites.
 - (b) A functional referral system for HIV testing, treatment, care and support services will be established in district and commune health centers near the construction camps and sites.
 - (c) Partnership with the provincial health authorities and NGOs in the area to ensure condom accessibility, availability and affordability at affected districts.
- (iv) **Output 4: Monitoring and Evaluation.** The output will be high-quality, timely information on the progress and effectiveness of the project activities being implemented. This will be implemented in close collaboration with the provincial, district and commune AIDS committees. The activities included are presented below.
- (a) Development of a project performance and management system (PPMS) to be applied throughout the project duration (baseline, mid-term and end-term) that is informed by, and can inform the national monitoring and evaluation (M&E) framework.
 - (b) Documentation, forums and dissemination activities on the changing risks and vulnerabilities faced by local communities around HIV and human trafficking.
 - (c) Mid-term and end-term workshops will be conducted among key stakeholders to discuss concerns, lessons and recommendations for remedial measures and improving strategies for future interventions in the project area or other similar areas.
- d. Implementation Arrangements**

172. MPWT will be the executing agency for the Project and will be responsible for overall coordination with the steering committee (to be established) and other partners. In the PMU3 of MPWT, there will be a nominated focal person responsible for overseeing the overall implementation of the program (or in the SEO). This focal person will convene a steering committee that will provide technical advice in the design, monitoring and evaluation of the activities, chaired by MPWT (Ministerial AIDS Committee) and NAA. The co-chairs will include representatives from the project supervision team and provincial AIDS committees, UNIAP and task force on anti-human trafficking.

e. Consulting Services

173. MPWT will select a program-implementing consultant, which maybe a consulting firm, joint venture, or consortium of consulting firms or an NGO, following the quality-based selection and simplified technical proposal in accordance with ADB's *Guideline on Use of Consultants*. Procurement by consultants of the office equipment and supplies required for the program implementation will be in accordance with ADB's *Procurement Guidelines*.

174. The consultant team, as shown below, should consist of one national team leader (15 pm), one national deputy team leader (15 pm), two national program officers (a total of 20 pm), and a national M&E officer (4 pm). The civil works contractors and subcontractors need to be involved in the HIV prevention program, as does the DDIS team representative.

Consultant team		Person-months
National	Team Leader	15
	Deputy Team Leader	15
	Program officers (2)	72
	M&E Officer	4
Total		106

M&E = monitoring and evaluation

f. Terms of Reference for Consultants

(i) Team Leader – National, 15 person-months

175. The specialist will undertake the following tasks but will not be limited to them:

- (i) Report to the DDIS HIV program representative, MPWT focal person and ADB;
- (ii) Manage all implementation, administration and financial requirements;
- (iii) Lead consultations on HIV and human trafficking in the project area;
- (iv) Guide the team and ensure that all the activities are implemented according to the TOR and any subsequent instructions or guidance from PMU and ADB, and be responsible for the collective work of the team;
- (v) Ensure regular liaison with PMU, Steering Committee, Commune Councils, and other key partners;
- (vi) Take responsibility for preparing a detailed implementation and budget for outputs 1–4 through a participatory planning process, including extensive consultations with the commune councils, civil works contractors and subcontractors, transport companies, commercial and entertainment establishments, local communities, and the Steering Committee.
- (vii) Manage the overall technical and financial assistance to the commune AIDS committees;
- (viii) Get the *For Life, With Love* Training Tool from ADB and/or IOM and train the team on how to use it;
- (ix) Design the work plan for the education and behavior change activities for outputs 1–3 using the *For Life, With Love* Training Tool, including the on-the-job training for commune AIDS committees;
- (x) Develop and ensure the overall implementation of an effective M&E system for internal monitoring of implementation and outcomes;

- (xi) Provide technical guidance to the national M&E officer in developing the project PPMS and supporting the commune AIDS committees in developing and updating their community M&E frameworks;
- (xii) Support the M&E officer in developing indicators and targets that are adequate for detailed planning, monitoring and evaluation of the program using updated information on HIV/AIDS, sexually transmitted infections, sex work, transport settings, commercial and entertainment settings, mobility and migration patterns, ethnic minority settings, health systems, among others.
- (xiii) Prepare memorandum of understanding/agreements required to implement the implementation design and financial and reporting requirements and ensure formal and documented approval of the activities at provincial and district levels; and
- (xiv) Ensure complete and on-time submission of formal written reports, including the inception report, baseline study, implementation report, quarterly reports, annual reports, and completion report.

