

# Facility Administration Manual

Project Numbers: 50301-002/003/004

MFF Number: 0102

Loan Numbers: 3579/3580/3851/xxxx

April 2021

Democratic Socialist Republic of Sri Lanka:  
Second Integrated Road Investment Program

## ABBREVIATIONS

ADB	–	Asian Development Bank
COVID-19	–	coronavirus disease
CRC	–	conventional road contract
DMF	–	design and monitoring framework
EARF	–	environmental assessment and review framework
EMP	–	environmental management plan
ESDD	–	Environment and Social Development Division
EWCD	–	elderly, women, children, and disabled
FIDIC	–	International Federation of Consulting Engineers
GAP	–	gender action plan
ICB	–	international competitive bidding
IEE	–	initial environmental examination
IPP	–	indigenous peoples plan
IPPF	–	indigenous peoples planning framework
iRoad 2	–	Second Integrated Road Investment Program
LKR	–	Sri Lanka rupee
MFF	–	multitranche financing facility
MOHW	–	Ministry of Highways
NCB	–	national competitive bidding
PBM	–	performance-based maintenance
PIC	–	project implementation consultant
PIU	–	project implementation unit
PMU	–	project management unit
PPMS	–	project performance management system
RDA	–	Road Development Authority
RRP	–	report and recommendation of the President
SLRs	–	Sri Lanka rupees

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### **Facility Administration Manual Purpose and Process**

The facility administration manual (FAM) 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 of the Democratic Socialist Republic of Sri Lanka and the Asian Development Bank (ADB). The FAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the FAM.

The Ministry of Highways (MOHW) and the Road Development Authority (RDA) 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 the MOHW and the RDA of their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.

At loan negotiations, the borrower and ADB shall agree to the FAM 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 FAM and the loan agreement, the provisions of the loan agreement shall prevail.

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 FAM.



## I. PROJECT DESCRIPTION

1. The Second Integrated Road Investment Program for the Democratic Socialist Republic of Sri Lanka will improve the accessibility of the road network in rural areas and thereby increase the involvement of the rural population in nationwide economic and social development. The program, also called iRoad 2, will (i) upgrade and maintain about 3,400 kilometers (km) of rural access roads to all-weather standard; (ii) rehabilitate and maintain in good condition about 340 km of national roads in Eastern, Northern, Uva, and Western provinces; and (iii) improve the capacity of road agencies with respect to safeguards, road safety, road maintenance, research capacity, and road design and construction.

2. **Impact and outcome.** The impact of the investment program will be improved connectivity between rural communities and socioeconomic centers in Sri Lanka to align with the government strategy. The outcome will be increased transport efficiency on project roads.

3. **Outputs.** The outputs of the proposed time-slice multitranche financing facility (MFF) will be (i) improved road conditions of about 3,400 km rural roads and 340 km national roads between the selected rural communities and socioeconomic centers, and (ii) enhanced capacity of road agencies. A list of project roads under the MFF is in Appendix A. A list of equipment for research capacity enhancement is in Appendix B.

## II. IMPLEMENTATION PLANS

### A. Project Readiness Activities

**Table 1: Project Readiness Activities**

Month Year	Loan Processing		Project Implementation	
	ADB Actions	Government Actions	ADB Actions	Government Actions
Apr 2017		Cabinet approved the project in January 2017	Review bid documents	Finalization of bid documents and safeguard documents
May 2017	Fact-finding mission			Finalize shortlist and RFP for consultants and Submission 1
Jun 2017		Aide Memoire endorsed	Review and approval of Submission 1 for consulting packages	Advertise bidding
Jul 2017	Management review meeting  Loan negotiations	FFA signing PFR 1 submitted		Technical proposal opening, for consulting contracts  Bid opening and start technical bid evaluation  Submit technical bid evaluation to ADB
Aug 2017			Review and approval of Submission 2 for consulting contracts  Review and approval of technical bid evaluation	Financial proposal opening, preparation of Submission 3 for consulting contracts  Financial bid opening and evaluation

Month Year	Loan Processing		Project Implementation	
	ADB Actions	Government Actions	ADB Actions	Government Actions
Sep 2017	Loan approval		Review and approval of Submission 3 for consulting contracts	Preparation of Submission 4 for consulting contracts
			Review and approval of financial bid evaluation	
Oct 2017		Loan signing	Review and approval of Submission 4 for consulting contracts	
Nov 2017				Contract award (Works contract)
				Contract award (Consulting contracts)
Dec 2017	Loan effectiveness			

ADB = Asian Development Bank, FFA = framework financing agreement, PFR = periodic financing request, RFP = request for proposal.

Source: Asian Development Bank.





### III. PROJECT MANAGEMENT ARRANGEMENTS

#### A. Project Implementation Organizations: Roles and Responsibilities

**Table 3: Project Implementation Organizations**

<b>Project Stakeholders</b>	<b>Management Roles and Responsibilities</b>
<b>Executing agency</b> <b>Ministry of Highways (MOHW)</b>	<ul style="list-style-type: none"> <li>• Overall coordination of project implementation</li> <li>• Interagency coordination</li> </ul>
<b>Implementing agency</b> <b>Road Development Authority (RDA)</b>	<ul style="list-style-type: none"> <li>• Day-to-day project and safeguards management</li> <li>• Consultant recruitment and procurement of works</li> <li>• Preparation and submission of withdrawal applications</li> <li>• Preparation of project progress reports and safeguard monitoring reports</li> <li>• Maintaining project accounts and complete loan financial records</li> </ul>
<b>National steering committee</b> Chairperson: Secretary of MOHW Members: <ul style="list-style-type: none"> <li>• Chief secretaries of the provinces under the investment program</li> <li>• Secretary, Finance Commission</li> <li>• Chairperson, RDA</li> <li>• Project director, Western Province and coordination (Second Integrated Road Investment Program) – Secretary to the committee</li> <li>• Project directors (Eastern, Northern, Uva provinces)</li> <li>• Commissioners of local government authorities under the investment program</li> <li>• Heads of provincial road agencies</li> <li>• District secretaries</li> <li>• External Resources Department, National Planning Department, and Project Monitoring and Management Department, National Budget Department, and Treasury Operations Department</li> </ul>	<ul style="list-style-type: none"> <li>• Overseeing and monitoring of project implementation as well as the adequacy of overall project funding</li> <li>• Holding meetings as required, at least quarterly, to discuss overall status and project issues, and invite representatives for coordination purposes, when and as necessary, from the Central Environmental Agency, Geological Survey and Mines Bureau, and utility agencies (electricity, telecommunications, water, and drainage)</li> </ul>
<b>Provincial coordination committees</b> Chairperson: Chief secretary of the province Members: <ul style="list-style-type: none"> <li>• Project director – Secretary to the committee</li> <li>• District secretaries</li> <li>• Representatives of provincial road agencies</li> <li>• Representatives of local authorities</li> </ul>	<ul style="list-style-type: none"> <li>• Coordination and facilitation of project implementation</li> <li>• Holding meetings as required, at least quarterly, to discuss implementation progress and address project issues, and invite representatives from the relevant offices, when and as necessary</li> <li>• A coordination committee will be established in each province under the investment program.</li> </ul>
<b>Asian Development Bank</b>	<ul style="list-style-type: none"> <li>• Monitoring and review of overall implementation of the project in consultation with the executing agency/implementing agency, including the project implementation schedule; actions required in terms</li> </ul>

Project Stakeholders	Management Roles and Responsibilities
	of poverty reduction, environmental impacts, and resettlement plans, if applicable; timeliness of budgetary allocations and counterpart funding; project expenditures; progress with procurement and disbursement; statement of expenditures when applicable; compliance with particular loan covenants; and the likelihood of attaining the project's immediate development objectives

Source: Asian Development Bank.

## B. Key Persons Involved in Implementation

### Executing Agency

Ministry of Highways (MOHW)

Mr. R. W. R. Pemasiri  
Secretary  
"Maganeguma Mahamedura"  
Denzil Kobbekkaduwa Mawatha  
Koswatta  
Battaramulla, Sri Lanka  
Telephone: +94 11 2867462  
Fax: +94 11 2862739

### Implementing Agency

Road Development Authority  
(RDA)

Mr. C. P. Athuluwage  
Chairperson  
"Maganeguma Mahamedura"  
Denzil Kobbekkaduwa Mawatha  
Koswatta  
Battaramulla, Sri Lanka  
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Fax: +94 11 2864801

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Project Director  
Second Integrated Road Investment Program  
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### Asian Development Bank (ADB)

Transport and Communications Division,  
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Mission Leader (Processing)

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Transport Specialist (SATC)  
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Email: [yanglu@adb.org](mailto:yanglu@adb.org)

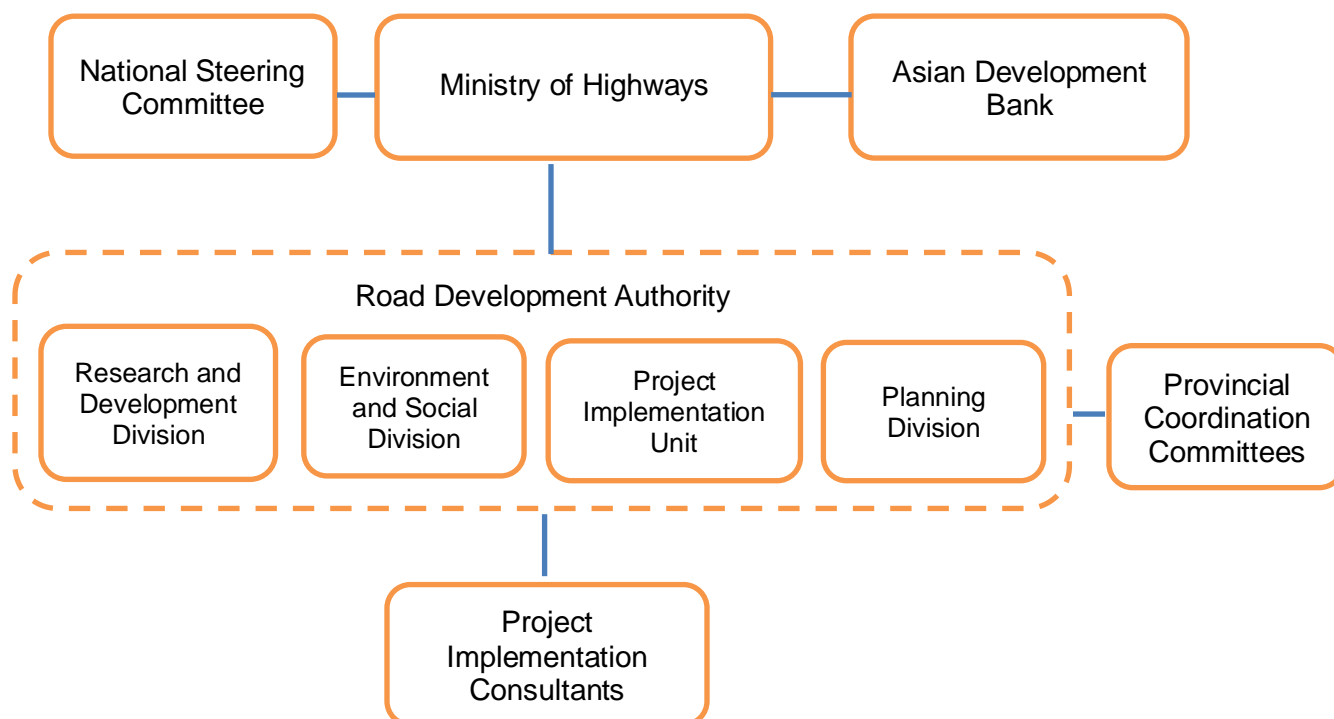
Mission Leader (Administration)

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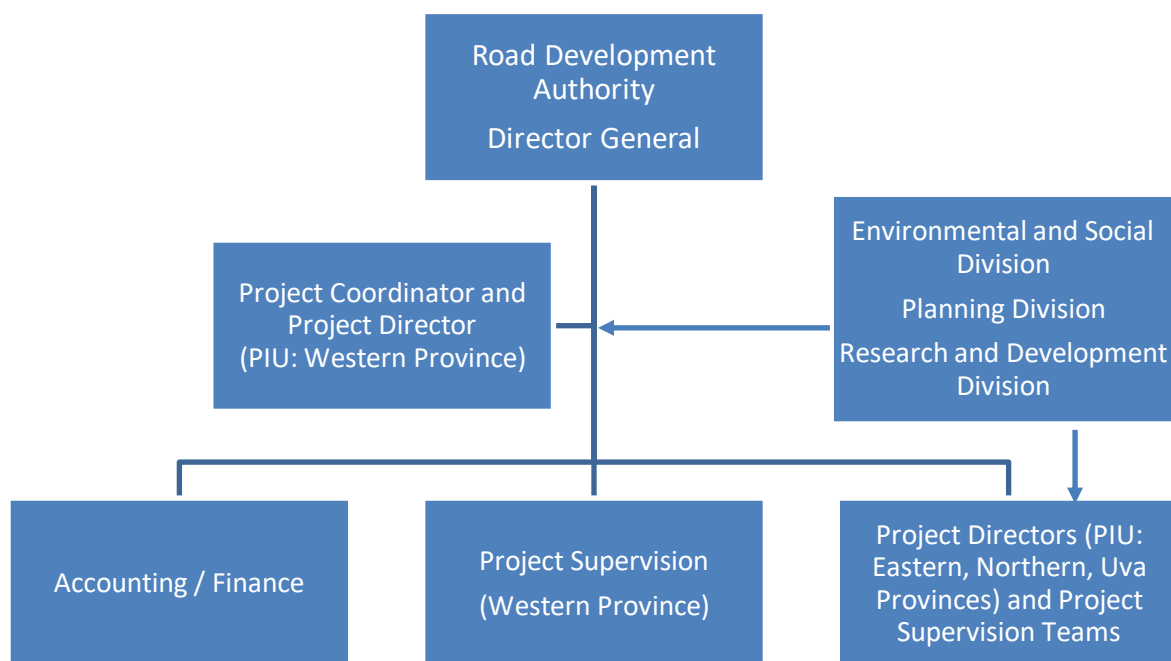
### C. Project Organization Structure

4. Figure 1 shows the reporting lines and essential internal structures of key organizations involved in iRoad 2 program implementation, which include the national steering committees, executing agency, provincial coordinating committee, implementing agency, and the project implementation unit (PIU). Figure 2 shows the reporting lines and essential internal structures of the project management units and their staffing assignments.

**Figure 1: Project Organization Structure**



Source: Asian Development Bank.

**Figure 2: Project Management Units**

PIU = project implementation unit.  
Source: Asian Development Bank.

5. To cover the iRoad 2, separate PIUs were established in the Eastern, Northern, Uva, and Western provinces. Under the integrated road investment programs, the position of the Project Director of the PIU for Western Province will be further strengthened to implement the iRoad 2 in that province. To maintain consistency in project implementation, the Project Director (Western Province) will assume responsibility for overall coordination of the other PIUs as project coordinator. The PIUs for the other provinces will thus report to the Project Coordinator. The Road Development Authority (RDA) will review and strengthen the PIUs as required during implementation of the investment program. The project staffing assignment and the recruitment plan are detailed in Tables 4–7. Appointments will be made in accordance with the actual progress of procurement and implementation of civil works for each project province. The RDA will make the best use of the approved positions for iRoad 1 to reallocate assignments for iRoad 2.

**Table 4: Staffing Assignment and Recruitment Plan for Western Province and Project Coordination Unit**

Sr. No.	Position	Name	Existing	New Recruit [Timeframe]
1	<b>Project Coordinator</b>	L.U.D. Atapattu	<input checked="" type="checkbox"/> Appointed	Oct 2020
2	<b>Project Director (Western Province)</b>	K.R.D.J.K. Weerakoon	<input checked="" type="checkbox"/> Appointed	Dec 2017
3	<b>Deputy Project Director 1</b>		<input type="checkbox"/> Appointed	[Jun 2021]
4	<b>Deputy Project Director (Materials)</b>		<input type="checkbox"/> Appointed	[Jun 2021]
5	Senior Engineer 1		<input type="checkbox"/> Appointed	[Jun 2021]
6	Senior Engineer 2		<input type="checkbox"/> Appointed	[Jun 2021]
7	Senior Engineer (Materials)		<input type="checkbox"/> Appointed	[Jun 2021]
8	Coordinating Engineer 1		<input type="checkbox"/> Appointed	[Jun 2021]
9	Coordinating Engineer 2		<input type="checkbox"/> Appointed	[Jun 2021]
10	Coordinating Engineer 3		<input type="checkbox"/> Appointed	[Jun 2021]
11	Coordinating Engineer 4		<input type="checkbox"/> Appointed	[Jun 2021]
12	Coordinating Engineer 5		<input type="checkbox"/> Appointed	[Jun 2021]

Sr. No.	Position	Name	Existing	New Recruit [Timeframe]
13	Coordinating Engineer 6		<input type="checkbox"/> Appointed	[Jun 2021]
14	Coordinating Engineer 7		<input type="checkbox"/> Appointed	[Jun 2021]
15	Coordinating Engineer 8		<input type="checkbox"/> Appointed	[Jun 2021]
16	Project Engineer 1	J.M.S. Duminda	<input checked="" type="checkbox"/> Appointed	Feb 2018
17	Project Engineer 2	L.P.S. Malkanthi	<input checked="" type="checkbox"/> Appointed	
18	Project Engineer 3	H.A.T.N. Wijewardhane	<input checked="" type="checkbox"/> Appointed	
19	Project Engineer 4	D.M.H.K. Ranasinghe	<input checked="" type="checkbox"/> Appointed	
20	Project Engineer 5	L.H.C. Udayangi	<input checked="" type="checkbox"/> Appointed	
21	Project Engineer 6	M.R.S.P. Weerasekara	<input checked="" type="checkbox"/> Appointed	July 2020
22	Project Engineer 7	M.G.K. Wijesinghe	<input checked="" type="checkbox"/> Appointed	July 2020
23	Project Engineer 8	R.W.U. Nuwansiri	<input checked="" type="checkbox"/> Appointed	July 2020
24	Project Engineer 9		<input type="checkbox"/> Appointed	[Jun 2021]
25	Project Engineer 10		<input type="checkbox"/> Appointed	[Jun 2021]
26	Project Engineer 11		<input type="checkbox"/> Appointed	[Jun 2021]
27	Project Engineer (Materials)		<input type="checkbox"/> Appointed	[Jun 2021]
28	Project Accountant 1	G.D.L.C. Amarasena	<input checked="" type="checkbox"/> Appointed	Jan 2018
29	Project Accountant 2		<input type="checkbox"/> Appointed	[Jun 2021]
30	Senior Social Safeguard Officer		<input type="checkbox"/> Appointed	[Jun 2021]
31	Senior Environmental Officer		<input type="checkbox"/> Appointed	[Jun 2021]
32	Social/Environmental Officer 1		<input type="checkbox"/> Appointed	[Jun 2021]
33	Social/Environmental Officer 2		<input type="checkbox"/> Appointed	[Jun 2021]
34	Social/Environmental Officer 3		<input type="checkbox"/> Appointed	[Jun 2021]
35	Project Secretary	S.A.D.C. Rasanjali	<input checked="" type="checkbox"/> Appointed	Sep 2019
36	Administrative Officer		<input type="checkbox"/> Appointed	[Jun 2021]
37	Accounts Officer 1		<input type="checkbox"/> Appointed	[Jun 2021]
38	Accounts Officer 2		<input type="checkbox"/> Appointed	[Jun 2021]
39	Accounts Officer 3		<input type="checkbox"/> Appointed	[Jun 2021]
40	Accounts Officer 4		<input type="checkbox"/> Appointed	[Jun 2021]
41	Accounts Officer 5		<input type="checkbox"/> Appointed	[Jun 2021]
42	Information Technology Officer		<input type="checkbox"/> Appointed	[Jun 2021]
43	Data Entry Operator 1		<input type="checkbox"/> Appointed	[Jun 2021]
44	Data Entry Operator 2		<input type="checkbox"/> Appointed	[Jun 2021]
45	Management Assistant 1		<input type="checkbox"/> Appointed	[Jun 2021]
46	Management Assistant 2		<input type="checkbox"/> Appointed	[Jun 2021]
47	Management Assistant 3		<input type="checkbox"/> Appointed	[Jun 2021]
48	Management Assistant 4		<input type="checkbox"/> Appointed	[Jun 2021]
49	Management Assistant 5		<input type="checkbox"/> Appointed	[Jun 2021]
50	Management Assistant 6		<input type="checkbox"/> Appointed	[Jun 2021]
51	Management Assistant 7		<input type="checkbox"/> Appointed	[Jun 2021]
52	Management Assistant 8		<input type="checkbox"/> Appointed	[Jun 2021]
53	Management Assistant 9		<input type="checkbox"/> Appointed	[Jun 2021]
54	Management Assistant 10		<input type="checkbox"/> Appointed	[Jun 2021]
55	Management Assistant 11		<input type="checkbox"/> Appointed	[Jun 2021]
56	Management Assistant 12		<input type="checkbox"/> Appointed	[Jun 2021]
57	Driver 1		<input type="checkbox"/> Appointed	[Jun 2021]
58	Driver 2		<input type="checkbox"/> Appointed	[Jun 2021]
59	Driver 3		<input type="checkbox"/> Appointed	[Jun 2021]
60	Driver 4		<input type="checkbox"/> Appointed	[Jun 2021]
61	Driver 5		<input type="checkbox"/> Appointed	[Jun 2021]
62	Driver 6		<input type="checkbox"/> Appointed	[Jun 2021]
63	Office Aide 1	B.A.W. Madhushani	<input checked="" type="checkbox"/> Appointed	
64	Office Aide 2	S.H.R.D. Priyamantha	<input checked="" type="checkbox"/> Appointed	
65	Office Aide 3		<input type="checkbox"/> Appointed	[Jun 2021]
66	Office Aide 4		<input type="checkbox"/> Appointed	[Jun 2021]

Source: Asian Development Bank estimates.