176. The team leader and HIV prevention specialist will have a bachelor's degree in health, public health, social service, or related field and at least eight years of work experience, including five years in project management. At least 4 years of proven work experience in HIV prevention is required and at least 2 years work experience in safe migration and human trafficking.

(ii) Deputy Team Leader – National, 15 person-months

177. The specialist will undertake the following tasks but will not be limited to them:

- (i) Report to the team leader, and support the team leader in managing the team and other consultants and making all arrangements for the smooth implementation and administration of the team's work;
- (ii) Support the establishment of close working relationships with MPWT, Steering Committee, supervising consultant, civil works contractors, commune councils and AIDS committees, district AIDS committees, CAMCONTROL¹⁷, and other partners;
- (iii) Work with the team leader to design, implement and monitor detailed implementation and budget plans for outputs 1–4 through a participative approach;
- (iv) Organize and participate in the training course for using the *For Life, With Love* Training Tool;
- (v) Assist in designing the curriculum for the *For Life, With Love* Training Tool, including the on-the-job training for the commune AIDS committees;
- (vi) Conduct awareness and behavior change activities using the *For Life, With Love* Training Tool;
- (vii) Provide regular and timely technical assistance and support to the commune AIDS committees and the Steering Committee;
- (viii) Ensure that each commune AIDS committee undertakes appropriate consultations at provincial, district and village levels to develop and maintain their community databases and action plans;

¹⁷ CAMCONTROL is the force of enforcement officers from Police and Customs who are specially assigned for border-post control.

- (ix) Support the national officers in preparing and implementing their work plans and assist the national M&E officer in establishing and maintaining the PPMS;
- (x) Draft quarterly and annual progress reports, including detailing achievements, implementation issues, and recommendations for remedial measures; and
- (xi) Assist the team leader in preparing formal written reports, including the inception report, baseline study, implementation report, annual reports, and completion report.

178. The deputy team leader will have a bachelor's degree in health, public health, social service, or related field, at least five years of work experience in project implementation and/or coordination, and at least 3 years of proven work experience in HIV prevention and safe migration and human trafficking.

(iii) Program Officers, 2 persons – National, 20 person-months

179. The specialists will undertake the following tasks but will not be limited to them:

- (i) Report to the deputy team leader and work as a member of the team;
- (ii) Implement field-level activities for outputs 1–3 and assist in output 4;
- (iii) Work closely with commune, district and provincial AIDS committees, UNIAP and task force on anti-human trafficking;
- (iv) Conduct awareness and behavior change activities using the *For Life, With Love* Training Tool, including on-the-job training for commune AIDS committees;
- (v) Assist the commune AIDS committees in maintaining their community databases and developing evidence-informed action plans;
- (vi) Provide technical support to commune AIDS committees in designing, implementing and monitoring their annual work plans, including financial and liquidation requirements;
- (vii) Assist in ensuring that commune AIDS committees, outreach workers and SRH service providers undertake appropriate consultations with communities, village health support groups, associations for people living with HIV/AIDS, and other key partners in the project area;
- (viii) Provide the deputy team leader with quarterly progress reports of community action plans, including achievements, implementation issues, and recommendations for remedial measures; and
- (ix) Assist the national M&E officer in implementing the PPMS.

180. The program officers will have a bachelor's degree in any related field and at least three years of work experience in HIV and/or and human trafficking prevention.

(iv) M&E Officer – National, 4 person-months (intermittent)

181. The national M&E officer will develop and implement the PPMS to (i) assess implementation progress in a timely fashion, (ii) enable appropriate adjustment of the activities during road construction through monitoring performance indicators, and (iii) evaluate the impacts of the intervention. The PPMS is aimed at improving the knowledge of the HIV and human trafficking issues and its dynamics in relation with the implementation of infrastructure projects to help fine-tune prevention programs associated with such projects in HIV- and human trafficking-prevalent areas. The national M&E officer will undertake the following tasks but will not necessarily be limited to them:

- (i) During the inception phase, develop PPMS including establishment of data sources and a set of performance indicators based on the intervention targets and anticipated outputs. The PPMS will report on a set of data including (a) HIV prevalence in the project areas disaggregated by gender and target group, e.g. construction workers, local communities and entertainment workers; (b) incidence of STIs among the same vulnerable groups and accessibility of quality STI testing and treatment services; (c) behavior change; (d) availability of condoms in project areas; and (e) cases of human trafficking.
- (ii) Train and provide technical assistance to the commune AIDS committees in developing and maintaining the community databases;
- (iii) Prepare appropriate procedures, and mechanisms for the participation of key stakeholders and periodic collection and processing of data;
- (iv) Design a baseline survey that considers the community action plans and the high turnover of employees in the construction companies and among migrant and mobile workers for the follow-up surveys. Complete the baseline survey 1 month after the commencement of civil works;
- (v) Undertake a mid-term assessment of the project outputs, compare them with those anticipated, and recommend corrective measures; in evaluating the program impacts, the PPMS should focus on those benefiting the vulnerable populations (construction workforce, local communities affected by the road construction, and entertainment workers); these outputs will be further analyzed upon completion of the program to evaluate the cost-effectiveness of the community-based interventions, behavior change communication method adopted, and health systems intervention;
- (vi) Provide inputs to the meetings and seminars.

182. The M&E officers will have a bachelor's degree in any related field and at least 5 years of work experience in monitoring and evaluation.

g. Reporting

183. The program implementing consultant will prepare the following reports: (i) an inception report, 4 weeks after commencement of the services; (ii) baseline study report 3 months after commencement of services; (iii) an implementation report detailing activities, annual budgets, and the PPMS plans (indicators, targets, source of data, and methodology) 1 month after completing the baseline study; (iv) semi-annual progress reports highlighting the component achievements over the period under review, the issues, and proposed remedial actions at the end of each quarter; (v) a mid-term report detailing achievements, implementation issues, and remedial measures; and (vi) a completion report, 3 months after completion of the Program. Three copies of these reports in the English language will be submitted to ADB, MPWT's Ministerial AIDS Committee and NAA. Four copies of these reports in Khmer language will be submitted to the Steering Committee and each of the provincial AIDS Committees.

h. Cost Estimate

184. The following table gives the indicative cost estimate for the Program.

Table: Indicative Cost Estimate
(\$'000)

Item	Cost
1. National Consultants	
a. Remuneration and Per Diem	160
b. Local Travel (air and land)	10
2. IEC Materials, Office and Communication Costs	
a. Print and audio-visual materials and equipment	10
b. STI diagnostic kits, medicines and condoms	15
c. Communication	5
3. IEC/BCC Activities, Trainings and Workshops	70
4. Facilitators and Outreach Workers	30
5. Contingencies	20
Total	320

BCC = Behavior Change Communication, IEC = Information, Education and Communication, STI = sexually-transmitted infections

f. Facilities

185. A furnished main office in Phnom Penh and its utilities for the consultant will be provided by MPWT. Operation and maintenance of office, and transport and accommodation of the consultant's staff will be financed under the consulting services contract.

g. Reports

186. The consultants will submit reports to MPWT and ADB as shown in the table below.

Reports for Submission to MPWT and ADB

Report	MPWT	ADB
Inception Report (after six weeks)	3	3
Monthly Progress Reports	3	3
Quarterly Reports	3	3
Project Completion Report	3	3

ADB =Asian Development Bank; MPWT =Ministry of Public Works and Transport.

4. CLIMATE RESILIENCE CONSULTING SERVICES

187. **Climate resilience output.** This is a web-linked document to the RRP, with the detailed TOR for the climate resilience consulting services.

VIII. SAFEGUARDS

188. All safeguards categories have been confirmed C for the proposed additional financing.

189. **Prohibited investment activities.** Pursuant to ADB's Safeguard Policy Statement (2009), ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth at Appendix 5 of the Safeguard Policy Statement.