**Table 5: Staffing Assignment and Recruitment Plan for Eastern Province**

Sr. No	Position	Name	Existing	New Recruit [Timeframe]
1	<b>Project Director</b>	T. Pathmarajah	<input checked="" type="checkbox"/> Appointed	Mar 2019
2	<b>Deputy Project Director</b>		<input type="checkbox"/> Appointed	[Jun 2021]
3	Senior Engineer		<input type="checkbox"/> Appointed	[Jun 2021]
4	Coordinating Engineer 1		<input type="checkbox"/> Appointed	[Jun 2021]
5	Coordinating Engineer 2		<input type="checkbox"/> Appointed	[Jun 2021]
6	Coordinating Engineer 3		<input type="checkbox"/> Appointed	[Jun 2021]
7	Coordinating Engineer 4		<input type="checkbox"/> Appointed	[Jun 2021]
8	Coordinating Engineer 5		<input type="checkbox"/> Appointed	[Jun 2021]
9	Coordinating Engineer 6		<input type="checkbox"/> Appointed	[Jun 2021]
10	Project Engineer 1	P. Parathan	<input checked="" type="checkbox"/> Appointed	May 2019
11	Project Engineer 2	T. Surendrakumar	<input checked="" type="checkbox"/> Appointed	May 2019
12	Project Engineer 3	S. Mayuran	<input checked="" type="checkbox"/> Appointed	May 2019
13	Project Engineer 4	A. M. Uwais	<input checked="" type="checkbox"/> Appointed	May 2019
14	Project Engineer 5	N. Lohis	<input checked="" type="checkbox"/> Appointed	July 2020
15	Project Engineer 6		<input type="checkbox"/> Appointed	[Jun 2021]
16	Project Engineer 7		<input type="checkbox"/> Appointed	[Jun 2021]
17	Project Engineer 8		<input type="checkbox"/> Appointed	[Jun 2021]
18	Project Engineer 9		<input type="checkbox"/> Appointed	[Jun 2021]
19	Project Engineer 10		<input type="checkbox"/> Appointed	[Jun 2021]
20	Project Engineer 11		<input type="checkbox"/> Appointed	[Jun 2021]
21	Project Engineer 12		<input type="checkbox"/> Appointed	[Jun 2021]
22	Senior Social Safeguard Officer	N. Kusumsiri (Resigned)	<input type="checkbox"/> Appointed	Apr 2019 / [Jun 2021]
23	Senior Environmental Officer		<input type="checkbox"/> Appointed	[Jun 2021]
24	Environmental Officer 1	S. Sivapathan	<input checked="" type="checkbox"/> Appointed	
25	Social/Environmental Officer 2		<input type="checkbox"/> Appointed	[Jun 2021]
26	Social/Environmental Officer 3		<input type="checkbox"/> Appointed	[Jun 2021]
27	Project Secretary		<input type="checkbox"/> Appointed	[Jun 2021]
28	Administrative Officer	P.A.X. Ravichandra	<input checked="" type="checkbox"/> Appointed	May 2019
29	Accounts Officer	A.A. Hussain	<input checked="" type="checkbox"/> Appointed	Apr 2019
30	Information Technology Officer		<input type="checkbox"/> Appointed	[Jun 2021]
31	Data Entry Operator	T. Girtharan	<input checked="" type="checkbox"/> Appointed	
32	Management Assistant 1	S.H. Silva	<input checked="" type="checkbox"/> Appointed	May 2019
33	Management Assistant 2	S.H. Dharmakulasingham	<input checked="" type="checkbox"/> Appointed	
34	Management Assistant 3	H.M.M. Ashfaaq	<input checked="" type="checkbox"/> Appointed	
35	Management Assistant 4		<input type="checkbox"/> Appointed	[Jun 2021]
36	Management Assistant 5		<input type="checkbox"/> Appointed	[Jun 2021]
37	Management Assistant 6		<input type="checkbox"/> Appointed	[Jun 2021]
38	Driver 1		<input type="checkbox"/> Appointed	[Jun 2021]
39	Driver 2		<input type="checkbox"/> Appointed	[Jun 2021]
40	Driver 3		<input type="checkbox"/> Appointed	[Jun 2021]
41	Driver 4		<input type="checkbox"/> Appointed	[Jun 2021]
42	Office Aide 1	P.Tharshan	<input checked="" type="checkbox"/> Appointed	
43	Office Aide 2	K.V.R.Madhushanka	<input checked="" type="checkbox"/> Appointed	

Source: Asian Development Bank estimates.

**Table 6: Staffing Assignment and Recruitment Plan for Northern Province**

Sr. No	Position	Name	Existing	New Recruit [Timeframe]
1	<b>Project Director</b>	C. Vathanakumar	<input checked="" type="checkbox"/> Appointed	Oct 2019
2	<b>Deputy Project Director</b>		<input type="checkbox"/> Appointed	[Jun 2021]
3	Senior Engineer		<input type="checkbox"/> Appointed	[Jun 2021]
4	Coordinating Engineer 1	A. Reginold	<input checked="" type="checkbox"/> Appointed	
5	Coordinating Engineer 2	V. Sivakumar	<input checked="" type="checkbox"/> Appointed	
6	Coordinating Engineer 3	T. Nithyanandan	<input checked="" type="checkbox"/> Appointed	
7	Coordinating Engineer 4	K. Kamaladeepan	<input checked="" type="checkbox"/> Appointed	July 2020
8	Coordinating Engineer 5		<input type="checkbox"/> Appointed	[Jun 2021]
9	Coordinating Engineer 6		<input type="checkbox"/> Appointed	[Jun 2021]
10	Coordinating Engineer 7		<input type="checkbox"/> Appointed	[Jun 2021]
11	Coordinating Engineer 8		<input type="checkbox"/> Appointed	[Jun 2021]
12	Coordinating Engineer 9		<input type="checkbox"/> Appointed	[Jun 2021]
13	Coordinating Engineer 10		<input type="checkbox"/> Appointed	[Jun 2021]
14	Project Engineer 1	A. Bamunusinghe	<input checked="" type="checkbox"/> Appointed	Oct 2019
15	Project Engineer 2	A. Arulrasa	<input checked="" type="checkbox"/> Appointed	Oct 2019
16	Project Engineer 3		<input type="checkbox"/> Appointed	
17	Project Engineer 4	K. Kugadasan	<input checked="" type="checkbox"/> Appointed	
18	Project Engineer 5	N. Anojan	<input checked="" type="checkbox"/> Appointed	
19	Project Engineer 6		<input type="checkbox"/> Appointed	[Jun 2021]
20	Project Engineer 7		<input type="checkbox"/> Appointed	[Jun 2021]
21	Project Engineer 8		<input type="checkbox"/> Appointed	[Jun 2021]
22	Project Engineer 9		<input type="checkbox"/> Appointed	[Jun 2021]
23	Project Engineer 10		<input type="checkbox"/> Appointed	[Jun 2021]
24	Project Engineer 11		<input type="checkbox"/> Appointed	[Jun 2021]
25	Project Engineer 12		<input type="checkbox"/> Appointed	[Jun 2021]
26	Project Engineer 13		<input type="checkbox"/> Appointed	[Jun 2021]
27	Project Engineer 14		<input type="checkbox"/> Appointed	[Jun 2021]
28	Project Engineer 15		<input type="checkbox"/> Appointed	[Jun 2021]
29	Senior Social Safeguard Officer		<input type="checkbox"/> Appointed	[Jun 2021]
30	Senior Environmental Officer	S.H.A. Ashraff	<input checked="" type="checkbox"/> Appointed	Oct 2019
31	Environmental Officer 1	K.W.H.C.B. Kodagoda	<input checked="" type="checkbox"/> Appointed	Oct 2019
32	Environmental Officer 2	H.A.H.I. Amarasinghe	<input checked="" type="checkbox"/> Appointed	Oct 2019
33	Social Officer 1		<input type="checkbox"/> Appointed	[Jun 2021]
34	Social Officer 2		<input type="checkbox"/> Appointed	[Jun 2021]
35	Social/Environmental Officer 5		<input type="checkbox"/> Appointed	[Jun 2021]
36	Project Secretary		<input type="checkbox"/> Appointed	[Jun 2021]
37	Administrative Officer		<input type="checkbox"/> Appointed	[Jun 2021]
38	Accounts Officer		<input type="checkbox"/> Appointed	[Jun 2021]
39	Information Technology Officer		<input type="checkbox"/> Appointed	[Jun 2021]
40	Data Entry Operator		<input type="checkbox"/> Appointed	[Jun 2021]
41	Management Assistant 1	L.D.L. Perera	<input checked="" type="checkbox"/> Appointed	Sep 2020
42	Management Assistant 2		<input type="checkbox"/> Appointed	[Jun 2021]
43	Management Assistant 3		<input type="checkbox"/> Appointed	[Jun 2021]
44	Management Assistant 4		<input type="checkbox"/> Appointed	[Jun 2021]
45	Management Assistant 5		<input type="checkbox"/> Appointed	[Jun 2021]
46	Management Assistant 6		<input type="checkbox"/> Appointed	[Jun 2021]
47	Driver 1		<input type="checkbox"/> Appointed	[Jun 2021]
48	Driver 2		<input type="checkbox"/> Appointed	[Jun 2021]
49	Driver 3		<input type="checkbox"/> Appointed	[Jun 2021]
50	Driver 4		<input type="checkbox"/> Appointed	[Jun 2021]
51	Office Aide 1		<input type="checkbox"/> Appointed	[Jun 2021]
52	Office Aide 2		<input type="checkbox"/> Appointed	[Jun 2021]

Source: Asian Development Bank estimates.



**Table 7: Staffing Assignment and Recruitment Plan for Uva Province**

Sr. No	Position	Name	Existing	New Recruit [Timeframe]
1	<b>Project Director</b>	M.M.G.K. Muhandiram	<input checked="" type="checkbox"/> Appointed	
2	<b>Deputy Project Director</b>		<input type="checkbox"/> Appointed	[Jun 2021]
3	Senior Engineer	M.M.G.K. Muhandiram (Promoted)	<input type="checkbox"/> Appointed	[Jun 2021]
4	Coordinating Engineer 1	W.M.N. Wijesena (Resigned)	<input type="checkbox"/> Appointed	[Jun 2021]
5	Coordinating Engineer 2		<input type="checkbox"/> Appointed	[Jun 2021]
6	Coordinating Engineer 3		<input type="checkbox"/> Appointed	[Jun 2021]
7	Coordinating Engineer 4		<input type="checkbox"/> Appointed	[Jun 2021]
8	Project Engineer 1	B.G.N.G. DeSilava	<input checked="" type="checkbox"/> Appointed	Aug 2018
9	Project Engineer 2	D.M.G.C. Dissanayake	<input checked="" type="checkbox"/> Appointed	Aug 2018
10	Project Engineer 3	M.K.N. Jayawardena	<input checked="" type="checkbox"/> Appointed	June 2019
11	Project Engineer 4		<input type="checkbox"/> Appointed	[Jun 2021]
12	Project Engineer 5		<input type="checkbox"/> Appointed	[Jun 2021]
13	Project Engineer 6		<input type="checkbox"/> Appointed	[Jun 2021]
14	Project Engineer 7		<input type="checkbox"/> Appointed	[Jun 2021]
15	Project Engineer 8		<input type="checkbox"/> Appointed	[Jun 2021]
16	Project Engineer 9		<input type="checkbox"/> Appointed	[Jun 2021]
17	Project Engineer 10		<input type="checkbox"/> Appointed	[Jun 2021]
18	Project Engineer 11		<input type="checkbox"/> Appointed	[Jun 2021]
19	Project Engineer 12		<input type="checkbox"/> Appointed	[Jun 2021]
20	Project Engineer 13		<input type="checkbox"/> Appointed	[Jun 2021]
21	Project Engineer 14		<input type="checkbox"/> Appointed	[Jun 2021]
22	Senior Social Safeguard Officer		<input type="checkbox"/> Appointed	[Jun 2021]
23	Senior Environmental Officer	P.G.E.N. Wijayarathna	<input type="checkbox"/> Appointed	
24	Social/Environmental Officer 1		<input type="checkbox"/> Appointed	[Jun 2021]
25	Social/Environmental Officer 2		<input type="checkbox"/> Appointed	[Jun 2021]
26	Social/Environmental Officer 3		<input type="checkbox"/> Appointed	[Jun 2021]
27	Social/Environmental Officer 4		<input type="checkbox"/> Appointed	[Jun 2021]
28	Project Secretary	H.D.R.I. Sirinayake	<input checked="" type="checkbox"/> Appointed	Aug 2018
29	Administrative Officer		<input type="checkbox"/> Appointed	[Jun 2021]
30	Accounts Officer		<input type="checkbox"/> Appointed	[Jun 2021]
31	Information Technology Officer		<input type="checkbox"/> Appointed	[Jun 2021]
32	Data Entry Operator		<input type="checkbox"/> Appointed	[Jun 2021]
33	Management Assistant 1	U.H.R.K.W. Henakgedara	<input checked="" type="checkbox"/> Appointed	July 2020
34	Management Assistant 2	N.N. Williams	<input checked="" type="checkbox"/> Appointed	July 2020
35	Management Assistant 3	R.M.P. Madhushan	<input checked="" type="checkbox"/> Appointed	
36	Management Assistant 4		<input type="checkbox"/> Appointed	[Jun 2021]
37	Management Assistant 5		<input type="checkbox"/> Appointed	[Jun 2021]
38	Management Assistant 6		<input type="checkbox"/> Appointed	[Jun 2021]
39	Driver 1		<input type="checkbox"/> Appointed	[Jun 2021]
40	Driver 2		<input type="checkbox"/> Appointed	[Jun 2021]
41	Driver 3		<input type="checkbox"/> Appointed	[Jun 2021]
42	Driver 4		<input type="checkbox"/> Appointed	[Jun 2021]
43	Office Aide 1	R.N. Weerasinghe	<input checked="" type="checkbox"/> Appointed	Sep 2018
44	Office Aide 2		<input type="checkbox"/> Appointed	[Jun 2021]

Source: Asian Development Bank estimates.

#### IV. COSTS AND FINANCING

6. The project is estimated to cost \$1,084.60 million, including taxes and duties, physical and price contingencies, interest, and other charges during implementation (Table 8).

**Table 8: Estimated Cost of Investment Program**  
(\$ million)

Item	Amount <sup>a</sup>
<b>A. Base Cost<sup>b</sup></b>	
1. Civil works	892.40
2. Equipment	5.80
3. Consulting services for project implementation and capacity development	37.90
4. Recurrent costs (project management)	17.20
<b>Subtotal (A)</b>	<b>953.30</b>
<b>B. Contingencies<sup>c</sup></b>	<b>108.30</b>
<b>C. Financing Charges during Implementation<sup>d</sup></b>	<b>23.00</b>
<b>Total (A+B+C)</b>	<b>1,084.60</b>

<sup>a</sup> Includes taxes and duties of \$124.30 million to be financed from government resources through exemption.

<sup>b</sup> In mid-2017 prices.

<sup>c</sup> Physical contingencies computed at 10% of civil works and 10% for consulting services. Price contingencies computed at about 1.5% on foreign exchange costs and about 5.0% on local currency costs; includes provision for potential exchange rate fluctuation.

<sup>d</sup> Includes interest and commitment charges. Interest during construction for the Asian Development Bank's (ADB) regular loan from ordinary capital resources (OCR) has been computed at the 5-year fixed swap London interbank offered rate plus a spread of 0.5% and a maturity premium of 0.2%. Commitment charges for ADB's regular loan are 0.15% per year to be charged on the undisbursed loan amount. Interest during construction for ADB's concessional loan from the OCR has been computed at 2% per year.

Source: Asian Development Bank estimates.

7. The government has requested an MFF in an amount up to \$900 million equivalent from the ordinary capital resources (OCR) of the Asian Development Bank (ADB) to help finance a part of the investment program. The MFF will consist of several tranches, subject to the government's submission of related periodic financing requests, execution of the related loan and project agreements for each tranche, and fulfillment of terms of conditions and undertakings set forth in the framework financing agreement.<sup>1</sup> Each tranche will finance parts of the works and consulting services contracts using the time-slice approach for large-scale projects. Once a tranche is disbursed, the government will submit a periodic financing request for a subsequent tranche, which will continue to finance the contracts awarded under the first tranche.

8. The tranche schedule and financing plan proposed at the approval of the MFF are in Table 9 (the tranche schedule was revised when processing tranche 3). The government will finance taxes and duties, and part of contingencies, for a total of \$184.60 million. The tranche schedule is based on the disbursement projection, which will minimize financing charges and improve the disbursement ratio under the investment program. Each tranche will finance slices of a group of contracts for civil works, equipment, and consulting services.

<sup>1</sup> Framework Financing Agreement (accessible from the RRP's list of linked documents in Appendix 2).

**Table 9: Financing Plan**

Source	Amount (\$ million)	Share of Total (%)	Indicative Tranche Schedule and Amount (\$ million)				
			1 (2017)	2 (2019)	3 (2021)	4 (2022)	5 (2023)
ADB	900.0	83.0	150.0	150.0	200.0	200.0	200.0
OCR (Regular loan)	815.0	75.1	90.0	150.0	200.0	200.0	200.0
OCR (Concessional loan)	85.0	7.8	60.0	0.0	0.0	0.0	0.0
Government	184.6	17.0	22.1	21.8	15.7	28.7	96.3
<b>Total</b>	<b>1,084.6</b>	<b>100.0</b>	<b>172.1</b>	<b>171.8</b>	<b>215.7</b>	<b>228.7</b>	<b>296.3</b>

ADB = Asian Development Bank, OCR = ordinary capital resources.

Source: Asian Development Bank estimates.

9. The first tranche of the MFF comprises (i) a regular loan of \$90 million, and (ii) a concessional loan of \$60 million, both from ADB's OCR. The regular loan will have (i) a 30-year term, including a grace period of 7 years; (ii) an annual interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility; (iii) a commitment charge of 0.15% per year (the interest and other charges during construction to be capitalized in the loan); and (iv) such other terms and conditions set forth in the draft loan and project agreements. Based on the straight-line method, the average maturity is 18.75 years, and the maturity premium payable to ADB is 0.20% per year. The concessional loan will have (i) a 25-year term, including a grace period of 5 years; (ii) an interest rate of 2% per year during the grace period and thereafter; and (iii) such other terms and conditions set forth in the loan and project agreements.

10. The second tranche of the MFF will be a regular loan of \$150 million from ADB's OCR to help finance the project.<sup>2</sup> The loan will have (i) a 29-year term, including a grace period of 8 years; (ii) an annual interest rate determined in accordance with ADB's LIBOR-based lending facility; (iii) a commitment charge of 0.15% per year (the interest and other charges during construction to be capitalized in the loan); and (iv) such other terms and conditions set forth in the draft loan and project agreements. Based on the straight-line method, the average maturity is 18.75 years, and the maturity premium payable to ADB is 0.20% per year.

11. The third tranche of the MFF will be a regular loan of \$200 million from ADB's OCR to help finance the project. The loan will have (i) a 29-year term, including a grace period of 8 years; (ii) an annual interest rate determined in accordance with ADB's LIBOR-based lending facility; (iii) a commitment charge of 0.15% per year (the interest and other charges during construction to be capitalized in the loan); and (iv) such other terms and conditions set forth in the draft loan and project agreements. Based on the straight-line method, the average maturity is 18.75 years, and there is no maturity premium payable to ADB.

## **A. Cost Estimates Preparation and Revisions**

12. The cost estimates were prepared by the RDA, which carried out level-2 detailed design for the projects under the investment program. The estimates were prepared based on the bill of quantities in accordance with the detailed design. The project cost will be updated during construction based on the final detailed design, changing quantities, and other conditions set forth in the civil works contract. The RDA will update the tranche schedule and the size of each subsequent tranches during project implementation based on the adjusted cost provided by the

<sup>2</sup> The original financing plan expected for tranche 2 included partial financing by the OCR (concessional loan) (Table 9). However, due to the delay in the procurement and Sri Lanka's graduation from the concessional assistance, tranche 2 financing resources have been changed only to the regular loan.

project implementation consultants.

## B. Key Assumptions

13. The following key assumptions underpin the cost estimates and financing plan for the MFF:

- (i) Exchange rate: SLRs152.30 = \$1.00 (as of 16 May 2017)
- (ii) Price contingencies based on expected cumulative inflation over the implementation period are shown in Table 10.

**Table 10: Escalation Rates for Price Contingency Calculation**

Item	2017	2018	2019	2020	2021	Average
Foreign rate of price inflation	1.4%	1.5%	1.5%	1.5%	1.5%	1.5%
Domestic rate of price inflation	5.5%	5.0%	5.0%	5.0%	5.0%	5.1%

Source: Asian Development Bank estimates.

- (iii) In-kind contributions cannot be easily measured and have not been quantified.

## C. Detailed Cost Estimates by Expenditure Category and Financier – Facility

**Table 11: Detailed Cost Estimates by Expenditure Category and Financier – Facility**

Component	Total	Government		ADB	
	\$ million	%	\$ million	%	\$ million
<b>A. Investment Cost</b>					
1. Civil works <sup>a</sup>	776.00	0.0	0.00	100.0	776.00
2. Equipment	5.00	0.0	0.00	100.0	5.00
3. Consultants					
a. Project implementation	28.80	0.0	0.00	100.0	28.80
b. Capacity development	4.20	0.0	0.00	100.0	4.20
<b>Subtotal (A)</b>	<b>814.00</b>	<b>0.0</b>	<b>0.00</b>	<b>100.0</b>	<b>814.00</b>
<b>B. Recurrent Cost</b>	<b>15.00</b>	<b>0.0</b>	<b>0.00</b>	<b>100.0</b>	<b>15.00</b>
<b>C. Taxes and Duties</b>	<b>124.30</b>	<b>100.0</b>	<b>124.30</b>	<b>0.00</b>	<b>0.00</b>
<b>D. Contingencies</b>					
1. Physical	82.90	55.6	46.10	44.4	36.80
2. Price	25.40	55.6	14.20	44.4	11.20
<b>Subtotal (D)</b>	<b>108.30</b>	<b>55.6</b>	<b>60.30</b>	<b>44.4</b>	<b>48.00</b>
<b>E. Financial Charges during Implementation</b>					
1. Interest during construction	22.30	0.0	0.00	100.0	22.30
2. Commitment charges	0.70	0.0	0.00	100.0	0.70
<b>Subtotal (E)</b>	<b>23.00</b>	<b>0.0</b>	<b>0.00</b>	<b>100.0</b>	<b>23.00</b>
<b>Total (A+B+C+D+E)</b>	<b>1,084.60</b>	<b>17.0</b>	<b>184.60</b>	<b>83.0</b>	<b>900.00</b>

ADB = Asian Development Bank, MFF = multitranché financing facility.

<sup>a</sup> The incremental cost to address climate change adaptation is estimated at about 5.2% of the civil works cost, i.e., \$40.1 million for the MFF.

Source: Asian Development Bank estimates.

**Table 12.1: Detailed Cost Estimates by Expenditure Category and Financier – Tranche 1**

<b>Component</b>	<b>Total \$ million</b>	<b>Government</b>		<b>ADB (OCR [Regular Loan])</b>		<b>ADB (OCR [Concessional Loan])</b>	
		<b>%</b>	<b>\$ million</b>	<b>%</b>	<b>\$ million</b>	<b>%</b>	<b>\$ million</b>
<b>A. Investment Cost</b>							
1. Civil works	135.80	0.0	0.00	60.0	81.50	40.0	54.30
2. Equipment	2.80	0.0	0.00	60.0	1.70	40.0	1.10
3. Consultants							
a. Project implementation	5.10	0.0	0.00	60.0	3.10	40.0	2.00
b. Capacity development	1.40	0.0	0.00	60.0	0.80	40.0	0.60
<b>Subtotal (A)</b>	<b>145.10</b>	<b>0.0</b>	<b>0.00</b>	<b>60.0</b>	<b>87.10</b>	<b>40.0</b>	<b>58.00</b>
<b>B. Recurrent Cost</b>	<b>2.40</b>	<b>0.0</b>	<b>0.00</b>	<b>60.0</b>	<b>1.40</b>	<b>40.0</b>	<b>1.00</b>
<b>C. Taxes and Duties</b>	<b>22.10</b>	<b>100.0</b>	<b>22.10</b>	<b>0.0</b>	<b>0.00</b>	<b>0.0</b>	<b>0.00</b>
<b>D. Contingencies</b>							
1. Physical	0.00	-	0.00	-	0.00	-	0.00
2. Price	0.00	-	0.00	-	0.00	-	0.00
<b>Subtotal (D)</b>	<b>0.00</b>	<b>-</b>	<b>0.00</b>	<b>-</b>	<b>0.00</b>	<b>-</b>	<b>0.00</b>
<b>E. Financial Charges during Implementation</b>							
1. Interest during construction	2.40	0.0	0.00	60.0	1.40	40.0	1.00
2. Commitment charges	0.10	0.0	0.00	100.0	0.10	0.0	0.00
<b>Subtotal (E)</b>	<b>2.50</b>	<b>0.0</b>	<b>0.00</b>	<b>60.0</b>	<b>1.50</b>	<b>40.0</b>	<b>1.00</b>
<b>Total (A+B+C+D+E)</b>	<b>172.10</b>	<b>12.8</b>	<b>22.10</b>	<b>52.3</b>	<b>90.00</b>	<b>34.9</b>	<b>60.00</b>

ADB = Asian Development Bank, OCR = ordinary capital resources.

Source: Asian Development Bank estimates.

**Table 12.2: Detailed Cost Estimates by Expenditure Category and Financier – Tranche 2**

<b>Component</b>	<b>Total \$ million</b>	<b>Government</b>		<b>ADB (OCR [Regular Loan])</b>	
		<b>%</b>	<b>\$ million</b>	<b>%</b>	<b>\$ million</b>
<b>A. Investment Cost</b>					
1. Civil works	135.80	0.0	0.00	100.0	135.80
2. Equipment	2.20	0.0	0.00	100.0	2.20
3. Consultants	6.00	0.0	0.00	100.0	6.00
<b>Subtotal (A)</b>	<b>144.00</b>	<b>0.0</b>	<b>0.00</b>	<b>100.0</b>	<b>144.00</b>
<b>B. Recurrent Cost</b>	<b>1.50</b>	<b>0.0</b>	<b>0.00</b>	<b>100.0</b>	<b>1.50</b>
<b>C. Taxes and Duties</b>	<b>21.80</b>	<b>100.0</b>	<b>21.80</b>	<b>0.0</b>	<b>0.00</b>
<b>D. Contingencies</b>					
1. Physical	0.00	-	0.00	-	0.00
2. Price	0.00	-	0.00	-	0.00
<b>Subtotal (D)</b>	<b>0.00</b>	<b>-</b>	<b>0.00</b>	<b>-</b>	<b>0.00</b>
<b>E. Financial Charges during Implementation</b>					
1. Interest during construction	4.20	0.0	0.00	100.0	4.20
2. Commitment charges	0.30	0.0	0.00	100.0	0.30
<b>Subtotal (E)</b>	<b>4.50</b>	<b>0.0</b>	<b>0.00</b>	<b>100.0</b>	<b>4.50</b>
<b>Total (A+B+C+D+E)</b>	<b>171.80</b>	<b>12.7</b>	<b>21.80</b>	<b>87.3</b>	<b>150.00</b>

ADB = Asian Development Bank, OCR= ordinary capital resources.

Source: Asian Development Bank estimates.

**Table 12.3: Detailed Cost Estimates by Expenditure Category and Financier – Tranche 3**  
(\$ million)

Item	ADB – Loan		Government		Total Cost	
	Amount	% of Cost Category	Amount	% of Cost Category	Amount	Taxes and Duties
<b>A. Investment Costs</b>						
1. Civil works	190.18	92.59	15.21	7.41	205.39	15.21
2. Equipment	2.80	92.59	0.22	7.41	3.02	0.22
3. Consulting services for project implementation and capacity development	3.44	92.59	0.28	7.41	3.71	0.28
<b>Subtotal (A)</b>	<b>196.41</b>	<b>92.59</b>	<b>15.71</b>	<b>7.41</b>	<b>212.12</b>	<b>15.71</b>
<b>B. Recurrent Costs</b>						
Project management costs	0.13	92.59	0.01	7.41	0.14	0.01
<b>Subtotal (B)</b>	<b>0.13</b>	<b>92.59</b>	<b>0.01</b>	<b>7.41</b>	<b>0.14</b>	<b>0.01</b>
<b>Total Base Cost</b>	<b>196.54</b>	<b>92.59</b>	<b>15.72</b>	<b>7.41</b>	<b>212.26</b>	<b>15.72</b>
<b>C. Contingencies</b>						
1. Physical	0.00	-	0.00	-	0.00	0.00
2. Price	0.00	-	0.00	-	0.00	0.00
<b>Subtotal (C)</b>	<b>0.00</b>	<b>-</b>	<b>0.00</b>	<b>-</b>	<b>0.00</b>	<b>0.00</b>
<b>D. Financial Charges During Implementation</b>						
1. Interest during construction	2.94	100.00	0.00	0.00	2.94	0.00
2. Commitment charges	0.52	100.00	0.00	0.00	0.52	0.00
<b>Subtotal (D)</b>	<b>3.46</b>	<b>100.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.46</b>	<b>0.00</b>
<b>Total Project Cost (A+B+C+D)</b>	<b>200.00</b>	<b>92.71</b>	<b>15.72</b>	<b>7.29</b>	<b>215.72</b>	<b>15.72</b>

ADB = Asian Development Bank  
Source: Asian Development Bank.

#### D. Allocation and Withdrawal of Loan Proceeds for Tranches 1, 2, and 3

14. Tranche 1 for \$150 million equivalent comprises two loans: (i) the regular OCR loan for \$90 million, and (ii) the concessional OCR loan for \$60 million.

**Table 13.1: Regular OCR Loan – Allocation and Withdrawal of Loan Proceeds (Tranche 1)**

CATEGORY			ADB FINANCING
Number	Item	Amount Allocated (\$ million equivalent)	Percentage and Basis for Withdrawal from the Loan Account
1	Works and equipment	83.20	100% of total expenditure claimed*
2	Consulting services	3.90	100% of total expenditure claimed*
3	Project management	1.40	100% of total expenditure claimed*
4	Interest and commitment charge	1.50	100% of amount due
	<b>Total</b>	<b>90.00</b>	

ADB = Asian Development Bank, OCR = ordinary capital resources.

\* Exclusive of taxes and duties imposed within the territory of the borrower.

Source: Asian Development Bank estimates.

**Table 13.2: Concessional OCR Loan – Allocation and Withdrawal of Loan Proceeds (Tranche 1)**

CATEGORY			ADB FINANCING
Number	Item	Amount Allocated (\$ million equivalent)	Percentage and Basis for Withdrawal from the Loan Account
1	Works and equipment	55.40	100% of total expenditure claimed*
2	Consulting services	2.60	100% of total expenditure claimed*
3	Project management	1.00	100% of total expenditure claimed*
4	Interest charge	1.00	100% of amount due
	<b>Total</b>	<b>60.00</b>	

ADB = Asian Development Bank, OCR = ordinary capital resources.

\* Exclusive of taxes and duties imposed within the territory of the borrower.

Source: Asian Development Bank estimates.



15. Allocation and withdrawal of loan proceeds for tranche 2 are as follows:

**Table 14: Regular OCR Loan – Allocation and Withdrawal of Loan Proceeds (Tranche 2)**

CATEGORY			ADB FINANCING
Number	Item	Amount Allocated (\$ million equivalent)	Percentage and Basis for Withdrawal from the Loan Account
1	Works and equipment	138.00	100% of total expenditure claimed*
2	Consulting services	6.00	100% of total expenditure claimed*
3	Project management	1.50	100% of total expenditure claimed*
4	Interest and Commitment charge	4.50	100% of amount due
	<b>Total</b>	<b>150.00</b>	

ADB = Asian Development Bank.

\* Exclusive of taxes and duties imposed within the territory of the borrower.

Source: Asian Development Bank estimates.

16. Allocation and withdrawal of loan proceeds for tranche 3 are as follows:

**Table 15: Regular OCR Loan – Allocation and Withdrawal of Loan Proceeds (Tranche 3)**

CATEGORY			ADB FINANCING
Number	Item	Amount Allocated (\$ million equivalent)	Percentage and Basis for Withdrawal from the Loan Account
1	Works and equipment	192.98	100% of total expenditure claimed*
2	Consulting services	3.43	100% of total expenditure claimed*
3	Project management	0.13	100% of total expenditure claimed*
4	Interest and Commitment charge	3.46	100% of amount due
	<b>Total</b>	<b>200.00</b>	

ADB = Asian Development Bank, OCR = ordinary capital resources.

\* Exclusive of taxes and duties imposed within the territory of the borrower.

Source: Asian Development Bank estimates.

## E. Detailed Cost Estimates by Year

**Table 16: Detailed Cost Estimates by Year – Facility**  
(\$ million)

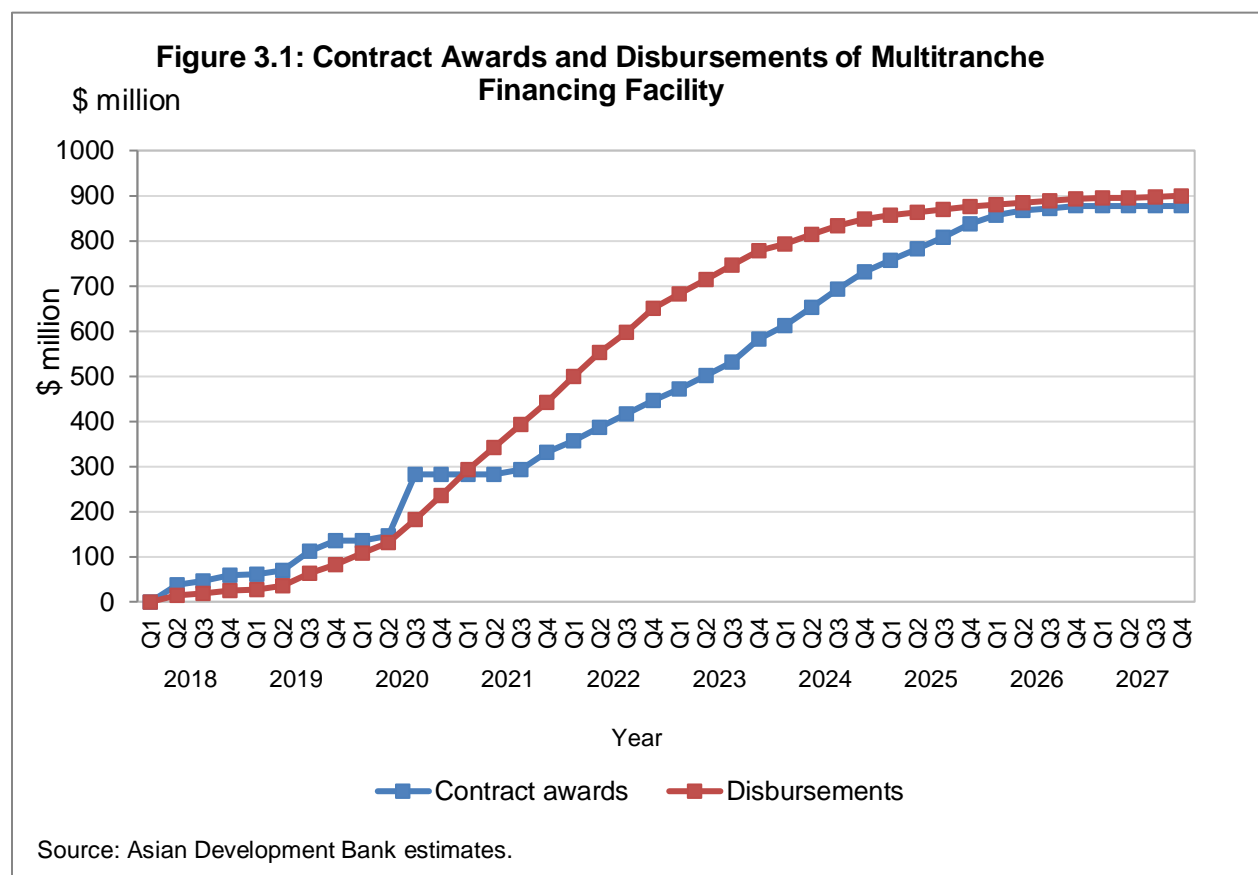
Component	Total Cost	Year							
		2018	2019	2020	2021	2022	2023	2024	2025
<b>A. Investment Cost</b>									
1. Civil works	892.40	112.00	322.00	198.70	143.80	44.60	36.40	22.30	12.60
2. Equipment	5.80	2.90	2.90	0.00	0.00	0.00	0.00	0.00	0.00
4. Consultants									
a. Project implementation	33.20	4.20	12.00	7.40	5.30	1.70	1.30	0.80	0.50
b. Capacity development	4.70	1.30	2.20	1.30	0.00	0.00	0.00	0.00	0.00
<b>Subtotal (A)</b>	<b>936.10</b>	<b>120.40</b>	<b>339.10</b>	<b>207.40</b>	<b>149.10</b>	<b>46.30</b>	<b>37.70</b>	<b>23.10</b>	<b>13.10</b>
<b>B. Recurrent Cost</b>	<b>17.20</b>	<b>2.30</b>	<b>3.50</b>	<b>3.50</b>	<b>3.50</b>	<b>1.70</b>	<b>1.70</b>	<b>0.50</b>	<b>0.50</b>
<b>C. Contingencies</b>									
1. Physical	82.90	10.70	29.80	18.30	13.30	4.20	3.40	2.10	1.20
2. Price	25.40	2.30	7.80	5.70	4.70	1.70	1.60	1.00	0.70
<b>Subtotal (C)</b>	<b>108.30</b>	<b>13.00</b>	<b>37.60</b>	<b>24.00</b>	<b>18.00</b>	<b>5.90</b>	<b>5.00</b>	<b>3.10</b>	<b>1.90</b>
<b>D. Financial Charges during Implementation</b>									
1. Interest during construction	22.30	1.40	7.60	13.30	0.00	0.00	0.00	0.00	0.00
2. Commitment charges	0.70	0.10	0.10	0.20	0.10	0.10	0.10	0.00	0.00
<b>Subtotal (D)</b>	<b>23.00</b>	<b>1.50</b>	<b>7.80</b>	<b>13.70</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.00</b>	<b>0.00</b>
<b>Total (A+B+C+D)<sup>a</sup></b>	<b>1,084.60</b>	<b>137.20</b>	<b>387.90</b>	<b>248.40</b>	<b>170.70</b>	<b>54.00</b>	<b>44.50</b>	<b>26.70</b>	<b>15.50</b>

<sup>a</sup> Taxes and duties of \$124.30 million are included in the total cost broken down as \$16.00 million for 2018, \$44.70 million for 2019, \$27.50 million for 2020, \$19.90 million for 2021, \$6.30 million for 2022, \$5.10 million for 2023, \$3.10 million for 2024, and \$1.80 million for 2025.

Source: Asian Development Bank estimates.

## F. Contract and Disbursement S-Curve

17. Figures 3.1–3.4 and Tables 17.1–17.4 show the yearly contract awards and disbursement projections over the life of the project.<sup>3</sup>



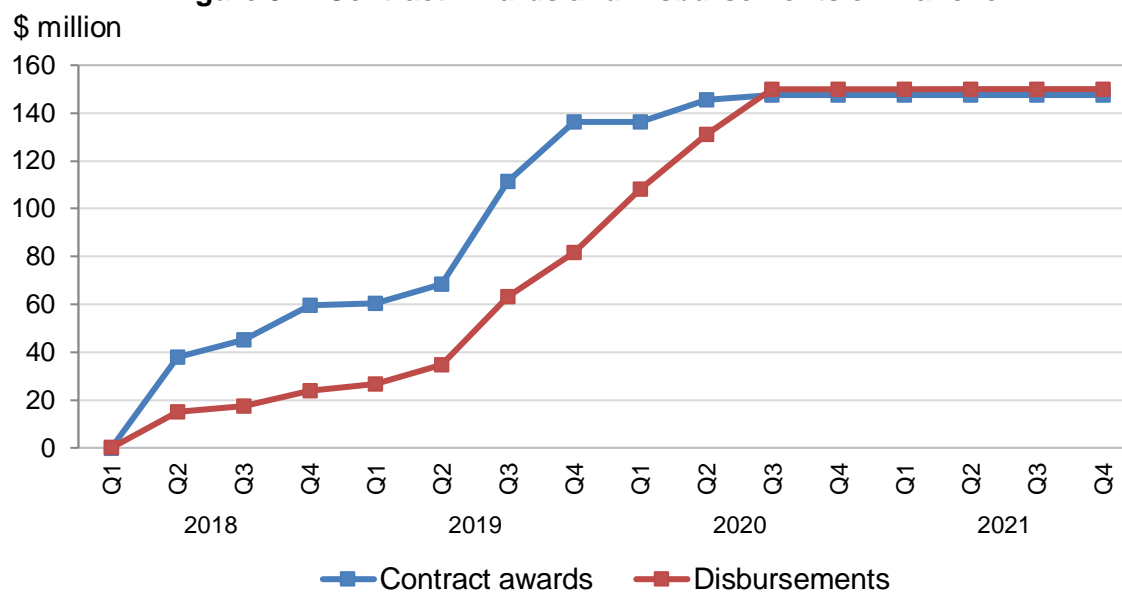
**Table 17.1: Contract Awards and Disbursements of Multitranche Financing Facility**  
(\$ million)

	2017	2018	2019	2020	2021	2022	2023	2024	2025
Accumulated contract awards	0.00	668.70	866.41	869.58	872.75	874.34	875.93	876.47	877.00
Accumulated disbursement	0.00	115.10	437.70	636.80	781.30	826.90	864.65	887.20	900.30

MFF = multitranche financing facility.