VIII. GENDER AND SOCIAL DIMENSIONS

190. There are no changes in Gender and Social Dimensions as the updated SPRSS is in a linked document.

IX. PERFORMANCE MONITORING, EVALUATION, REPORTING, AND COMMUNICATION

A. Project Design and Monitoring Framework

REVISED DESIGN AND MONITORING FRAMEWORK

<p>Impact the Project is Aligned With Current project Access to markets, jobs, and social services in four project provinces (Kampong Chhnang, Kampong Speu, Prey Veng, and Svay Rieng) improved.</p> <p>Overall project Unchanged</p>			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
<p>Outcome Current project Safe, climate-resilient, and cost-effective road network that provides all-year access in the agricultural areas of the project provinces</p> <p>Overall project Unchanged</p>	<p>a. Current project Average travel times on project roads decrease by 25% from 2012 to 2017</p> <p>b. Share of the paved provincial road network increases from 11% in 2010 to 12% in 2017</p> <p>Overall project Unchanged</p>	<p>a. MPWT's field traffic surveys</p> <p>b. MPWT's provincial and national trade statistics and annual report</p>	<p>Project roads suffer severe damage from unexpectedly severe natural disasters.</p>
<p>Outputs Output 1 Current project Project roads and the CBF at Prey Var, Svay Rieng, rehabilitated</p> <p>Overall project Unchanged</p>	<p>1a. Current project 157 km of provincial roads and the CBF rehabilitated, and about 117 km of road sections improved according to climate-resilient codes and standards by 2017</p> <p>Overall project 157 km of provincial roads and the CBF rehabilitated, and about 117 km of road sections improved according to climate-resilient codes and standards by 2018</p> <p>1b. Current project Average roughness of project roads in 2012 decreases from 6–14 to 2–3 in 2017</p>	<p>1a. MPWT's monthly and quarterly project progress reports</p> <p>MPWT's monitoring reports</p> <p>1b. MPWT's road roughness test results</p>	<p>Recruitment of consultants and contractors is delayed by external factors such as procurement and corruption issues.</p> <p>Increased construction costs reduce the scope of works.</p> <p>The number of natural disasters exceeds predictions.</p> <p>Trained personnel in PMU3 leave MPWT or are replaced.</p> <p>Implementation of project outputs is</p>

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
	Overall project Unchanged		delayed due to insufficient public financial management and due diligence actions of PMU3.
Output 2 Current project Improved MPWT	2a. Current project Violations of overloaded	2a. MPWT's annual reports	
road asset management	trucks in southeastern Cambodia decline by 60% from 2012 to 2017	Japan International Cooperation Agency's Axle Load Control Program reports	
Overall project Unchanged	Overall project Unchanged 2b. Current project The annual operation and maintenance budget for project roads increases from \$350 per km in 2010 to \$400 per km in 2017 Overall project Unchanged	2b. MPWT's annual reports	
Output 3 Current project Increased road safety, institutional efficiency, and awareness of potential social problems	3a. Current project 40% of project beneficiaries in project districts in Svay Rieng, Kampong Chhnang, Kampong Speu (Thpong district), and Prey Veng (Kamchay Chay), and all contractor personnel participate in an HIV awareness and human trafficking-prevention program before and during civil works construction by 2017	3a–3e. MPWT's quarterly progress report	
Overall project Unchanged	Overall project Unchanged 3b. Current project Sex-disaggregated baseline socioeconomic data established by 2013 Overall project Unchanged 3c. Current Project		

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
	<p>At least two women facilitators conduct road safety awareness program in communes</p> <p>Overall project Unchanged</p> <p>3d. Current project At least 50% of women-led households participate in community-based road safety awareness workshops</p> <p>Overall project Unchanged</p> <p>3e. Current project Women workers provide at least 30% of local unskilled labor for road upgrading and maintenance</p> <p>Overall project Unchanged</p>		
<p>Output 4 Current project Increased resilience of project roads to climate change</p> <p>Overall project Unchanged</p>	<p>4a. Current project All residents at risk evaluated within 72 hours after a typhoon occurs in the pilot province for emergency management from 2017 onward</p> <p>Overall project Unchanged</p> <p>4b. Current project Capacity of at least 20 MPWT staff to mainstream adaptation into road infrastructure planning and maintenance strengthened</p> <p>Overall project Unchanged</p> <p>4c. Current project Vulnerability mapping and ecosystem-based adaptation</p>	<p>4a–4b.</p> <p>MPWT's quarterly progress reports</p> <p>4c–4e.</p> <p>MPWT's quarterly progress reports</p>	

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
	<p>measures integrate gender issues</p> <p>Overall project Unchanged</p> <p>4d. Current project At least 40% of the workers engaged in climate-resilient measures, including planting and green maintenance, are women</p> <p>Overall project Unchanged</p> <p>4e. Current project Emergency management plans include women as agents and beneficiaries.</p> <p>Overall project Unchanged</p>	PPCR reports	
<p>Output 5 Current project Efficient project management</p> <p>Overall project Unchanged</p>	<p>5a. Current project PMU3 personnel increases from 12 (7 men, 5 women) in 2010 to 22 (14 men, 8 women) in 2017</p> <p>Overall project Unchanged</p> <p>5b. Current project All PMU3 staff (currently 7 men, 5 women) participate in training on social and gender issues by 2017 (likely 22: 14 men, 8 women)</p> <p>Overall project Unchanged</p>	<p>5a–5b.</p> <p>MPWT's quarterly progress reports</p>	

Key Activities with Milestones

1. **Civil works**
 - 1.1 MPWT selected the detailed design and construction supervision consultants by March 2012 (unchanged)
 - 1.2 MPWT prepared the tender documents and selected contractors by October 2012 (unchanged)
 - 1.3 MPWT completed the land acquisition and resettlement by 2013 (changed; IRC completes the land acquisition and resettlement by 2016)
 - 1.4 MPWT completes 157 km of road and CBF rehabilitation by 2017 (changed; CBF will be completed

Key Activities with Milestones					
in 2018, others will be completed in 2017)					
2. Road asset management					
2.1 MPWT completed weigh station construction by 2014 (unchanged; overdue)					
2.2 MPWT completed procurement of weigh station equipment and installation by 2014 (unchanged, overdue).					
2.3 MPWT implemented new weigh stations by 2015 (unchanged, overdue).					
3. Road safety and safeguards					
3.1 MPWT implemented the community-based road safety program by 2015 (unchanged, ongoing).					
3.2 MPWT implemented the HIV/AIDS awareness and human trafficking-prevention program by 2015 (unchanged, ongoing).					
3.3 MPWT completed the baseline socioeconomic survey with sex-disaggregated data by 2013 (unchanged)					
4. Climate resilience					
4.1 MPWT completes the detailed vulnerability map for climate change for project provinces by 2017 (unchanged)					
4.2 MPWT completes the ecosystem-based climate change adaptation strategies by 2017 (unchanged)					
4.3 MPWT completes a pilot climate monitoring system-based road maintenance and management program by 2017 (unchanged)					
4.4 MPWT establishes a pilot emergency management system for Kampong Chhnang and operates it by 2017 (unchanged)					
4.5 MPWT installs the pilot early warning system in Kampong Chhnang by 2017 (unchanged)					
4.6 Completion of the plan for water capture and storage systems for the project provinces by 2017 (unchanged)					
5. Efficient project management					
5.1 MPWT completed the training on social and gender issues for all PMU3 staff by 2014 (unchanged)					
5.2 PMU3 recruits 10 new staff to increase its efficiency by 2017 (unchanged)					
5.3 MPWT manages the project efficiently by 2017 (unchanged)					
Inputs					
ADB		PPCR		Government	
Loan (million)		Grant (million)		Loan (million)	
\$46.88	(current) ^a	\$7.00	(current)	\$9.80	(current)
\$6.00	(additional)	\$0.00	(additional)	\$0.00	(additional)
\$52.88	(overall)	\$7.00	(overall)	\$9.80	(overall)
Assumptions for Partner Financing					
Current project					
Not applicable					
Overall project					
Unchanged					

ADB = Asian Development Bank, CBF = cross-border facility, IRC = Interministerial Resettlement Committee; km = kilometer, MPWT = Ministry of Public Works and Transport, PCR = project completion report, PMU = project management unit; PPCR = pilot program for climate resilience.

^a The original financing depreciated from \$52.0 million to \$46.88 million as of 19 June 2016.

Source: Asian Development Bank.