Source: Asian Development Bank estimates.

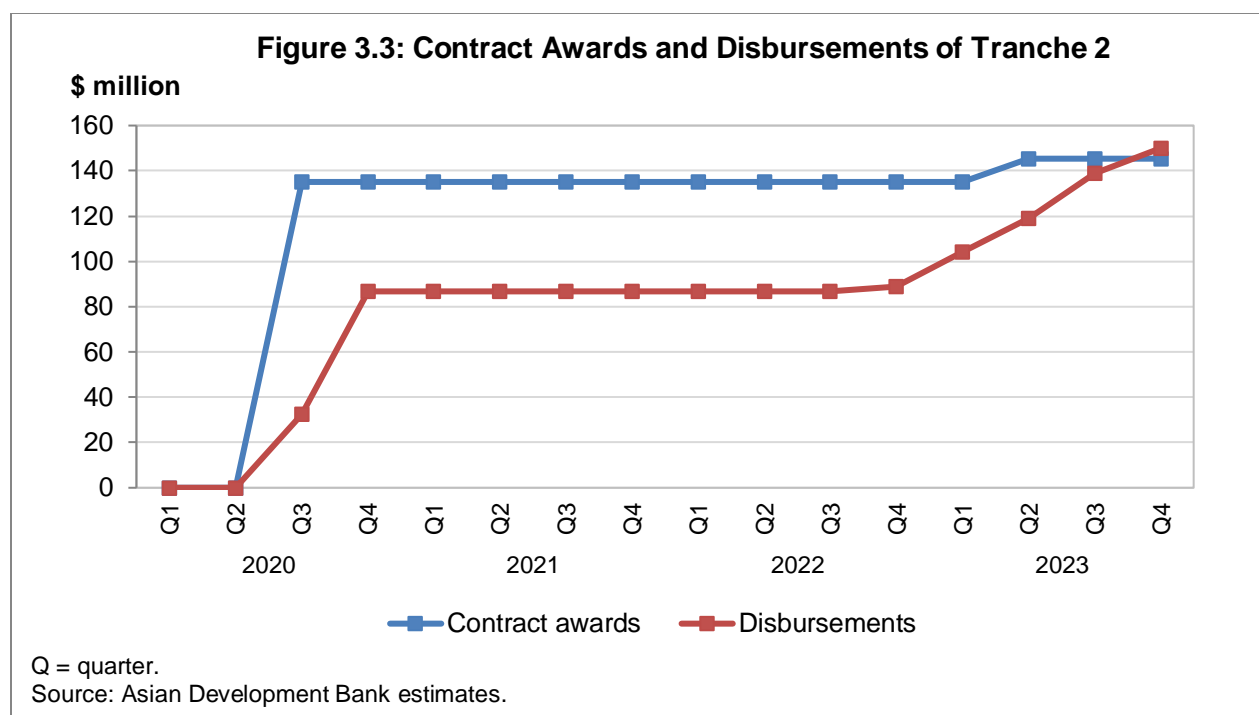
<sup>3</sup> Facility contract award and disbursement projections presented are the original estimates during MFF approval. Following its time-slice nature, the MFF will finance long-term contract packages across tranches. However, the MFF contract award projections were made based on the whole amount of each awarded contract.

**Figure 3.2: Contract Awards and Disbursements of Tranche 1****Table 17.2: Contract Awards and Disbursements of Tranche 1**  
(\$ million)

Year	Contract Award						Disbursement					
	Q1	Q2	Q3	Q4	Total	Cum	Q1	Q2	Q3	Q4	Total	Cum
2018	0.00	37.79	7.32	14.53	59.64	59.64	0.02	14.92	2.46	6.43	23.83	23.83
2019	0.84	8.14	42.69	24.99	76.66	136.30	2.68	8.13	28.60	18.38	57.79	81.62
2020	0.01	9.33	1.88	0.00	11.22	147.52	26.58	22.85	18.73	0.05	68.21	149.83
2021	(0.02)	0.00	0.00	0.00	(0.02)	147.50	0.15	0.02	0.00	0.00	0.17	150.00

Cum = cumulative, Q = quarter, ( ) = denotes negative value.

Source: Asian Development Bank estimates.

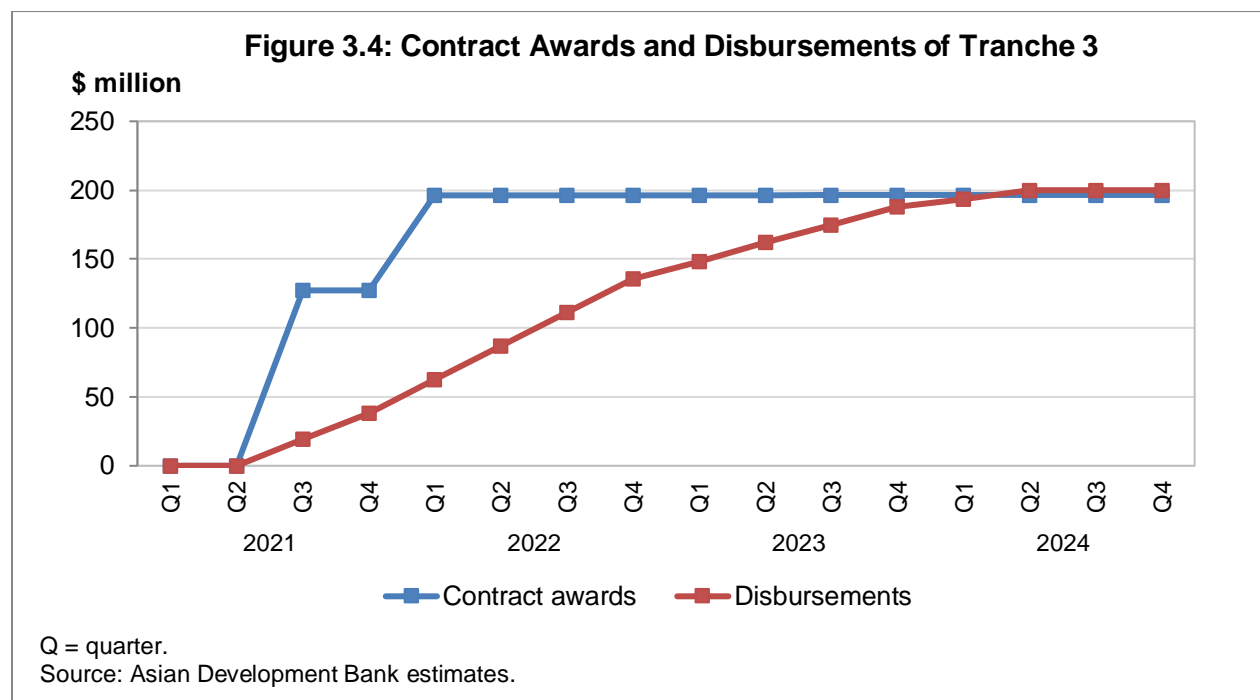


**Table 17.3: Contract Awards and Disbursements of Tranche 2**  
(\$ million)

(\$ Million)												
	Contract Award						Disbursement					
Year	Q1	Q2	Q3	Q4	Total	Cum	Q1	Q2	Q3	Q4	Total	Cum
2020	0.00	0.00	135.10	0.00	135.10	135.10	0.00	0.00	32.58	54.09	86.67	86.67
2021	0.00	0.00	0.00	0.00	0.00	135.10	0.00	0.00	0.00	0.00	0.00	86.67
2022	0.00	0.00	0.00	0.00	0.00	135.10	0.00	0.00	0.00	2.33	2.33	89.00
2023	0.00	10.27	0.00	0.00	10.27	145.37	15.00	15.00	20.00	11.00	61.00	150.00

Cum = cumulative, Q = quarter.

Source: Asian Development Bank estimates.



**Table 17.4: Contract Awards and Disbursements of Tranche 3**

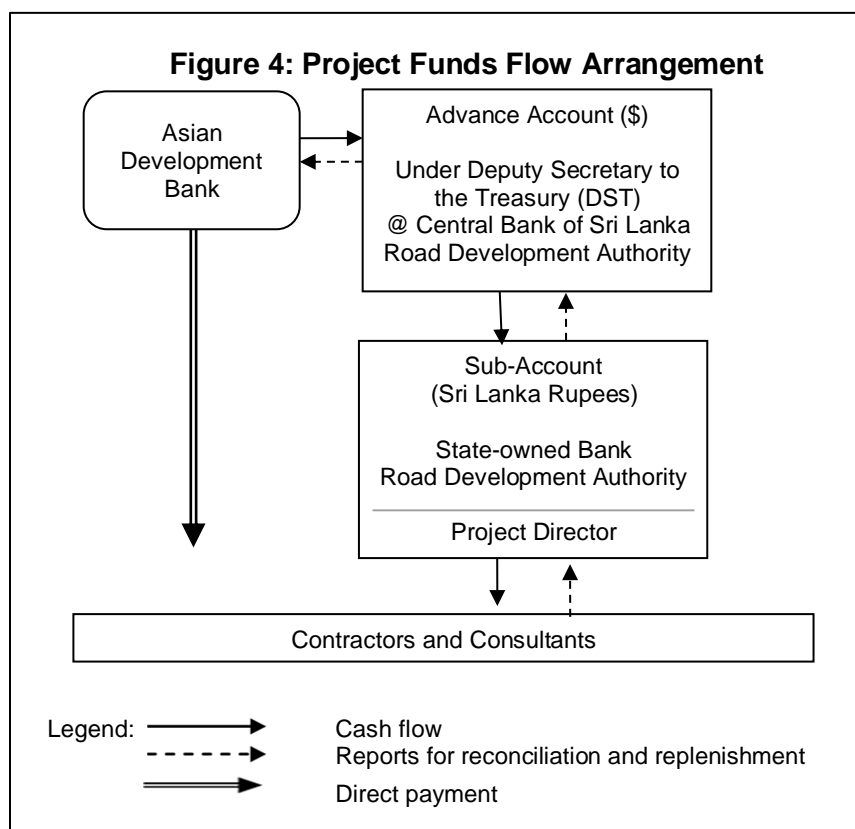
Year	Contract Award						Disbursement					
	Q1	Q2	Q3	Q4	Total	Cum	Q1	Q2	Q3	Q4	Total	Cum
2021	0.00	0.00	127.22	0.00	127.22	127.22	0.00	0.00	19.02	19.37	38.39	38.39
2022	69.2	0.00	0.00	0.00	69.2	196.41	24.1	24.6	24.1	24.6	97.35	135.73
2023	0.00	0.00	0.1	0.00	0.1	196.54	12.7	13.4	12.7	13.4	52.13	187.86
2024	0.00	0.00	0.00	0.00	0.00	196.54	1.42	1.62	1.42	1.62	6.07	193.93
2025	0.00	0.00	0.00	0.00	0.00	196.54	2.83	3.24	0.00	0.00	6.07	200.00

Cum = cumulative, Q = quarter.

Source: Asian Development Bank estimates.

## G. Fund Flow Diagram

18. Figure 4 shows how the funds will flow from ADB and the borrower to implement project activities.



Source: Asian Development Bank.

## V. FINANCIAL MANAGEMENT

### A. Financial Management Assessment

19. The financial management assessment was conducted in July–August 2016 with updated information collected in April 2017, which was later updated for tranche 2 in July 2019 and for tranche 3 in January 2021, in accordance with ADB guidelines.<sup>4</sup> The financial management assessment considered the capacity of the RDA, including fund flow arrangements, staffing, accounting and financial reporting systems, financial information systems, and internal and external auditing arrangements. The RDA's overall financial management risk was assessed as *moderate* mainly due to (i) the need for further enhancement of the project management unit (PMU) finance team to cope with the progress of the civil works, (ii) the absence of a financial management and accounting manual, and 3) delays in the submission of the qualified audit opinion on entity-level financial statements of the RDA.<sup>5</sup> Tranche 3 due diligence has resulted in further strengthening of the financial management action plan, and key mitigation measures were agreed for the identified risks, including (i) fast-tracking the hiring of accounting and finance staff, (ii) development of a accounting and financial management manual,<sup>6</sup> and (iii) implementation of an action plan for the resolution of audit qualifications. The financial management action plan is provided in Table 18. Financial management risks and risk-mitigation measures shall be reviewed and updated throughout the project life.

**Table 18: Financial Management Action Plan**

Key Risk Area	Risk Mitigation Activity	Timeline	Responsible Entity
Budget allocation and flow of funds	Based on the Cabinet approval of the iRoad program in January 2017, the MOHW and the RDA will give the highest priority to the investment program in their budget request.	Annual	MOHW and RDA
Internal audit of the project may not be conducted	Internal audits by the MOHW and internal auditors of the RDA-PMU to be conducted at least semiannually, with detailed reports prepared and submitted to the respective audit committees	Semi-annual	MOHW and RDA
Lack of a comprehensive policies and procedures manual	A comprehensive policies and procedures manual for accounting and financial management of the program will be developed and implemented by the RDA.	September 2021	RDA
Hiring of accounts staff	Hiring of accounts officer for Uva Province  Hiring of accounts officer for Northern Province  Hiring of 3 accounts officers for PMU (coordination, financial management, and for Western Province)	May 2021  May 2021  May 2021	RDA
Delays in hiring of institutional support	Hiring of following experts to support in institutional capacity enhancement and		RDA

<sup>4</sup> ADB. 2019. [Financial Analysis and Evaluation](#). Manila; and ADB. 2015. [Financial Management Assessment](#). Manila.

<sup>5</sup> The submission of FY2018 audited entity financial statements was delayed mainly due to the prolonged translation from the local language.

<sup>6</sup> Development of the manual will be undertaken by the public administration specialist to be hired for the MFF program.



Key Risk Area	Risk Mitigation Activity	Timeline	Responsible Entity
consultants	sustainability: <ul style="list-style-type: none"> <li>Public Financial Management Specialist</li> <li>Road Maintenance Specialist</li> <li>Public Administration Specialist</li> </ul>	June 2021 June 2021 March 2021	
Delays in submission of the RDA financial statements	RDA to ensure submission of AEFS within 1 month of approval by the board of directors of the RDA, but not later than 1 year from the end of each fiscal year	Annually	RDA
Persistent audit qualifications on financial statements of the RDA	(i) RDA to submit a comprehensive time-bound action plan for resolution of audit qualifications to ADB  (ii) Status update on implementation of action of plan (referred in "i" above) for addressing audit qualifications, on quarterly basis to be included in quarterly progress reports	March 2021  Quarterly	RDA  RDA
Delays in submission of audited project financial statements	Timely submission of APFS and resolution of audit findings to be ensured. APFS to be prepared on accrual basis of accounting and should include (i) independent auditors' opinions on overall APFS, (ii) use of project funds for intended purpose, (iii) a management letter, and (iv) reconciliation with ADB's loan financial information system	Within 6 months after fiscal year end	RDA
Quarterly progress reports are not submitted on time	Submission of quarterly progress reports with physical and financial progress with variance analysis and disbursement reports to ADB	Throughout entire duration of the project, within 45 days of end of each quarter	RDA

ADB = Asian Development Bank, AEFS = audited entity financial statement, APFS = audited project financial statement, iRoad = Integrated Road Investment Program, MOHW = Ministry of Highways, PMU = project management unit, RDA = Road Development Authority.

Source: Asian Development Bank.

20. The RDA has comprehensive experience in implementing ADB-funded projects and satisfactory capacity in terms of project financial accounting and knowledge of ADB procedures. The RDA has a dedicated project accounting and finance team with suitable qualified accountants: two project accountants, one accounting assistant, four accounts clerks, and a computer operator. The RDA will maintain separate project records and accounts to identify the financing resources received and expenditures made for each tranche of the MFF, thus ensuring an adequate audit trail. The RDA operates with the Computer Integrated Government Accounting System (CIGAS) for monthly cash reports under statutory reporting. The PIUs under the RDA use a combination of manual and off-the-shelf packages for accounting and recording purposes depending on the size of the projects implemented. The government's Office of the Auditor General annually audits the project financial statements in accordance with the Sri Lanka Auditing Standards. Audited project financial statements for previous ADB-funded projects implemented by the RDA were of adequate quality and received within due dates, and there are no significant unresolved audit observations.

21. The RDA's audited entity financial statements (AEFS) for fiscal year (FY) 2018 indicate that

the department is functioning primarily with treasury grants and financing arranged from local banks and has adequate financial management and internal controls. There have been delays in submission of the AEFS by the RDA. The audited financial statements for FY2019 are under process and expected to be received by the end of May 2021 (the extended deadline is 30 June 2021 due to the COVID-19 pandemic). The financial statements are prepared in accordance with the Sri Lanka Accounting Standards. The auditors have issued a qualified audit opinion for FY2018 on the AEFS of the RDA. The RDA has managed to resolve most of the audit issues raised in the FY2016 audit report (with disclaimer of audit opinion). The RDA is primarily governed by financial regulations of the government and has an internal audit department. ADB-funded projects are subject to internal audit. The PMU also has appointed two internal auditors who are engaged in continuous internal audit of project activities, with reports submitted to the audit committee of the RDA.

22. Timely availability of counterpart funds has been identified as an issue in previous projects. To minimize the risk of implementation delays, ADB's direct payment procedure will be used for disbursements above \$200,000 for works, goods, and consulting services. The Cabinet approval of the investment program, including disbursement projection, was obtained in January 2017 to assure priority of fund allocation for iRoad 2. Based on the approval, the MOHW and the RDA shall ensure that the investment program is given the highest priority to allocate the necessary annual budget. The continuation of staff throughout the implementation period is also essential. Frequent transfer of staff should be minimized. Continuous training should be given to new and existing staff to minimize this type of loss.

## **B. Disbursement**

### **1. Disbursement Arrangements for ADB Funds**

23. The loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2017, as amended from time to time), and detailed arrangements agreed upon between the government and ADB. The proceeds of the loan will be made available to the RDA through the budgetary provisions under the annual budget of the borrower. Online training for project staff on disbursement policies and procedures is available.<sup>7</sup> Project staff are encouraged to avail of this training to help ensure efficient disbursement and fiduciary control.

24. ADB's disbursement procedures (direct payment, commitment, reimbursement, and/or advance fund) will be used for withdrawal of project funds. Separate advance account in US dollars at the Central Bank of Sri Lanka and subaccount in local currency will be established and maintained by each implementing agency. A local currency account for the related subaccount will also be established and administered by each implementing agency to facilitate disbursements of local currency costs. Direct payment procedure by ADB will be utilized for progress payments above \$200,000 for civil works, equipment, and consultant's fees. Reimbursement and advance fund (liquidation or replenishment) procedures will be utilized for recurrent costs (project management) and progress payments less than \$200,000 for civil works, equipment, and consultant's fees.

25. **Advance fund procedure.** The advance accounts will be established, managed, replenished, and liquidated in accordance with ADB's *Loan Disbursement Handbook*. The total outstanding advance to each advance account should not exceed the estimate of ADB's share of expenditures to be paid through the advance account for the forthcoming 6 months. The request

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<sup>7</sup> Disbursement e-Learning: [http://wpqr4.adb.org/disbursement\\_elearning](http://wpqr4.adb.org/disbursement_elearning).

for initial advance to the advance account should be accompanied by an estimate of expenditure sheet setting out the estimated expenditures for the first 6 months of project implementation, and submission of evidence satisfactory to ADB that the advance account has been duly opened.<sup>8</sup> The advance accounts are to be used exclusively for ADB's share of eligible expenditures. The implementing agency that administers the advance account is accountable and responsible for proper use of advances to the advance account. Supporting documents should be submitted to ADB or retained by the RDA in accordance with ADB's Loan Disbursement Handbook (2017, as amended from time to time) when liquidating or replenishing the advance account.

**26. Statement of expenditure procedure.** The statement of expenditure (SOE) procedure may be used for reimbursement of eligible expenditures or liquidation of advances to the advance account.<sup>9</sup> Supporting documents and records for the expenditures claimed under the SOE should be maintained and made readily available for review by ADB's disbursement and review missions, upon ADB's request for submission of supporting documents on a sampling basis and for independent audit.