B. Monitoring

191. **Project performance monitoring.** MPWT has agreed to a set of indicators for evaluating Project performance in relation to its impacts, outcomes, outputs, and conditions. At the beginning of project implementation, MPWT will establish baseline and target values for the

indicators. The indicators will be measured at project inception, project completion, and 3 years after Project completion and compared with the baseline. Data will be disaggregated by gender. The consultants will provide support for monitoring and evaluation. The main sources of data will include (i) secondary data from the Borrower's sources, (ii) traffic counts, (iii) traffic accident database, and (vi) producer and price surveys. MPWT shall submit a report to ADB summarizing the findings of monitoring at inception, project completion, and 3 years after project completion.

192. **Compliance monitoring.** The ADB project team will field a minimum of 2 review missions per year to review and monitor the compliance of covenants—technical, policy, legal, financial, economic, environmental, safeguards, good governance and others.

193. **Safeguards monitoring.**

- (i) **Environment:** The MPWT, assisted by the DDIS will: (i) undertake regular monitoring, as scheduled in the EMP, of contractors' environmental performance in terms of implementation of mitigation measures indicated in the EMP; (ii) monitor and report on the environmental impacts during construction, and recommend measures to improve the situation as required; (iii) undertake environmental effects monitoring on air quality, noise, and water quality based on the EMP; and (iv) prepare semi-annual monitoring reports for submission to ADB.
- (ii) **Resettlement and Indigenous People:** The implementation and effectiveness of the resettlement plans will be monitored both internally and externally. The MPWT is directly responsible for internal monitoring of resettlement plans implementation. In particular, the executing agency with assistance from the consultants, will supervise and manage monitoring of resettlement activities and implementation arrangements. The MPWT will provide quarterly reports to ADB. The executing agency will ensure that the reports of the consultants include in their progress reports, the status of the resettlement plan implementation, information on location and numbers of people affected, compensation amounts paid by item, and assistance provided to displaced indigenous peoples. ADB will also monitor these activities in its regular supervision missions during the period of project implementation.

The objectives of the internal monitoring program are to (i) ensure that the standard of living of affected persons are restored or improved, (ii) monitor whether the overall project and resettlement objectives are being met, (iii) assess if rehabilitation measures and compensation are sufficient, (iv) identify problems and risks, and (v) identify measures to mitigate problems.

The range of activities and issues that need to be recorded and verified, include:

- (a) compensation, allowance payments and delivery of assistance measures;
- (b) re-establishment of displaced person settlements and livelihoods;
- (c) reaction of displaced persons, in particular, to resettlement and compensation packages; and
- (d) re-establishment of income levels.

The principal indicators for internal monitoring of resettlement activities include:

- (a) timely and complete disbursement of compensation to affected persons according to the compensation policy agreed in the resettlement plans;

- (b) timely and complete delivery of relocation, income restoration, and rehabilitation allowances and measures;
- (c) provision of resettlement assistance;
- (d) public information dissemination and consultation procedures;
- (e) adherence to grievance procedures and identification of outstanding issues that require further attention and resolution;
- (f) attention given to the priorities of affected persons regarding the options offered;
- (g) attention given to identifying the needs and interests vulnerable households; and
- (h) completion of resettlement activities required before the award of civil works contracts.

194. **Gender and social dimensions monitoring.** Gender and social dimensions not covered under the environment and resettlement safeguards documents will be monitored internally through the project performance management system. Specific indicators have been presented in the LGAP. These indicators will be further refined for the monitoring and evaluation framework during the detailed design phase.

C. Evaluation

195. In addition to regular quarterly reviews by ADB staff, the Government and ADB will jointly undertake a midterm review of the Project in early 2013 to assess (i) the status of implementation, (ii) the design and construction standards, (iii) the performance of consultants and contractors, (iv) the impacts of the Project, (v) the status of compliance with the covenants stipulated in the Loan Agreement, and (vi) the need for any changes in the project scope or schedule to achieve the project's impact and objectives. Within 6 months of physical completion of the Project, MPWT will submit a project completion report to ADB.¹⁸

D. Reporting

196. MPWT will provide ADB with (i) quarterly progress reports in a format consistent with ADB's project performance reporting system; (ii) semi-annual environmental monitoring reports on progress of EMP implementation, compliance issues and corrective actions, if any; (iii) consolidated annual reports including: (a) progress achieved by output as measured through the indicator's performance targets, (b) key implementation issues and solutions; (c) updated procurement plan and (d) updated implementation plan for next 12 months; and (iv) a project completion report within 6 months of physical completion of the Project.

197. MPWT will monitor project implementation in accordance with the implementation schedule and will keep ADB informed of any significant deviations from the schedule. The quarterly report will include basic data on utilization of funds, achievement of immediate development objectives, compliance with covenants, implementation progress, land acquisition, resettlement progress, and major issues and problems.

198. MPWT will submit to ADB annual contract awards and disbursement projections. This requirement is effective in monitoring project implementation and will help identify impediments

¹⁸ Project completion report format available at: <http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar>

to implementation progress. The annual projections are submitted to ADB on 15 December of each year.

199. The project completion will provide a detailed evaluation of the project design, costs, contractors' and consultants' performance, social and economic impact, economic rate of return, and other details as may be requested by ADB.

E. Stakeholder Communication Strategy

200. The stakeholder communication policy is based on the principles of transparency, timeliness, participation, meaningful engagement, and inclusiveness. Means of communication and consultation are to promote participation of those who may otherwise tend to be marginalized such as women, indigenous people, elderly, and the poor. Stakeholder communication will encompass institutional stakeholders, communities within the project area, and persons directly affected by the project.

201. Institutional stakeholders include (i) government agencies responsible for the design, management, and implementation of the project; and (ii) state institutions, community based organizations, and private sector institutions whose mandates share an interest with the outcomes and/or impacts of the project.

202. Communities within the project area as well as individuals directly affected by the project have a natural vested interest in the effectiveness of project design and implementation as well as mitigation of negative impacts and maximization of project benefits and are stakeholders.

203. Institutional stakeholders will participate in the design of the project, including technical design, institutional framework, monitoring and evaluation as well as measures to enhance project benefits and mitigate negative impacts. Consultation will continue throughout the project cycle from inception, design, implementation and evaluation. Particularly, implementing agencies will ensure that agencies that will be responsible for operation and maintenance of the project facilities after project completion will be fully consulted on the designs and specifications of the facilities. The implementing agencies will undertake quality control inspections and manage the handover of the project facilities to the agencies responsible for operation and maintenance.

204. Communities and affected individuals will be meaningfully consulted on all project activities which affect them. Such consultation shall take place as early as possible in the project and be ongoing, continuing throughout the project cycle. Consultations will be timely with information provided when the feedback of consultations could be incorporated in to design features or mitigation measures and prior to commencement of any project activity. Consultation will include information on project objectives and policies; project technical design; implementation activities and schedules; potential and actual impacts and risks such as environmental, resettlement, livelihood, access restrictions, HIV/AIDS transmission, and human trafficking along with mitigation measures; benefit and opportunities; institutional arrangements; grievance redress mechanisms; and the results of project monitoring and evaluation. All significant communications will be recorded¹⁹ and stakeholders will have the opportunity to present questions, opinions and suggestions.

¹⁹ Significant consultations will typically be recorded in writing (such as minutes) and with the informed consent of those participating.

X. ANTICORRUPTION POLICY

205. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the project.²⁰ All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing agency and all project contractors, suppliers, consultants, and other service providers. Individuals and/or entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contracts under the project.²¹

206. To support these efforts, relevant provisions are included in the loan agreement and the bidding documents for the project.

²⁰ Anticorruption Policy: <http://www.adb.org/Documents/Policies/Anticorruption-Integrity/Policies-Strategies.pdf>

²¹ ADB's Integrity Office web site: <http://www.adb.org/integrity/unit.asp>

XI. ACCOUNTABILITY MECHANISM

207. People who are, or may in the future be, adversely affected by the project may address complaints to ADB, or request the review of ADB's compliance under the Accountability Mechanism. MPWT will establish a project specific website within MPWT's website to provide information on accountability mechanism of MPWT and ADB. This will include a hotline for grievance related matters as email contacts may not be possible in rural areas.

XII. RECORD OF CHANGES TO THE PROJECT ADMINISTRATION MANUAL

208. All revisions and/or updates during the course of implementation should be retained in this section to provide a chronological history of changes to implemented arrangements recorded in the PAM, including revision to contract awards and disbursement s-curves.