**27.** Before the submission of the first withdrawal application, 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 \$200,000 equivalent. Individual payments below this amount should be paid (i) by the RDA and subsequently claimed to ADB through reimbursement, or (ii) through the advance fund procedure, unless otherwise accepted by ADB. Use of ADB's Client Portal for Disbursements (CPD) system is encouraged for submission of withdrawal applications to ADB.<sup>10</sup>

## **2. Disbursement Arrangements for Counterpart Fund**

**28.** Counterpart funds will be provided by the Ministry of Finance through the MOHW to the RDA as direct budgetary support. The RDA's project implementation unit will be responsible for annually (i) preparing disbursement projections, and (ii) requesting budgetary allocations for counterpart funds.

### **C. Accounting**

**29.** The RDA will maintain, or cause to be maintained, separate books and records by funding source for all expenditures incurred on the project following accrual-based accounting that is according to international and national accounting standards. The RDA will prepare project financial statements in accordance with the government's accounting laws and regulations that are consistent with international accounting principles and practices.

### **D. Auditing and Public Disclosure**

**30.** The RDA will cause the detailed project financial statements to be audited in accordance with the 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 by the

<sup>8</sup> The estimate of expenditures sheet is available in Appendix 8A of the ADB's *Loan Disbursement Handbook* (2017, as amended from time to time).

<sup>9</sup> Statement of expenditure forms are available in Appendix 7B of ADB's *Loan Disbursement Handbook* (2017, as amended from time to time).

<sup>10</sup> The CPD facilitates online submission of WA to ADB, resulting in faster disbursement. The forms to be completed by the Borrower are available online at <https://www.adb.org/documents/client-portal-disbursements-guide>.

RDA in the English language to ADB within 6 months from the end of the fiscal year.

31. The audit report for the project financial statements, for each tranche, will include a management letter (or a written confirmation from auditors that no management letter was issued) and auditor's opinions that 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 purposes 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). The annual project financial statements should include the withdrawal application-wise reconciliation between amounts reported in the project financial statements and disbursement amounts appearing in the Loan Financial Information System (LFIS) of ADB. The LFIS can be accessed online.

32. The RDA will submit the audited entity financial statements together with the auditor's report and management letter, in English, to ADB within 1 month after approval by the relevant authority (the board of directors of the RDA).

33. 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.

34. The government, the MOHW, and the RDA 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.<sup>11</sup> 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 confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

35. Public disclosure of the audited project financial statements, including the auditor's opinion on the project financial statements, will be guided by ADB's Access to Information Policy.<sup>12</sup> 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.<sup>13</sup>

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<sup>11</sup> 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.

<sup>12</sup> Access to Information Policy: <https://www.adb.org/documents/access-information-policy>.

<sup>13</sup> This type of information would generally fall under public communications policy exceptions to disclosure. ADB. 2011. *Public Communications Policy*. Manila. Paragraphs 97(iv) and/or 97(v).

## VI. PROCUREMENT AND CONSULTING SERVICES

### A. Advance Contracting and Retroactive Financing

36. All advance contracting and retroactive financing will be undertaken in conformity with the ADB Procurement Guidelines (2015, as amended from time to time) and the ADB Guidelines on the Use of Consultants (2013, as amended from time to time). The issuance of invitations to bid under advance contracting and retroactive financing will be subject to ADB approval. The borrower, the MOHW, and the RDA have been advised that approval of advance contracting and retroactive financing does not commit ADB to finance the project.

37. **Advance contracting.** Advance contracting will be carried out for works, equipment, and consulting services.

38. **Retroactive financing.** Eligible expenditures under retroactive financing are up to the equivalent of 20% of the amount of each ADB loan under the facility, incurred before loan effectiveness, but not more than 12 months before the signing of the loan agreement.

### B. Procurement of Goods, Works, and Consulting Services

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

40. The civil works contracts will be procured in accordance with the international competitive bidding procedure with ADB's prior review of bid documents and major steps in the procurement process during bid evaluation. The equipment contracts will be procured in accordance with the shopping procedure and with ADB's post review. A list of equipment is in Appendix B.

41. All consultants will be recruited according to ADB's Guidelines on the Use of Consultants (2013, as amended from time to time).<sup>14</sup> The terms of reference for all consulting services are detailed in Appendixes E–K.

42. To facilitate project management and implementation, four separate international firms will be recruited as project implementation consultants (PIC), one for each designated province. The total person-months is estimated at 144 for international consultants and 9,741 for national consultants. The PIC will assume the role of the "engineer" and will supervise the respective civil works and provide on-the-job training to counterpart staff from the RDA and/or provincial and local road agencies. The consulting firm will be engaged using the quality- and cost-based selection method with a ratio of 90% technical and 10% financial as the nature of the assignment requires priority consideration for quality.<sup>15</sup>

### C. Procurement Plan

43. An updated 18-month procurement plan indicating threshold and review procedures, goods, works, and consulting service contract packages and national competitive bidding guidelines is in Appendix D.

<sup>14</sup> Checklists for actions required to contract consultants by method are available in the *e-Handbook on Project Implementation* at <http://www.adb.org/documents/handbooks/project-implementation/>.

<sup>15</sup> The consultants will be required to support the implementation of several innovative activities, including performance-based maintenance and climate change adaptation measures. Therefore, 90:10 is considered more appropriate.

## D. Consultants' Terms of Reference

44. Outlines of terms of reference of the consulting services to be financed under the facility are in Appendixes E–K:

- E, F, G, H: Project implementation consultants (four contracts for Eastern, Northern, Uva, and Western provinces)
- I: Individual consultants for research capacity enhancement
- J: Individual consultants for mechanistic–empirical pavement design development
- K: Other individual consultants

## VII. SAFEGUARDS

### A. Environment

45. **Categorization.** The scope of works of the MFF involves rehabilitation and maintenance of existing rural and national roads, with minor alignment changes within the existing right-of-way to improve geometry and road safety. No roads falling inside protected and critical habitat areas will be included in the project per national and ADB's Safeguard Policy Statement (SPS) (2009) definition. Therefore, tranche 1 and subsequent tranches under the MFF have been categorized *B* in accordance with ADB's Safeguard Policy Statement (2009). Consolidated province-level initial environmental examinations (IEE) have been prepared for all roads identified in each province (Eastern, Northern, Uva, and Western) and disclosed on the ADB website prior to MFF approval. The IEEs were prepared based on completed road-specific environmental checklists with baseline data, public consultations, and literature reviews. An environmental assessment and review framework (EARF) has been prepared to guide the environmental assessment of succeeding tranches, including any additional roads that will be funded, under the iRoad 2.

46. **Ensuring implementation of environmental standards.** The executing and implementing agencies will ensure that all environmental safeguard requirements under the program will be implemented as required by the ADB Safeguard Policy Statement (2009), EARF, applicable international standards, local laws and regulations, and province-level IEEs, including the standard environmental management plans (EMP). The standard EMP is comprehensive and covers all typical environmental issues that may be expected during road construction and/or maintenance within the respective province based on environmental checklists. The EMP contains mitigation measures for all typical anticipated environmental impacts during project construction and operation. Specific mitigation measures with details on location, time, and the responsible agency for implementation are given in the EMP, to the extent feasible. The contractor who is responsible for preparing the final detailed design of the roads will be required to prepare site-specific environment management action plans (SSEMAP) based on the final detailed design, information in the road-specific environment checklists, and the standard EMP. These will be subject to approval by the PIC and PIU. Necessary provisions for these will be included in the bidding documents. The contractor will be required to include all costs for implementing the SSEMAP.

47. The PIC will conduct regular monitoring of SSEMAP implementation and review monitoring records maintained by the contractors. The Environment and Social Development Division (ESDD) of the RDA will also conduct on-site monitoring and review of documents at least semiannually and provide technical advice to enhance SSEMAP implementation as necessary.

48. All required clearances, permits, and licenses as applicable must be obtained by the PIU

before the start of construction works in the respective road sections. Permits, licenses, and other pertinent approvals for activities such as operation of asphalt plants, quarries, borrow areas, etc. must be obtained by the contractor before the beginning of the respective construction activity.

49. The project directors of each PIU, supported by the environment staff of the four PIUs in the designated provinces, will be responsible for overseeing and managing the implementation of environmental safeguards in the entire investment program. Each of the PIUs is staffed with a senior environment officer who will be supported by social and environment officers (three in Eastern Province, five in Northern Province, four in Uva Province, and three in Western Province). Each of the PIUs will be supported by project implementation consultants (one per province). The consultancy teams will include an environment safeguard consultant.

50. The duties of the PIU environmental officers will include (i) monitoring of implementation of mitigation measures by construction contractors on a weekly basis; (ii) preparing and implementing environment policy guidelines and environmental good practices; (iii) liaising with the environmental agencies and seeking their help to solve the environment-related issues of project implementation; (iv) conducting awareness training on environmental and social issues related to the program, together with the PICs and contractors; (v) establishing a grievance redress mechanism and ensuring it is operated satisfactorily; and (vi) providing necessary information to the PIC for preparation of annual environmental monitoring reports.

51. The PIU environmental officers will also be supported by the PIC's environment safeguard consultants. The PIC will support the PIU in the following tasks: (i) update the environmental assessments, if required, together with the ESDD; (ii) review, approve, and maintain records of updated EMPs and/or SSEMAPs and environment monitoring checklists prepared by the contractor; (iii) provide oversight on environmental management aspects of the project and ensure SSEMAPs are implemented by the contractors; (iv) facilitate and ensure contractors' compliance with all government rules and regulations regarding permits as well as any other relevant approvals required for works; (v) supervise and provide guidance to the contractors to properly carry out the implementation of the SSEMAPs; (vi) review, monitor, and evaluate the effectiveness with which the SSEMAPs are implemented, and recommend corrective actions to be taken as necessary; (vii) prepare annual environmental monitoring reports for each province to be submitted to ADB upon approval of the RDA; (viii) ensure timely disclosure of final environmental assessments in locations and forms accessible to the public; (ix) take corrective actions when necessary to ensure there are no adverse environmental impacts; (x) together with the PIU, conduct consultations with the community during the implementation of the project; and (xi) prepare due diligence reports prior to the approval of each subsequent tranche. In addition, the consultants will train PIU social/environmental officers on environmental monitoring and reporting.

## **B. Involuntary Resettlement**

52. **Categorization.** The scope of works under the MFF involves the improvement of rural access roads and national roads within the existing alignment only, with no widening except where minor improvements in road geometry are required for road safety. Therefore, all tranches under the MFF are expected to be classified *B* in accordance with ADB's Safeguard Policy Statement. The land acquisition due diligence undertaken for all project roads did not identify any significant involuntary impact on land, structures, private trees, or community resource properties.

53. **Preconstruction.** The RDA, supported by its ESDD and PIC, will conduct a transect walk for each rural road, during which the community is consulted and involved to (i) minimize construction impact, (ii) identify and minimize social and environment impacts, and (iii) integrate

road safety design into the project. The RDA will inform each community about the grievance redress mechanism and how to access it. The results from the transect walk (including reports and maps) will be submitted to the civil works contractor who will integrate feasible features into the level-1 final design. The PIC will review the final design.

54. **Construction and maintenance.** During the construction phase, the PIC will conduct semiannual on-site social safeguard monitoring. During the maintenance phase, the PIU will conduct annual on-site social safeguard monitoring. The PIC should pay close attention to ensure that all grievances are addressed in a timely manner. The resettlement framework provides the monitoring and reporting templates.

55. **Unanticipated impact.** A resettlement framework has been prepared to guide the management of unanticipated land acquisition and resettlement impacts. If land will be required for the rural roads component, the voluntary land donation system will be used. For land donation, specific procedural requirements involving comprehensive consultations with the communities have been prepared in Appendix 3 of the resettlement framework. The RDA will ensure that land donation (i) is undertaken without coercion, (ii) is documented in a transparent manner, (iii) will involve less than 5% of an affected household's land holding; and (iv) will not result in physical displacement. The RDA will not resort to expropriation when negotiation regarding land donation fails. The PIC will visit roads where land donation is required, on a monthly basis, until the land donation process is finalized. An independent monitor will be engaged to verify and certify that the process has been done as per the resettlement framework. For the national roads component, land donation shall not be used. If involuntary resettlement will be involved in a national road, a resettlement plan will be prepared and reviewed by ADB. Civil works cannot commence until the right-of-way is free of encumbrance, meaning that the affected household must be fully compensated and/or assisted prior to dismantling or relocation. The PIU will be supported by the RDA's ESDD and a social safeguard team under the PIC.

### C. Indigenous Peoples

56. No indigenous peoples communities were identified in the project areas of influence during due diligence. Hence, all tranches are category C for indigenous peoples safeguards. In case an indigenous peoples community will be identified and affected by unanticipated impacts during implementation, the RDA will ensure that the indigenous peoples plan (IPP) is prepared in accordance with the indigenous peoples planning framework, and the IPP is reviewed and approved by ADB before commencement of the relevant section of the civil works contract.

### D. Grievance Redress Mechanism

57. Grievances from the affected people on social and environmental issues during project implementation will be addressed mainly through the existing local administrative system. Depending on the nature and significance of the grievances or complaints, grievances will be addressed at three levels. The first will be at the grassroots level where grievances will be directly received and addressed by the contractor, the PIC, or the PIU representative on the site. Grievances that are simple but still cannot be addressed at the grassroots level will be addressed at the level of the *grama niladhari* (village-level administrator). The grievance redress committee will be composed of (i) the *grama niladhari* as chairperson, (ii) the PIU representative as secretary, (iii) a representative of the PIC, (iv) a representative of the contractor, (v) a community member or religious leader, and (vi) a woman representative from among the community. More complex grievances that cannot be addressed at the *grama niladhari* level will be raised to the divisional secretariat level. The committee at the divisional secretariat level will include (i) the divisional



secretary as the chairperson, (ii) a representative of the PIU as secretary, (iii) *grama niladhari*, (iv) a representative of the PIC, (v) a representative of the contractor, (vi) a representative of a nongovernment organization or community-based organization in the area, (vii) a community member or religious leader, and (viii) a woman representative from the community.

## E. Prohibited Investment Activities

58. 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 in Appendix 5 of the Safeguard Policy Statement.

## VIII. GENDER AND SOCIAL DIMENSIONS

### A. Gender and Development

59. A gender action plan (GAP) has been formulated for the MFF. Key gender mainstreaming activities for all tranches include the following: (i) engage at least 35% women in consultation during design; (ii) integrate features that increase road safety and meet the needs of the elderly, women, children, and the disabled; (iii) encourage the employment of local women as road construction workers; (iv) ensure at least 30% of local employees hired for road maintenance are women and that they receive equal wages for equal work; (v) conduct awareness trainings on road safety and HIV/AIDS and sexually transmitted infections with a minimum of 40% women participants; (vi) appoint gender focal persons at all levels; (vii) build knowledge and skills of the transport sector on gender and inclusivity; and (viii) develop an online grievance reporting mechanism and track sex-disaggregated data of complainants.

60. To ensure that these and other gender issues are addressed and complied with, the project implementation consultants will include a social and/or gender development expert. The PICs will provide monitoring support and the ESDD of the RDA will be responsible for the overall implementation of the GAP. Social safeguard and/or social officers in the PIUs will undertake tasks related to GAP implementation. Semi-annual monitoring reports of the GAP shall be prepared using data disaggregated by sex, where appropriate, and submitted to ADB for disclosure.

61. The gender mainstreaming activities for the MFF are indicated in Table 19.

**Table 19: Gender Action Plan**

Activity		Targets and Indicators	Responsibility	Timeframe
<b>Output 1: Road conditions between the selected rural communities and socioeconomic centers improved</b>				
1.1	For 3,400 km of rural roads, conduct community consultations and integrate findings into the final design, addressing issues of (i) road safety and EWCD features, (ii) construction impact and mitigation measures, and (iii) social and environmental impact and mitigation measures.	<ul style="list-style-type: none"> <li>One community consultation guidebook to be used by contractors and consultants developed</li> <li>At least 35% female representation achieved in consultations related to the final designs</li> <li>Consultation findings integrated into the final designs</li> <li>Road safety and EWCD features included pedestrian crossings and locations of signage</li> <li>Contractors trained as per the training manual on gender and transportation (will be developed as per output 2.2)</li> </ul>	<ul style="list-style-type: none"> <li>Contractors</li> <li>PIC</li> <li>ESDD/RDA</li> </ul>	2018–2026
1.2	For 340 km of national roads to be improved, integrate safety and EWCD-	<ul style="list-style-type: none"> <li>Results of the gender analysis and consultation recommendations integrated to make project design, operation, and maintenance gender-responsive</li> </ul>	<ul style="list-style-type: none"> <li>Contractors</li> <li>PIC</li> <li>ESDD/RDA</li> </ul>	2018–2026

Activity		Targets and Indicators	Responsibility	Timeframe
	friendly features into the final designs.	<ul style="list-style-type: none"> <li>• Designs included paved shoulders, pedestrian crossings, and locations of signage</li> </ul>		
1.3	Raise awareness among local women on employment opportunities and work conditions in road construction.	<ul style="list-style-type: none"> <li>• A communication campaign to inform and attract local women (especially from women-headed households) developed and implemented</li> <li>• All contractors meet core labor standards and gender-responsive health and safety standards, and equal pay for equal value of work</li> </ul>	<ul style="list-style-type: none"> <li>• Contractors</li> <li>• PIC</li> <li>• PIU</li> <li>• ESDD/RDA</li> </ul>	2018–2026
1.4	Local women for road maintenance.	<ul style="list-style-type: none"> <li>• At least 30% of local women employed in rural road maintenance (with an estimated 18,000 person-days allocated for women workers)</li> <li>• Contractors meet core labor standards and gender-responsive health and safety standards work health and safety standards, and equal pay for equal value of work</li> <li>• 100% of women employed for maintenance trained and provided with safety equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Contractors</li> <li>• PIC</li> <li>• PIU</li> <li>• ESDD/RDA</li> </ul>	2018–2026
1.5	Conduct road safety awareness campaigns targeting local communities.	<ul style="list-style-type: none"> <li>• At least three awareness campaigns launched per district, using diverse communication approaches (workshops, handouts, awareness for schoolchildren, billboards, street drama, etc.) to reach out to children, youth, and adults, with 50% female participation</li> </ul>	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• PIC</li> <li>• PIU</li> </ul>	2018–2024
1.6	Provide awareness training on sexually transmitted diseases, including HIV, and on human trafficking for civil works employees and local communities.	<ul style="list-style-type: none"> <li>• At least three community awareness sessions per district, with more than 40% female participants, conducted</li> <li>• Awareness training on an annual basis for civil works employees by all contractors conducted</li> </ul>	<ul style="list-style-type: none"> <li>• Contractors</li> <li>• PIU</li> </ul>	2018–2026
<b>Output 2: Capacity of road agencies enhanced</b>				
2.1	Appoint social and gender focal points at contractor, consultant, and employer levels.	<ul style="list-style-type: none"> <li>• One gender and social focal staff for each PIU</li> <li>• One gender and social focal staff for each PIC</li> <li>• One gender and social focal staff for each contractor package</li> <li>• Semiannual reports submitted on GAP monitoring include sex-disaggregated data and report progress against targets</li> </ul>	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• PIC</li> <li>• RDA</li> </ul>	Within first 6 months of establishment
2.2	Build the capacity of the RDA and provincial road agencies on gender and transportation.	<ul style="list-style-type: none"> <li>• One training manual on gender and transportation to be used for gender capacity building training for transport sector staff developed</li> <li>• At least 80% of project staff of the RDA and provincial road agencies working on iRoad 2 trained on gender</li> <li>• At least one workshop in each province (four total) for project staff of contractors, consultants, and employer conducted to discuss means of promoting inclusiveness in the transport sector</li> </ul>	<ul style="list-style-type: none"> <li>• ADB (gender specialist)</li> <li>• Consultant</li> <li>• ESDD/RDA</li> </ul>	2018–2026
2.3	Develop and promote an online web application for grievance reporting by local communities using local languages.	<ul style="list-style-type: none"> <li>• Web application translated into local languages</li> <li>• Sex-disaggregated data of complainants available</li> <li>• Information campaign conducted for raising community awareness on the use of the application</li> </ul>	<ul style="list-style-type: none"> <li>• PIC</li> <li>• RDA</li> </ul>	2018–2026

ADB = Asian Development Bank, ESDD = Environment and Social Development Division, EWCD = elderly, women, children, and differently abled, GAP = gender action plan, iRoad 2 = Second Integrated Road Investment Program, km = kilometer, PIC = project implementation consultant, PIU = project implementation unit, RDA = Road Development Authority. Note: The multitranche financing facility became effective in February 2018.

Source: Asian Development Bank.

## **B. HIV/AIDS**

62. The RDA will ensure that all civil works contractors complete the following: (i) carry out awareness programs for labor on the risks of sexually transmitted diseases, HIV/AIDS, and human trafficking; and (ii) disseminate information at worksites on the risks of sexually transmitted diseases and HIV/AIDS as part of health and safety measures for those employed during construction. Contracts for all subprojects will include specific clauses on these undertakings, and compliance will be strictly monitored by the RDA with the support of construction supervision consultants during project implementation.

## **C. Health**

63. The RDA shall ensure that contractors provide adequately for the health and safety of construction workers and further ensure that bidding documents include measures on how contractors will address this, including an information and awareness-raising campaign for construction workers on sexually transmitted diseases, HIV/AIDS, and human trafficking.

## **D. Labor**

64. Project construction is expected to generate employment opportunities for local communities during construction and maintenance phases. Men and women will be paid equally for equal work. Provisions are in the bidding documents for the contractors to ensure that all the civil works comply with core labor standards (e.g., no child labor; no bonded labor; no work discrimination regardless of gender, race, and ethnicity; and freedom of association and collective bargaining). Targets for employing women for construction and maintenance have been established in the GAP. The project implementation consultant will monitor the provisions and report on core labor standards in quarterly progress and environmental monitoring reports.

# **IX. PERFORMANCE MONITORING, EVALUATION, REPORTING AND COMMUNICATION**

## **A. Project Design and Monitoring Framework**

65. The design and monitoring framework (DMF) for the facility is in Appendix C.

## **B. Monitoring**

66. **Project performance monitoring.** The achievement of the project performance targets will be assessed following the DMF. The RDA, assisted by the PIC, survey and preliminary engineering consultants, and other consultants as required, will establish and assist with the implementation of a project performance management system (PPMS). The PPMS will include detailed methodology of data collection and analysis ensuring statistical validity, isolation of compounding factors, and comparison with baseline and control data. As a minimum, the indicators will be monitored before and after construction/project, both on the subprojects and control roads.

67. Indicators to be monitored may include but not be limited to the following: (i) number of newly connected habitations (total, by districts, and size); (ii) length of roads constructed/ upgraded (total, by district, by habitation size, terrain, etc.); (iii) traffic volume and travel time on constructed roads; (iv) periods of construction (by road length, terrain, etc.), amounts and frequencies of variation orders, and frequencies and durations of holding up of civil works by rural communities (by causes, including instances of holding up of civil works due to the omissions in design); (v) pavement condition index on rural roads under 3-year maintenance; and (vi) percentage of

detailed design undergoing road safety audits and amended following road safety audits of detailed design; etc.

68. The PIC will also establish a system for the monitoring of socioeconomic indicators in the selected habitation served by the investment program roads as compared to the unconnected habitations, such as (i) poverty rates, (ii) number of maternal and infant deaths, (iii) number of total deliveries versus safe deliveries, (iv) immunization rates, (v) unemployment rates, (vi) agricultural production of perishable goods, (vii) income and expenditure of rural households, and (viii) district cash turnover of agricultural produce in local markets served by investment program roads, etc. The PIC will conduct baseline surveys at the outset of each tranche.

69. The RDA will also monitor (i) the project budget and actual expenditures, (ii) road maintenance budget, (iii) ratio of kilometers of the rural road network per one staff dedicated to road maintenance, (iv) road maintenance cost per kilometer, and (v) other relevant indicators.

70. The results of the performance monitoring will be carefully documented and made accessible to the MOHW, the RDA, and ADB. The PIC will establish a practice of annual presentation to the MOHW, the RDA, and ADB on the key performance indicators of the investment program.

71. **Compliance monitoring.** Compliance with loan covenants will be monitored through ADB's (i) project administration missions, including the project inception mission, to discuss and confirm the timetable for compliance with the loan covenants; (ii) project review missions to review the compliance with particular loan covenants and, where there is any noncompliance or delay, to discuss proposed remedial measures with the MOHW and the RDA; and (iii) midterm review mission, if necessary, to review covenants to assess whether they are still relevant or need to be changed, or waived due to changing circumstances.

72. **Environment.** Implementation of the EMP will be monitored by the PIU and the PIC. For monitoring of the EMP, implementation will be carried out during the preconstruction, construction, and operation and maintenance stages of the investment program. Based on the EMP, monitoring checklists will be prepared for each of these stages. Every road must have at least (i) one monitoring checklist completed during preconstruction, (ii) one to three monitoring checklists during construction depending on the length of the road, and (iii) one monitoring checklist per year during operation and maintenance.<sup>16</sup> Records of these completed monitoring checklists must be systematically maintained within the PIC and/or PIU office. Based on these records and site visits, monitoring reports will be prepared during the construction and operation stages on an annual basis per province and submitted to ADB for disclosure on the ADB website. Satisfactory due diligence reports will be prepared and submitted to ADB before approval of the next tranche.

73. **Involuntary resettlement.** Internal monitoring will be carried out by the PIU with support from the PIC. An independent third party will be engaged to verify the land donation process. Semiannual monitoring reports will be submitted to the RDA and ADB. The monitoring report will be disclosed on the ADB website. Satisfactory due diligence reports will be prepared and submitted to ADB before approval of the next tranche.

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<sup>16</sup> The monitoring checklist during construction stage will be completed three times when the progress of physical works is 25%, 50%, and 75%, respectively. This may not be practically feasible for shorter roads that are only 1 to 3 kilometers long. Hence, for these shorter roads, only one completed monitoring checklist during construction stage will be adequate.

74. **Indigenous peoples.** If impact is identified on indigenous people, the indigenous peoples planning framework (IPPF) will guide the preparation, implementation, and monitoring of relevant actions.

75. **Gender and development.** To monitor the gender action plan implementation, a GAP implementation matrix that tracks the implementation progress of each GAP activity should be included in the semiannual monitoring report. A format to be used for updating the progress is attached in Appendix L. Semiannual monitoring reports will be prepared by the PIU with support from the PIC and submitted to the ESDD of the RDA and ADB.

## C. Evaluation

76. The ADB inception mission will be fielded within 3 months after the legal agreements for the investment program and each project are declared effective; thereafter, regular reviews will follow at least annually. As necessary, special loan administration missions and a midterm review mission will be fielded, under which any changes in scope or implementation arrangement may be required to ensure achievement of project objectives. The RDA at the central level and the PIU at the project level will monitor the implementation of the investment program in accordance with the schedule and timebound milestones, and keep ADB informed of any significant deviations that may result in the milestones not being met. Within 6 months of physical completion of each of the projects under the investment program, the RDA will submit a project completion report to ADB.<sup>17</sup>

## D. Reporting

77. Disaggregated data for all output and outcome indicators will be updated and reported quarterly. The MOHW through the RDA will provide ADB and the Department of Project Management and Monitoring of the Ministry of Finance with (i) quarterly progress reports submitted within 45 days after the end of each quarter in a format consistent with the PPMS and DMF, and will provide information necessary to update ADB's project performance reporting system;<sup>18</sup> (ii) 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 the next 12 months; (iii) annual environmental monitoring reports; and (iv) a project completion report within 6 months of physical completion of each project under the investment program. To ensure viability and sustainability, project accounts and the audited financial statements, together with the associated auditor's report, will be adequately reviewed.

78. For civil works, progress will be reported on a regular basis by field engineers to the PIU. The PIU will submit monthly progress reports to the MOHW and the RDA. Based on these reports, the MOHW, with assistance from the RDA, will include in the quarterly progress reports all required information on the progress of implementation of civil works. These reports will include (i) data on progress made during the period of review; (ii) changes, if any, in the implementation schedule; (iii) problems or difficulties encountered and remedial actions taken; and (iv) work to be undertaken in the coming quarter.

<sup>17</sup> Project completion report format is available at <http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar>.

<sup>18</sup> The quarterly progress report template is in Appendix M.

## E. Stakeholder Communication Strategy

79. Various information regarding the investment program and each of the tranches—including scope, general progress status, beneficiaries, invitation for bids, and consultant recruitment notices—will be provided to the general public. The information will be made available and updated through the official RDA and ADB websites. ADB's communication strategy is summarized in Table 20.

**Table 20: Project Communication Strategy**

<b>Project Documents</b>	<b>Means of Communication<sup>a</sup></b>	<b>Responsible Party</b>	<b>Frequency</b>	<b>Audience</b>
Project data sheet (PDS)	ADB website	ADB	Initial PDS no later than 30 calendar days from concept approval; annual afterwards	General public
Design and monitoring framework (DMF)	ADB website	ADB	Draft DMF after fact-finding mission for the investment program and each tranche	General public
Initial environmental examination reports	ADB website RDA website	ADB	Post fact-finding mission for the investment program and each tranche	General public, project-affected people in particular
Resettlement framework and social safeguard due diligence report	ADB website RDA website	ADB	Post fact-finding mission for the investment program and each tranche	General public, project-affected people in particular
Indigenous peoples planning framework	ADB website	ADB	Post fact-finding mission for the investment program and each tranche	General public, project-affected people in particular
Summary poverty reduction and social strategy	ADB website	ADB	Post fact-finding mission for the investment program and each tranche	General public, project-affected people in particular
Gender action plan	ADB website	ADB	Post fact-finding mission for the investment program	General public, project-affected people in particular
Legal agreements	ADB website	ADB	No later than 14 days from ADB Board approval of the project	General public
Facility administration manual	ADB website	ADB	After loan negotiations	General public
Social monitoring reports	ADB website	ADB	Semi-annually	General public, project-affected people in particular
Environment monitoring report	ADB website	ADB	Annually	General public, project-affected people in particular

ADB = Asian Development Bank, DMF = design and monitoring framework, PDS = project data sheet; RDA = Road Development Authority.

<sup>a</sup> The RDA website will have a hyperlink to the ADB website where all these documents will be posted.

Source: Asian Development Bank.

## X. ANTICORRUPTION POLICY

80. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the project.<sup>19</sup> 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

<sup>19</sup> Anticorruption Policy: <http://www.adb.org/Documents/Policies/Anticorruption-Integrity/Policies-Strategies.pdf>.

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.<sup>20</sup>

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

## **XI. ACCOUNTABILITY MECHANISM**

82. People who are, or may in the future be, adversely affected by the project may submit complaints to ADB's Accountability Mechanism. The Accountability Mechanism provides an independent forum and process whereby people adversely affected by ADB-assisted projects can voice and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected people should make an effort in good faith to solve their problems by working with the concerned ADB operations department. Only after doing that, and if they are still dissatisfied, should they approach the Accountability Mechanism.<sup>21</sup>

## **XII. RECORD OF CHANGES TO THE FACILITY ADMINISTRATION MANUAL**

83. All revisions and/or updates during the course of implementation should be retained in this section to provide a chronological history of changes to implementation arrangements recorded in the facility administration manual, including revisions to contract awards and disbursement S-curves.

**Table 21: Summary of Changes to the Facility Administration Manual**

<b>Version</b>	<b>Date</b>	<b>Description of Revisions</b>
1	22–26 May 2017	Draft during fact-finding mission
2	10 August 2017	Agreed during loan negotiations
3	16 March 2018	Updated during loan inception to reflect project progress in the (i) implementation schedule, (ii) implementation arrangements, (iii) contract awards and disbursements projections, and (iv) procurement plan
4	31 May 2019	Updated during midterm review to reflect project progress in the (i) implementation schedule, (ii) implementation arrangements, (iii) contract awards and disbursements projections, and (iv) procurement plan
5	19 July 2019	Updated during the fact-finding mission to add information on tranche 2
6	6 March 2020	Updated during the inception mission to reflect project progress in the (i) contract award and disbursement projections for tranche 2, (ii) implementation arrangements, and (iii) procurement plan
7	13 November 2020	Updated during the review mission to reflect the changes in PMU staffing, Ministry name, and other minor updates
8	18 January 2021	Updated during the fact-finding mission to add information on tranche 3

PMU = project management unit  
Source: Asian Development Bank.

<sup>20</sup> ADB's Integrity Office website: <http://www.adb.org/integrity/unit.asp>.

<sup>21</sup> Accountability Mechanism: <http://www.adb.org/Accountability-Mechanism/default.asp>.





## LIST OF PROJECTS

### LIST OF PROJECTS (PROPOSED AT THE APPRAISAL OF MFF)

#### I. Eastern Province

##### I.1. Ampara District

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
1	EAM034	Konawatte Road Addalaichenai	Addalaichche	0.47
2	EAM192	Laddies Arabic College Road Oluvil-3, 5, 7	Addalaichche	0.79
3	EAM041	Udayar Road	Akkaraipattu	0.92
4	EAM043	Mcc Road	Akkaraipattu	0.53
5	EAM048	Badur School Road	Akkaraipattu	0.81
6	EAM182	Central Road, Alamkulam	Akkaraipattu	0.99
7	EAM241	Neethai Road-Alim Nagar	Akkaraipattu	0.69
8	EAM011	Village Road Alayadivembu	Alayadiwembu	1.50
9	EAM132	DS Office Front Road Section II	Alayadiwembu	0.30
10	EAM138	Anchenayar Kovil Road Section II	Alayadiwembu	0.31
11	EAM140	Periyathampiran Kovil Road Sections I, II & III	Alayadiwembu	0.53
12	EAM108	From Bodagolla Mv Sangadasa's House to Ambagahawella	Ampara	1.13
13	EAM112	Nishantha Welandasela to Ambagahawella Main Road	Ampara	1.19
14	EAM164	7th Avenue Road	Ampara	1.03
15	EAM165A	New Housing Scheme Road Section III	Ampara	1.14
16	EAM173	Gunasiri Bakery to Pirivena Road	Ampara	0.65
17	EAM426	Bandaranayaka Girls College Jc. to Gamunupura Buddhist Center	Ampara	1.44
18	EAM448	Namaloya, Diyabeduma to the Main Irrigation from Welusumana Collage	Ampara	3.93
19	EAM457	Galwanguwa Main Road to Hospital Road	Ampara	3.50
20	EAM001	Damana Padagoda Pallanoya Road Sections I & II	Damana	5.68
21	EAM213	Pannalgama to Bakmitiyaawa	Damana	6.04
22	EAM214	Wadinagala to Karabana Sections I & II	Damana	3.97
23	EAM279	Ihiniyagala Power Station to across Wee Pahalalanda Dewalahinda Road	Damana	8.40
24	EAM280	Kethsirigama to Pallanoya Road	Damana	6.34
25	EAM290	Near Higulana Temple to Madiyana River	Damana	2.00
26	EAM308	Ampara, Old Higurana Road - Village 07 to Padagoda Road 40 Junction	Damana	5.70
27	EAM003	Diyaviddagama-Rathkinda	Dehiattakandiya	2.92
28	EAM019	Medagama Hannanigala Road	Dehiattakandiya	3.39
29	EAM027	Lihiniyagama-Wijapura	Dehiattakandiya	2.80
30	EAM117	Thuwaragala to Kugdagala	Dehiattakandiya	3.15
31	EAM117A	Thuwaragala to Kugdagala Section I	Dehiattakandiya	3.75

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
32	EAM118	Mahawanawela to Bihirisorowwa	Dehiattakandiya	1.93
33	EAM119	Lihiniyagama to Wehadagama	Dehiattakandiya	3.08
34	EAM119A	Lihiniyagama to Wehadagama Section I	Dehiattakandiya	4.64
35	EAM120	Nagaswewa to Bakmeedeniya	Dehiattakandiya	3.03
36	EAM309	Lihiniyagama to Wawabadagama Section II	Dehiattakandiya	2.75
37	EAM312	Bihirisorowwa to Muwapatikewala	Dehiattakandiya	5.30
38	EAM316	Uththalapura near the Temple, across the Pahalagama to Kudaoya	Dehiattakandiya	4.45
39	EAM317	Across Sandunpura Babarawana to Mawanagama	Dehiattakandiya	4.25
40	EAM510	Aralekanwila Main Road to Dhulakande Internet Road	Dehiattakandiya	2.75
41	EAM037	Irakkamam Akkaraipattu Link Road	Irakkamam	1.30
42	EAM079	Boc Hidaya Road	Irakkamam	0.76
43	EAM080	New Town Road Sections I & II	Irakkamam	1.25
44	EAM081	Water Tower Road Varip	Irakkamam	0.63
45	EAM082	Millath Road	Irakkamam	0.54
46	EAM083	Central Road, Kudivil Section I	Irakkamam	0.62
47	EAM092	Madeena Puram Road	Irakkamam	1.06
48	EAM020	Kariyappar Road Maruthamunai	Kalmunai	0.99
49	EAM030	Central Road Maruthamunai	Kalmunai	1.07
50	EAM058	Old Beach Road from Mahmood Balika to Kalmunai Rest House	Kalmunai	2.96
51	EAM064	Alayadi North Road	Kalmunai	0.65
52	EAM573	Old Post Office Road	Kalmunai	1.14
53	EAM033	Amman Kovil Road Section II	Kalmunai Tamil Division (Sub Div)	0.51
54	EAM039	Udayar Road, Kalmunai	Kalmunai Tamil Division (Sub Div)	1.07
55	EAM016	M.M.V. Road Karaitivu	Karaitheevu	0.53
56	EAM069	Thesigar Road Kar - 7,8,10,11,12	Karaitheevu	1.76
57	EAM074	Road in Mavadipalli Sections I, II, III, IV & V	Karaitheevu	1.50
58	EAM024	Lahugala Village Road	Lahugala	2.09
59	EAM247	Magulmaha Viharaya Bunt Road, Dewalagoda Sections I & II	Lahugala	1.57
60	EAM248	Bogaslanda Road, Pasalgoda Sections I to V	Lahugala	2.04
61	EAM414	Hulanuge Smurdi Road to Monaragala Yanawila Main Road Section III	Lahugala	1.30
62	EAM418	From Lahugala Ground to Tamitiyawela Boo Tree	Lahugala	1.62
63	EAM015	Mahaoya Kurunthuvinna Road	Mahaoya	2.99
64	EAM028	Tempittiya Kolanisiyaya Road	Mahaoya	1.79
65	EAM028A	Tempittiya Kolanisiyaya Road Section I	Mahaoya	3.99

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
66	EAM114	Borapola Samagipura Internal Road Sections III & IV	Mahaoya	1.10
67	EAM114A	Borapola Samagipura Internal Road Section V	Mahaoya	4.79
68	EAM116	Unwaturabubulla Internal Road	Mahaoya	0.42
69	EAM263	Bulugastalawa Road	Mahaoya	1.27
70	EAM263A	Concreting Bulugastalawa Road Section I	Mahaoya	1.76
71	EAM264	Tekka Watta Road	Mahaoya	1.09
72	EAM266A	Kekirihena-Kalupenibedda Road Section I	Mahaoya	4.43
73	EAM268	Saranagama-Samagipura Byroad	Mahaoya	1.41
74	EAM276	Tempitiya Dumana Road Section II	Mahaoya	2.67
75	EAM514	Hotwell Internal Road	Mahaoya	0.89
76	EAM017	Annamalai Navithanveli Road	Navithanveli	0.99
77	EAM018	Navithanveli Vc Road Sections I & II	Navithanveli	1.32
78	EAM121	Manal Kumpathady	Navithanveli	1.05
79	EAM122	Old MOHW Office Road	Navithanveli	1.31
80	EAM125	Al - Siraj - Murugan Kovil Road	Navithanveli	1.50
81	EAM128	Kudiyurupumunai Road	Navithanveli	2.96
82	EAM144	Rd Crossroad	Ninthavur	2.71
83	EAM150	Coparative Road	Ninthavur	0.53
84	EAM004	Padiyatalawa Kolamantalawa Road	Padiyathalawa	3.97
85	EAM029	Padiyatalawa Demodara Road (Saranangara Road) Sections I & II	Padiyathalawa	2.67
86	EAM029A	Padiyatalawa Demodara Road (Saranangara Road) Section III	Padiyathalawa	2.31
87	EAM177A	Thalapitaoya Kokumawara Section III	Padiyathalawa	2.85
88	EAM258	Road from Padiyathalawa Siyabalagaha Jc. to Welikumbura Jc.	Padiyathalawa	1.92
89	EAM258A	Road from Padiyathalawa Siyabalagaha Jc. to Welikumbura Jc. Section I	Padiyathalawa	2.18
90	EAM260	Diyarawela Road	Padiyathalawa	2.93
91	EAM320	Koomana to Helakoomana	Padiyathalawa	5.90
92	EAM321	Koolamanthalawa Welaganayotha Ela Road Section I	Padiyathalawa	5.10
93	EAM329	Wirana Collage to Wirana Village	Padiyathalawa	2.30
94	EAM330	Near Jayasiri Maha Bodi to Helico	Padiyathalawa	2.35
95	EAM025	Central Road Pottuvil	Pothuvil	1.57
96	EAM038	Village Road Pottuvil	Pothuvil	0.76
97	EAM216	Al-Fathah Mosque Road Sections I & II	Pothuvil	1.02
98	EAM217	Pottuvil Central College Ground Road Sections I & II	Pothuvil	1.05
99	EAM218	Urani Kattukal Road	Pothuvil	2.07
100	EAM220	Kundumadu Road Sections I & II	Pothuvil	1.02
101	EAM222	Boys School Road	Pothuvil	1.02
102	EAM023	Sainthamaruthu Thaikka Road	Sainthamarathu	0.52
103	EAM012	Sammanthurai Veeramunai Road	Samanthurai	1.71

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
104	EAM013	Malayar, Vissavaithiyar, Vissavaithiyar North Road Sammanthurai Section I	Samanthurai	0.75
105	EAM014	Chettiyawatta Road, Sammanthurai	Samanthurai	0.64
106	EAM031	Central Road Sammanthurai	Samanthurai	0.98
107	EAM032	Aandi Road Sammanthurai (Fifth Crossroad)	Samanthurai	0.90
108	EAM197	Al Arsath North Rd., Malayadikkiramam 03	Samanthurai	0.44
109	EAM198	Salam Mosquerd, Kallarchchal 03	Samanthurai	0.55
110	EAM199	Mal 15 Th Rd, Block J West 01	Samanthurai	0.62
111	EAM200	Am-14 & 15 Th Rd., Udanga 2 Sections I, II & III	Samanthurai	0.83
112	EAM201	Hijra 2 Nd Rd., Block J East 2 Sections I & II	Samanthurai	0.59
113	EAM203	Karuththidda Rd., Malayadikkiramam 3	Samanthurai	0.46
114	EAM205	Am 10, 11 Th Rd., Sammanthurai 12 Sections I & II	Samanthurai	0.64
115	EAM207	Majeethpuram School Rd., Malwatha 3	Samanthurai	1.03
116	EAM208	S Channal Irigation Bund Road, Udanga-2	Samanthurai	1.31
117	EAM209	Kulaththady Pullayar Kovil Rd., Malwatha1 Sections I & II	Samanthurai	0.95
118	EAM210	Madeena Ummard, Block J Esat 3	Samanthurai	0.84
119	EAM379	Old Walathapitiya Lali Kovil Road to Palaweli Kalmuneyar Road Sections I, II & III	Samanthurai	4.58
120	EAM008	A.G.A.'s Office to Vinayagapuram Road	Thirukkivil	1.86
121	EAM036	Vakkirasa Road Sections I & II	Thirukkivil	5.38
122	EAM097	Gayathrikiramam 1 St Road Sections I & II	Thirukkivil	1.07
123	EAM099	Gayathirykiramam 9th Road Sections I & II	Thirukkivil	1.22
124	EAM100	Gayathirykiramam 13th Road Sections I & II	Thirukkivil	0.91
125	EAM105	Village Road Thambiluvil Sections I & II	Thirukkivil	1.20
126	EAM106	Veeraiyady Road	Thirukkivil	1.39
127	EAM005	Senagama Road, Uhana	Uhana	3.01
128	EAM006	Pudunagala Tempplr Road Section II	Uhana	1.29
129	EAM242	Road from Ruhunugama School to Buddhangala Post Office Sections II & III	Uhana	1.94
130	EAM243	Road from 60 Junction to Gonagala Village Sections I & II	Uhana	2.64
131	EAM243A	Road from 60 Junction to Gonagala Village Section III	Uhana	3.05
132	EAM244	Road Near to Suhadagama Saman Boutique to Rajagama Junction	Uhana	1.99
133	EAM244A	Road Near to Suhadagama Saman Boutique to Rajagama Junction Section I	Uhana	0.64
134	EAM245A	Lathugala Road from Dora Paha Juction to Lathugala Section IV	Uhana	10.27
135	EAM341	Central Camp Main Road Uhana to Dadayamthalawa Junction	Uhana	7.29
136	EAM343	Weeragoda Cataract Junction to Rajagama	Uhana	3.90
137	EAM344	Bridge Camp to Dematamal Palassa College	Uhana	3.34

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
138	EAM345	Weeragoda Cemetery Junction Suhadagama Village	Uhana	3.71
139	EAM347	Warankatagoda College to Bandaradoowa Y Junction	Uhana	5.89
140	EAM348	Near Gonagolla Dorapaha to Bandaradoowa Village End	Uhana	7.02
141	EAM353	Near the Mayadunna 36 Home to Senagama Temple	Uhana	3.02
142	EAM362	Junction to Akkara 50 Road	Uhana	1.41
143	EAM370	Dematamalpalassa to Samanabadda Section I	Uhana	0.77
144	EAM371	Near the Karangawa School to across Karangawa River Himidurawa 12 Ela	Uhana	7.81

Source: Asian Development Bank.

## I.2. Batticaloa District

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
1	EBT009	Vantharumoolai Kaluwankeney Road	Eravur Pattu	2.58
2	EBT014	Eravur Punnakudah Road	Eravur Pattu	2.50
3	EBT016	Punnakuday Savukady Road Sections I & II	Eravur Pattu	2.62
4	EBT023	Merankerny Access Road	Eravur Pattu	2.04
5	EBT098	Uppodai Road, Vantharumoolai	Eravur Pattu	0.35
6	EBT100	Pannaithidal Road, Karadiyanaaru	Eravur Pattu	1.34
7	EBT101	Kali Kovil 1st, Koduvamadu	Eravur Pattu	0.92
8	EBT103	APC Road, Vantharumoolai Sections I, II & III	Eravur Pattu	1.39
9	EBT104	10th Milepost Road, Kommathurai Sections I & II	Eravur Pattu	0.62
10	EBT105	Market Road, Chenkalady Sections I, II, III & IV	Eravur Pattu	0.87
11	EBT107	Vipulananda Pura Road, Mylampaveli	Eravur Pattu	0.73
12	EBT109	RDS Road Michnagar, Iyangkeni Sections I & II	Eravur Pattu	0.81
13	EBT110	School Road, Meerakeni	Eravur Pattu	0.44
14	EBT111	Kudha Pali Road, Michanagar	Eravur Pattu	0.42
15	EBT113	Murugan Kovil Road, Savukkady	Eravur Pattu	1.18
16	EBT115	Thirthakemi Road, Uthayan Moolai Section I	Eravur Pattu	0.20
17	EBT116	Barathy Lane 1st Cross Lane, Iyangkerny	Eravur Pattu	1.08
18	EBT117	Kanesha Viththiyalaya Road, Vantharumoolai Sections I, II & III	Eravur Pattu	0.80
19	EBT118	DS Office Road to Iyangkerny, Chenkalady Sections I & II	Eravur Pattu	0.11
20	EBT119	School Road, Iyankeney Sections I & II	Eravur Pattu	0.85
21	EBT120	Bake House Road Sections I & II	Eravur Pattu	1.29
22	EBT146	Alaiyadi Road	Eravur Pattu	0.31
23	EBT154	Railway Station Road Section I	Eravur Pattu	0.31
24	EBT155	Hassan Husain Palli Road, Eravur-2C	Eravur Pattu	0.51
25	EBT177	Extension of Lagoon road from Kathiyar road junction to A5 Badulla-Peradeniya road	Eravur Pattu	2.45
26	EBT178	5th cross Hisbulla Nagar road	Eravur Pattu	0.28

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
27	EBT179	Redbana road	Eravur Pattu	0.23
28	EBT182	Reconstruction of Kathiyar road with drainage	Eravur Pattu	0.60
29	EBT013	Marine Drive, Katankudy	Kattankudy	1.80
30	EBT121	Talecom Road	Kattankudy	1.09
31	EBT122	Muhideen Mosque Road	Kattankudy	1.07
32	EBT123	Hostal Road	Kattankudy	0.51
33	EBT124	Deen Road	Kattankudy	1.59
34	EBT125	Central Road	Kattankudy	0.49
35	EBT126	Abrar Road	Kattankudy	0.54
36	EBT193	Lagoon Drive Road, Kaththankudy Section I	Kattankudy	1.79
37	EBT194	Karbala Palamunai Road, New Kaththankudy	Kattankudy	3.02
38	EBT024	Meeravorai Kinniyadi Road	Koralai Pattu (Valachchenai)	2.04
39	EBT070	Vinayagapuram Central Road, Kalmadu 204 A	Koralai Pattu (Valachchenai)	2.20
40	EBT076	Nakathampiran Kovil Road, Kannaki, Puram 205 D	Koralai Pattu (Valachchenai)	0.83
41	EBT077	Kulakkoddan Street, Kinnayadi Road	Koralai Pattu (Valachchenai)	0.76
42	EBT079	Boundary Road, Sungkan keny, Sungkan kemy 202 C Sections I & II	Koralai Pattu (Valachchenai)	1.62
43	EBT080	Anna Veethy Road, Karuvakerny 202 A	Koralai Pattu (Valachchenai)	0.16
44	EBT081	Vipulanantha Crossroad, Valaichchenai Tamil 205	Koralai Pattu (Valachchenai)	1.25
45	EBT082	Kurinchinagar Road, Karuvakerny 202 A	Koralai Pattu (Valachchenai)	0.61
46	EBT083	Paddiyadichenai Vishnu Kovil Road, Kalkuda 204	Koralai Pattu (Valachchenai)	0.55
47	EBT130	Resettlement Area Road, 207, Mancholai Sections I & II	Koralai Pattu (Valachchenai)	1.50
48	EBT010	Valaichenai Oddamavady Road	Koralai Pattu Central	1.65
49	EBT015	Meeravoral Karuwakeny Road	Koralai Pattu Central	0.68
50	EBT060	Ahamed G.S. Road, Valaichchenai Section I	Koralai Pattu Central	0.25
51	EBT061	Ahamod Hirashi Road, Semmanodai	Koralai Pattu Central	0.53
52	EBT065	Habeeb Kankaniyaar, Mavadichenai	Koralai Pattu Central	0.48
53	EBT067	Pansala Road-03 Culverts, Branthuraichennai Sections I & II	Koralai Pattu Central	0.60
54	EBT131	Palainagar Road, 210C, Thiyawattawan	Koralai Pattu Central	0.83
55	EBT196	Rideethanna Main Road, Kolaraleipattu Central	Koralai Pattu Central	1.44
56	EBT017	Kayankerny Road	Koralai Pattu North (Vaharai)	1.80

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
57	EBT086	Thaddumunai Main Road, Uriyankaddu 213 B Sections I & II	Koralai Pattu North (Vaharai)	4.60
58	EBT087	Puliyankandalady Main Road, Vaharai North Sections I & II	Koralai Pattu North (Vaharai)	2.25
59	EBT088	Sithravel link Road, Amenthanavelly Sections I & II	Koralai Pattu North (Vaharai)	2.19
60	EBT089	Thombuthar Road, Kathiravelly Sections I & II	Koralai Pattu North (Vaharai)	1.77
61	EBT072	Visankerny Road, Kiran East 203 Sections I, II & III	Koralai Pattu South (Kiran)	1.85
62	EBT075	Chairmen Road, Murakkaddanchenai 199 Section I	Koralai Pattu South (Kiran)	0.69
63	EBT078	Kaalikovil-Jinna Joint Road, Devapuram	Koralai Pattu South (Kiran)	0.99
64	EBT114	Vipulananda Road, Siththandi-01 Sections I & II	Koralai Pattu South (Kiran)	0.88
65	EBT127	Vadamunai Uthuchchenai Road, 210A/1, Vadamunai	Koralai Pattu South (Kiran)	1.55
66	EBT128	Potthanai Road, 2010E, Punanai	Koralai Pattu South (Kiran)	3.00
67	EBT132	Youth Club Road, 207, Mancholai	Koralai Pattu West (Oddamavadi)	1.33
68	EBT133	School Road, 210B, Kawatthamunai	Koralai Pattu West (Oddamavadi)	0.32
69	EBT138	Alim Road, Valachchenai, 207B, Meeravodai East	Koralai Pattu West (Oddamavadi)	0.54
70	EBT003	Ammankovil Road	Manmunai North	1.82
71	EBT026	Datch Bar Muhathuwaram Road	Manmunai North	2.90
72	EBT158	Poonochimunai Road, Navathudah	Manmunai North	0.85
73	EBT161	Music College Road, Nochimunai	Manmunai North	0.67
74	EBT163	Vipulanantha Road Sethukuda	Manmunai North	0.54
75	EBT164	Tharisanam Road Navatkuaha	Manmunai North	0.46
76	EBT165	Kannahi Amman Kovil Road Thiruperunthurai	Manmunai North	0.87
77	EBT166	Puliyadi Madu to Sathurukondan Bund Road	Manmunai North	0.46
78	EBT167	Thiraimadu School Road, Thiraimadu	Manmunai North	0.60
79	EBT168	New Palamunai Road, Poonochimunai	Manmunai North	1.28
80	EBT169	Mamangam Kovil Road, Amirthakali	Manmunai North	0.62
81	EBT195	Hisbullah Road, Manchanthuduwei, Manmunai North Sections I & II	Manmunai North	0.96
82	EBT199	Upodai Lake Road East Lagoon road	Manmunai North	2.38
83	EBT022	Kankeyaodai Ollikulam Mavilangathurai Road	Manmunai Pattu (Araipattai)	2.75
84	EBT025	Palamunai Road	Manmunai Pattu (Araipattai)	1.21
85	EBT051	Central Road, Arasadithivu	Manmunai Pattu (Araipattai)	0.63

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
86	EBT052	Kanapathipillai J.P. Road, Puthukudiyiruppu	Manmunai Pattu (Araipattai)	0.90
87	EBT053	Theerthakkarai Road-Kanapathipillai link Road, Selvanagar	Manmunai Pattu (Araipattai)	1.10
88	EBT054	Beach Road, Kirankulam	Manmunai Pattu (Araipattai)	1.20
89	EBT056	Meera Jummah Road, Palamunai	Manmunai Pattu (Araipattai)	0.47
90	EBT197	Palamunai Main Road, Araympathi	Manmunai Pattu (Araipattai)	0.30
91	EBT198	Kaankeyannodei, Main Road, Arayampathi	Manmunai Pattu (Araipattai)	0.84
92	EBT004	Kurukalmadam Amplanthurai Athuchenai Road Sections I & II	Manmunai South & Eruvil Pattu	12.31
93	EBT007	Kaluwanchikudy Kurumanvelly Ferry Road	Manmunai South & Eruvil Pattu	3.69
94	EBT021	Thuraineelavani Village Road	Manmunai South & Eruvil Pattu	2.66
95	EBT027	Thuraiamma Road, Kurumanvely West	Manmunai South & Eruvil Pattu	0.60
96	EBT029	Koddaimeedu Road, Eruvil South	Manmunai South & Eruvil Pattu	0.79
97	EBT030	Kumarankalamandra Road, Kaluwanchikudy-01 Sections I & II	Manmunai South & Eruvil Pattu	1.37
98	EBT031	Arasady Road, Kaluthavalai - 01	Manmunai South & Eruvil Pattu	1.48
99	EBT034	Boundary Road, Cheddypalayam, Kurukkalmadam	Manmunai South & Eruvil Pattu	0.85
100	EBT036	Main Road, Mahiloor, Mahiloor	Manmunai South & Eruvil Pattu	1.45
101	EBT037	Housing Scheme Road, Onthachimadam	Manmunai South & Eruvil Pattu	0.50
102	EBT040	Sivankovil Road, Cheddypalayam	Manmunai South & Eruvil Pattu	0.43
103	EBT192	Onthachimadam mahiloor kurumanvelly Road	Manmunai South & Eruvil Pattu	4.10
104	EBT005	Athuchenai Pulugunawai Road	Manmunai South-West	2.03
105	EBT006	N.G. Thamotharam Road (up to Thanthamalai Kovil)	Manmunai South-West	3.04



Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
106	EBT045	Mahiladitheevu to Kalikovil, Mahiladitheevu Sections I & II	Manmunai South-West	1.61
107	EBT046	Narasingka Vairavar Kovil Road, Ampalanthurai Sections I & II	Manmunai South-West	0.94
108	EBT048	Boundary Road, Kokkaddicholai Sections I & II	Manmunai South-West	1.08
109	EBT050	Vaikal Kulathu Road Section I	Manmunai South-West	0.90
110	EBT008	Robertsan Road	Manmunai West	5.30
111	EBT011	Kuruchamunai Pavatkodichenai Unnichai Road Sections I & II	Manmunai West	6.68
112	EBT012	Karaveddy Mahilavedduvaan Road	Manmunai West	2.80
113	EBT094	Kanchirankuda Panchenai Main Road, Panchenai Sections I & II	Manmunai West	5.10
114	EBT095	Puthumandapathady Main Road	Manmunai West	0.73
115	EBT096	Old Soruvamunai Road Sections I & II	Manmunai West	2.01
116	EBT001	Porativu Palugamam Thumpankerny Road	Porotivu pattu	3.73
117	EBT041	Thikkodai Thanthamalai Road, Thikkodai	Porotivu pattu	3.66
118	EBT042	Kalumunthanvely Road, Kalumunthanvely Sections I & II	Porotivu pattu	3.92
119	EBT043	Ayurveda Hospital Road, Munaitheevu	Porotivu pattu	1.55
120	EBT044	Thitkodai Thanthamalai Road	Porotivu pattu	2.27
121	EBT186	Hospital Kinniyadi Thurai Veethi	Porotivu pattu	0.74
122	EBT188	Ellai Veethi Sections I, II & III	Porotivu pattu	0.52
123	EBT189	Vaikaladi Veethi	Porotivu pattu	0.87

Source: Asian Development Bank.

### I.3. Trincomalee District

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
1	ETR014	NochchikulamaKarakawewa Gomarankadawala Road Sections I & II	Gomarankadawala	3.84
2	ETR102	PKT to Pankeriya Ulpata Hotwell Road	Gomarankadawala	1.96
3	ETR004	Sugar Factory Road	Kanthale	8.07
4	ETR103	Raja-Ela Road, Peraru	Kanthale	1.77
5	ETR104	Jayanthipura-Wan-Ela Road, Jeyanthipura	Kanthale	1.99
6	ETR105	Senanayake Mawatha, Unit 05 Raja Ela	Kanthale	2.06
7	ETR106	Sooriyapura Samanala Palama Temple Road, Sooriyapura	Kanthale	0.91
8	ETR107	Sivan Kovil Road, Sooriyapura	Kanthale	0.87
9	ETR135	From 91 bogas junction to Wewsirigama temple road through water treatment plant	Kanthale	0.70
10	ETR136	In front of 91 bogas junction through Jayantha light mawatha up to Parakrama mawatha	Kanthale	1.48

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
11	ETR137	From Kantaale town to Ariyawansha mawatha	Kanthale	1.17
12	ETR139	From Batukachchiya to Thaigaswewa road Sections I & II	Kanthale	5.56
13	ETR140	From Parakrama mawatha light road up to Senanayaka mawatha	Kanthale	1.85
14	ETR141	Poddankadu mosque Road	Kanthale	1.53
15	ETR161	From 91 Palugaswewa through unit 14, a road from Vindrassan pura up to main road	Kanthale	1.72
16	ETR163	Jenthipura wanela main road to Wanela Police station road	Kanthale	7.88
17	ETR168	Dipo Junction to Parakkirama mawathe	Kanthale	1.17
18	ETR012	Kuddikarachi Alankerney Road	Kinniya	1.78
19	ETR013	Kaivaikal Kakamunai Road	Kinniya	2.47
20	ETR026	Jalaliya Mosque Road to Batticalo Road, Annal Nagar	Kinniya	0.42
21	ETR027	Faizal Nagar Main Road, Alankerny	Kinniya	1.55
22	ETR029	Alim Road to Jalaliya Main Road, Annal Nagar, Mancholaichenai Sections I, II & III	Kinniya	1.78
23	ETR030	Dipo Road to Lathif Hajiya Road, Faizal Nagar	Kinniya	1.46
24	ETR032	Kolimuttaikarachai Road, Kachchakoditheevu	Kinniya	0.65
25	ETR033	Nadutheevu Main Road, Nadutheevu	Kinniya	0.88
26	ETR034	V.C Ground Road, Munaichenai	Kinniya	0.59
27	ETR035	Mahamaaru main Road, Maharu	Kinniya	0.99
28	ETR036	Soorungal tower Road, Soorungal	Kinniya	0.81
29	ETR037	Kakkamunai Central Road, Kakkamunai	Kinniya	0.99
30	ETR039	Sunkankuli Road to School Road, Majeednagar	Kinniya	0.98
31	ETR041	Naduoothu to Vattamadu Road, Upparu	Kinniya	0.98
32	ETR153	Panichai adi road	Kinniya	1.26
33	ETR157	Eachchantivu to Fizel Nagar Joint Road, Eachchantivu Sections I & II	Kinniya	2.55
34	ETR158	Aalankerny Juntion to Eachchantivu Road	Kinniya	0.60
35	ETR159	Rahumaniya Mosque Road Sections I, II & III	Kinniya	1.18
36	ETR160	Kinniya UC Road Section - 01	Kinniya	0.58
37	ETR073	Periyakulam Internal Road, Periyakulam	Kuchchaveli	1.31
38	ETR074	Nilavelly Beach Road, Gopalapuram	Kuchchaveli	1.11
39	ETR076	Kumburupiddy East Internal Road, Kumburupiddy East Sections I, II & III	Kuchchaveli	0.89
40	ETR078	Sinhala M.V. Road, Pulmoddai (Aarisimalai to Post Office), Pulmoddai	Kuchchaveli	0.93
41	ETR142	Arisimalai Road	Kuchchaveli	0.67
42	ETR143	Selvanagar Main Road	Kuchchaveli	0.86

Serial No.	Code	Road Name	Divisinal Secretariat's Division	Length (kilometer)
43	ETR015	Kallarawa Road	kuchchaweli	2.96
44	ETR017	Morawewa Nochchikulama Road	Morawewa	4.86
45	ETR121	Viharagama Road, Mahadiwulwewa stage - 1	Morawewa	0.65
46	ETR125	Namalwatha Road, Namalwatha	Morawewa	0.75
47	ETR146	Rodduwewa cemetery road	Morawewa	0.56
48	ETR006	Thopur Kaddaparichan Iddimanthurai Road	Muttur	7.17
49	ETR016	Mawadichenai Road	Muttur	4.58
50	ETR051	Jamiah Road, Pala Nagar	Muttur	0.49
51	ETR053	Al Hambra School Road, Allai Nagar West, Allai Nagar East, Iqbal Nagar	Muttur	0.92
52	ETR054	Al Hairiy School Road, Periyapalam	Muttur	0.47
53	ETR055	PDS Road, Thakwa Nagar Sections I & II	Muttur	0.60
54	ETR056	Vethatheevu Main Road, Shafi Nagar	Muttur	0.49
55	ETR057	Kiliveddy West Road, Kiliveddy	Muttur	0.50
56	ETR058	Cooperative Road, Iruthayapuram	Muttur	0.51
57	ETR059	Manatchenai Peruvely Central Road, Periyavely	Muttur	0.49
58	ETR060	Malikaitheevu to Mengamam Road, Mengamam	Muttur	0.49
59	ETR061	Bahriya Road, Thakwa Nagar	Muttur	0.50
60	ETR063	Cemetery Road, Aalim Nagar	Muttur	0.51
61	ETR064	Manarul Hutha Road, Neithal Nagar	Muttur	0.50
62	ETR066	Munnampodiveddai Road, Palathadichenai	Muttur	0.50
63	ETR067	Kovil Road, Kanguvely	Muttur	0.48
64	ETR068	Jaya Nagar Centaral Road, Jaya Nagar	Muttur	0.51
65	ETR069	Central Road (Kovil Road), Muthur Central Sections I & II	Muttur	0.54
66	ETR070	Ralkuly Main Road, Ralkuly	Muttur	1.48
67	ETR154	Alimchenai School Road Sections I & II	Muttur	1.90
68	ETR155	Palanagar Mosqu to Army camp road Section - 01	Muttur	0.43
69	ETR156	Neithal Nagar Main Road (Old Haber Road) Sections I & II	Muttur	0.82
70	ETR170	Sampoor Soodakkudah road	Muttur	4.48
71	ETR117	Gunawardhana Mawatha at Singhapura, 31 J Singhapura	Padawi Sri Pura	0.68
72	ETR001	Tract 11 Road	Padawi Sri Pura	5.64
73	ETR002	Branch Channel Road Sections I & II	Padawi Sri Pura	0.91
74	ETR003	B.p 7th Milepost to Jayanthiwewa Road	Padawi Sri Pura	6.31
75	ETR109	Sripura School Road, 31 D Sripura	Padawi Sri Pura	0.48
76	ETR110	Gamunupura Main road, 31 N Gemunupura	Padawi Sri Pura	0.56
77	ETR111	Kawanthissapura Main Road, 31 H Kawanthissapura	Padawi Sri Pura	0.96
78	ETR112	Clinic Centre Road at Paranamedawachchiya, 31 F Paranamedawachchiya Sections I & II	Padawi Sri Pura	0.69
79	ETR113	Main Road tracking yaya 10	Padawi Sri Pura	0.50

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
80	ETR116	Pallegama Stors to Mr. Rangana Sashipraba House Road at Samanpura, 31 M Samanpura	Padawi Sri Pura	0.65
81	ETR118	8th Track Sripura Road	Padawi Sri Pura	0.62
82	ETR119	Sripura Bus Stand Road	Padawi Sri Pura	1.60
83	ETR018	D6 Road	Seruvila	1.88
84	ETR127	Methagama Central Road - Somapura, Seruwila P.S., Dehiwaththa	Seruvila	0.96
85	ETR130	Mankala Boakku (culvert) Road - Seruvila, Seruwila P.S., Arriyama Kemy	Seruvila	1.41
86	ETR131	School Mawaththa Road at Dehiwatta - Seruwila P.S., Srimangalapura Sections I & II	Seruvila	1.12
87	ETR132	MOHWideen Jummah Mosque Road at Selvenger S.P.S., Selve Nagar	Seruvila	0.51
88	ETR133	Lingapuram School Road	Seruvila	1.05
89	ETR134	Karechchei Road at Selvenager	Seruvila	1.05
90	ETR164	Neelapaja Junction to muthur road	Seruvila	1.17
91	ETR165	Dehiwatta to 5th speel Road	Seruvila	1.35
92	ETR166	Mavilaru Junction to Seruvila Main road	Seruvila	4.22
93	ETR011	PudukudlIrrippuu Paththinipuram Road	Thambalagamu wa	4.06
94	ETR084	Sippithidal Road, Thampalakamam 228 I	Thambalagamu wa	0.66
95	ETR085	Potkerny Main Road, Potkerny 228 B	Thambalagamu wa	0.91
96	ETR086	As-Sums School Road, Mullipottanai North, Mullipottanai 228 G	Thambalagamu wa	0.52
97	ETR087	Al- Aksha Road, Mullipoththanai East	Thambalagamu wa	0.87
98	ETR088	Meera Nagar, Thakiya Road, Meera Nagar 228 H	Thambalagamu wa	0.50
99	ETR089	Arabic College Road, Sirajiya 228 E	Thambalagamu wa	0.41
100	ETR092	Buhari School Road, Mullipottanai	Thambalagamu wa	1.44
101	ETR151	Shiraj Nager Main Road	Thambalagamu wa	1.01
102	ETR169	Konamalai Road via thaif Nagar to Sivasakthipuram Sections I, II, III & IV	Thambalagamu wa	3.55
103	ETR007	Salli Sambaltheive Road	Trinco town & Gravets	1.91
104	ETR008	Selvanayagapuram Road	Trinco town & Gravets	2.67
105	ETR009	Pillaikulam Sambaltheive Road	Trinco town & Gravets	2.02
106	ETR010	Ganeshapuram Housing Scheme Sections I, II, III, IV, V & VI	Trinco town & Gravets	2.71
107	ETR019	4th Lane, Orr's Hill - ETTRI 177	Trinco town & Gravets	0.76
108	ETR020	Gandinagar Road Sections I & II	Trinco town &	0.56

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
			Gravets	
109	ETR021	Mihindapuram Main Road - ETTRI 250	Trinco town & Gravets	0.65
110	ETR022	Jamaliya to Thulasipuram, Main Road - ETTRI 274	Trinco town & Gravets	0.85
111	ETR023	Central Road - ETTRI 230, Peruntheru, Arasady	Trinco town & Gravets	0.90
112	ETR024	Seaview Road & Kasthurinagar off Seaview Road- ETTRI 025, Thillainagar Section 01	Trinco town & Gravets	1.07
113	ETR025	Green Road - ETTRI 002	Trinco town & Gravets	0.80
114	ETR042	Campus Road, Koneshapuri, Sambaltivu	Trinco town & Gravets	2.26
115	ETR043	Aaththimoddai Veethy, Sambaltivu / Illupai kulam	Trinco town & Gravets	1.95
116	ETR044	Vadali Pillayar Kovil Road, Sally	Trinco town & Gravets	1.06
117	ETR045	Linganagar Main Road, Linganagar	Trinco town & Gravets	1.23
118	ETR046	Karumalaiyoothu Veethy, Vellaimanal	Trinco town & Gravets	1.50
119	ETR047	Madco Approch Road, Vellaimanal	Trinco town & Gravets	0.35
120	ETR048	Sangama Road, Chinabay	Trinco town & Gravets	0.46
121	ETR049	Champa Lane, Andankulam	Trinco town & Gravets	0.42
122	ETR050	Housing Scheme Road to Muslim Cemetery, Chinabay Section 01	Trinco town & Gravets	0.71
123	ETR147	Thean tamil veethy left side 01 & 02 and land form Aansaneyar Kovil at Orrishil hill Section 01	Trinco town & Gravets	0.60

Source: Asian Development Bank.

#### I.4. National Roads

Serial No.	Code	Road Name	Length (kilometer)
1	EAM346	Uhana Kanishtha Vidyalaya to Central Camp Hospital (B440/B073)	17.46
2	EAM380	From Malwaththa to Central Camp Road (B266)	8.23
3	EAM381	Central Camp Wayal Road (B266)	4.63
4	EAM420	Alayadiwembu Junction to Alayadiwembu Central Road (B002)	3.00
5	EAM564	Kalmunai Sea View Road (B186)	1.21
6	EAM565	Ampilanthurai-Weeramunai Road (B018)	11.62
7	EAM566	Sammanthurai-Malkampity-Deegawapi Road (B483)	1.90
8	EAM567	Addalaichenai-Alankulam Road (B572)	9.75
9	EAM568	Akkaraipattu-Deegawapi-Ambalantharu Road (B573)	3.40
10	EAM569	Galmaduwa-Muwangala-Hingurana Road (B131)	5.15
11	EAM570	Pallanoya Inginiyagala Road (B350)	10.87

Serial No.	Code	Road Name	Length (kilometer)
12	EAM571	Ampara Inginiyagala Road (AB001)	4.71
13	EAM572	Chadayamthalawa-Uhana Road (B073)	7.24
14	ETR171	Batticaloa Thirukondiyadimadu Trincomalee Road (A015)	30.30
15	EBT201	Batticaloa Thirukondiyadimadu Trincomalee Road (A015)	30.24
16	EBT200	Paddiruppu Vellaveli Road (B344)	6.05

Source: Asian Development Bank.

## II. Northern Province

### II.1. Jaffna District

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
1	NJF131	Kayts Suruvil Saravanai Road	Island North (Kayts)	11.76
2	NJF132	Melinchimunai Main Road at Melinchimunai Stage IV	Island North (Kayts)	1.46
3	NJF133	Puliyankoodal south road	Island North (Kayts)	1.85
4	NJF137	East Sea side road	Island North (Kayts)	1.31
5	NJF115	Mankumpan Chaddy Velanai Road	Island South (Velanai)	5.00
6	NJF116	Allaipiddy Mankumpan Road	Island South (Velanai)	4.53
7	NJF117	Vallam Road-Punguduthivu	Island South (Velanai)	5.35
8	NJF130	Kondagam Road 16th Lane	Island South (Velanai)	0.64
9	NJF021	Oodaikarai Lane	Jaffna	0.42
10	NJF024	Gurunagar 2nd cross lane	Jaffna	0.33
11	NJF138	Palavodai Oori Road	Karainagar	4.79
12	NJF254	Kesadai Veethi	Karainagar	1.67
13	NJF001	Ariyalai East Road Sections I & II	Nallur	8.93
14	NJF002	Temple Road - Kokuvil	Nallur	1.58
15	NJF003	Kulankarai Veethy	Nallur	0.96
16	NJF015	Uthayapuram Joint Road	Nallur	0.57
17	NJF019	Brown road 1st lane Arasady road link	Nallur	0.56
18	NJF235	Wyman Road	Nallur	0.51
19	NJF236	Pazham Road	Nallur	0.55
20	NJF237	Kanagaratnam Road	Nallur	1.15
21	NJF238	Sivan Veethy	Nallur	0.66
22	NJF239	Saddanathar Road Sections I & II	Nallur	0.91
23	NJF240	New Sivan Road	Nallur	0.72
24	NJF241	Sangiliyan Road	Nallur	0.70
25	NJF243	Rasavinthoddam Road	Nallur	0.86
26	NJF244	Brown Road Sections I & II	Nallur	2.22
27	NJF245	Forest Office Lane	Nallur	0.55
28	NJF246	Rakka Road	Nallur	0.77
29	NJF247	Punkankulam Road	Nallur	0.78
30	NJF248	Somasundaram Road	Nallur	0.45

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
31	NJF250	Maruthady Road	Nallur	0.49
32	NJF258	Thaddankulam Road	Thenmaradchi (Chavakachcheri)	2.31
33	NJF178	Nunavil-Sarasalai Road	Thenmaradchi (Chavakachcheri)	4.35
34	NJF179	Chavakachcheri-Dutch Road Sections I & II	Thenmaradchi (Chavakachcheri)	6.09
35	NJF182	Meesalai Varany Road	Thenmaradchi (Chavakachcheri)	5.76
36	NJF183	Varany-Kudathanai Road	Thenmaradchi (Chavakachcheri)	4.11
37	NJF185	Madduvil Amman Kovil Road	Thenmaradchi (Chavakachcheri)	4.45
38	NJF186	Kachchai Ketpeli Elephantpass Road	Thenmaradchi (Chavakachcheri)	6.60
39	NJF187	Church Veethy (Potkollar Veeth) Sections I & II	Thenmaradchi (Chavakachcheri)	1.43
40	NJF188	Phip Road & Arasady Veethy Sections I & II	Thenmaradchi (Chavakachcheri)	1.51
41	NJF190	Kaithadi East Annamar Kovil Veethy	Thenmaradchi (Chavakachcheri)	0.72
42	NJF191	Kaithady Moorththiyavaththai Veethy	Thenmaradchi (Chavakachcheri)	0.58
43	NJF192	Varani Hospital Idaikkurichchi sri suppiramaniyan joint veethy	Thenmaradchi (Chavakachcheri)	0.79
44	NJF193	Pichchappallam Vellavaikkal Veethy	Thenmaradchi (Chavakachcheri)	0.46
45	NJF194	Kodikamam Madaththady Veethy	Thenmaradchi (Chavakachcheri)	1.21
46	NJF195	Madaththady 1st Lane	Thenmaradchi (Chavakachcheri)	0.45
47	NJF196	Puluddaiyan Pillaiyar Kovil Road	Thenmaradchi (Chavakachcheri)	0.30
48	NJF197	Manankunappillaiyar Kovil Road	Thenmaradchi (Chavakachcheri)	0.37
49	NJF199	Meesalai Vayatkarai Road	Thenmaradchi (Chavakachcheri)	0.63
50	NJF201	Thamotharampillai 1st Lane	Thenmaradchi (Chavakachcheri)	0.31
51	NJF259	Pointpedro Road-Kudamiyan G.T.M. School Joint Road	Thenmaradchi (Chavakachcheri)	2.08
52	NJF260	Kaddaiparithan-Manthuvil Siriparathy School Road	Thenmaradchi (Chavakachcheri)	3.17
53	NJF261	Koyilamanai Road	Thenmaradchi (Chavakachcheri)	1.68
54	NJF264	Sellaiya Road	Thenmaradchi (Chavakachcheri)	2.46
55	NJF157	Mamunai-Kaddaikadu Road	Vadamaradchi East	18.12
56	NJF158	Vettilai Kerny Vinayakapuram Road	Vadamaradchi East	1.37
57	NJF159	Kaddaikadu Kudllruoppu Veethy1	Vadamaradchi East	0.84
58	NJF161	Vaththirayan Kudllruoppu Veethy 1	Vadamaradchi East	1.73

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
59	NJF163	From Nagarkovil Junction to Beach Road	Vadamaradchi East	2.67
60	NJF046	Selvachannithy Road Sections I & II	Vadamaradchi North (Pointpedro)	1.06
61	NJF050	Sandasanthi-Polikandy Road Sections I & II	Vadamaradchi North (Pointpedro)	2.87
62	NJF053	Puloly Hospital Vallipuram Road	Vadamaradchi North (Pointpedro)	2.16
63	NJF055	Manthikai-Thambasidy-Alvai Road	Vadamaradchi North (Pointpedro)	2.68
64	NJF057	St. Xavier Seaside Road Sections I & II	Vadamaradchi North (Pointpedro)	2.22
65	NJF058	Thumpalai Road	Vadamaradchi North (Pointpedro)	1.59
66	NJF060	Mavilankaiyadi Old Church Cemetery Road Sections I & II	Vadamaradchi North (Pointpedro)	0.90
67	NJF061	Koovil Theepajothy front lane (Muthumariamman Road)	Vadamaradchi North (Pointpedro)	0.72
68	NJF062	Panampattai Alankaddai Veethi	Vadamaradchi North (Pointpedro)	0.37
69	NJF081	Netkolu vairavar kovil behind road	Vadamaradchi North (Pointpedro)	0.64
70	NJF083	Selvachchannithy kovil front 2nd lane	Vadamaradchi North (Pointpedro)	0.59
71	NJF048	Police Station Road Valvettithurai	Vadamaradchi South-West	1.79
72	NJF051	Udupiddy-Malisanthi-Alvai Road Sections I & II	Vadamaradchi South-West	8.40
73	NJF056	Kumarathipulam Road	Vadamaradchi South-West	2.36
74	NJF086	Imayan-an-Puraporruki Road	Vadamaradchi South-West	0.96
75	NJF087	Karanavai-North Road	Vadamaradchi South-West	1.99
76	NJF088	Nelliady-Karanavai Road	Vadamaradchi South-West	2.62
77	NJF089	Karaveddy Road	Vadamaradchi South-West	2.38
78	NJF092	Karanavai-South Road	Vadamaradchi South-West	1.89
79	NJF094	Unionady Illanthaikadu Veethy Section I	Vadamaradchi South-West	0.87
80	NJF096	Arivalaiyam Community Centre Approach Veethy	Vadamaradchi South-West	0.43
81	NJF257	Modara Kerny Veethi Sections I, II & III	Valikamam East (Kopay)	1.55
82	NJF114	Konavalai veethy	Valikamam East (Kopay)	2.47
83	NJF165	Neerveli-Punnalaikaduvan Road	Valikamam East (Kopay)	3.86
84	NJF166	Urelu-Neerveli Road	Valikamam East (Kopay)	4.34
85	NJF168	Sivan Road Sections I & II	Valikamam East (Kopay)	1.10
86	NJF170	Ilankadu Cemetery Road Section I	Valikamam East (Kopay)	1.12
87	NJF171	Rasa Veethy Thoppu Road	Valikamam East (Kopay)	0.41
88	NJF172	Barathy Road Sections I & II	Valikamam East (Kopay)	1.15
89	NJF173	Raja Veethy Kannan Lane	Valikamam East (Kopay)	0.53
90	NJF174	Sellapillaiyar Veethy	Valikamam East (Kopay)	0.96



Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
91	NJF176	Urmpirai East Palali Road to Karanthan Neerveli Sivan Road & Sellappa Road Sections I & II	Valikamam East (Kopay)	0.85
92	NJF256	Vanki Veethi	Valikamam East (Kopay)	1.65
93	NJF097	Tellippalai Thyiddy Road	Valikamam North	2.15
94	NJF098	Pannalai Keerimalai Road	Valikamam North	4.12
95	NJF099	Naguleswary Road Sections I & II	Valikamam North	2.66
96	NJF101	Kunchchan Road	Valikamam North	2.19
97	NJF102	Ampanai Alaveddy Road	Valikamam North	2.16
98	NJF103	Alaveddy Periyavillan Road	Valikamam North	2.62
99	NJF104	Annaivilunthan Kadaivayal Road	Valikamam North	1.49
100	NJF215	Erlalai Kadduwan Road	Valikamam South (Uduvil)	2.69
101	NJF219	Thunmalai Road	Valikamam South (Uduvil)	1.84
102	NJF220	Thavady Suthumalai Cemetery Road	Valikamam South (Uduvil)	0.57
103	NJF265	Thavadi-Suthumalai-Urelai Veethi Section I	Valikamam South-West (Sandilipay)	0.94
104	NJF221	Pirampathai Pandatharuippu Road	Valikamam South-West (Sandilipay)	1.87
105	NJF222	Alankulai Kalvalai Road Sections I, II & III	Valikamam South-West (Sandilipay)	2.86
106	NJF224	Sandilipay Hindu College Road links Kammalai Veethy	Valikamam South-West (Sandilipay)	0.85
107	NJF225	Kaya 1st, 2nd Veethy Sections I & II	Valikamam South-West (Sandilipay)	1.07
108	NJF226	Navali Rajarajeswary Veethy Section I	Valikamam South-West (Sandilipay)	0.49
109	NJF227	Malaivembadi Veethy	Valikamam South-West (Sandilipay)	0.72
110	NJF228	Savari Veethy	Valikamam South-West (Sandilipay)	1.11
111	NJF231	Seddiyadaippu Veethy	Valikamam South-West (Sandilipay)	0.76
112	NJF233	Navali North Thaluvil Road Sections I & II	Valikamam South-West (Sandilipay)	0.59
113	NJF029	Cheddiyarmadam Chankanai Pirampathai Road Sections I & II	Valikamam West (Chankanai)	6.58
114	NJF030	Chulipuram Chankanai Road Section II & III	Valikamam West (Chankanai)	1.87
115	NJF031	Araly Post Office Cheddiyarmadam Road	Valikamam West (Chankanai)	1.55
116	NJF032	Sathiyakaddu Market Veethy	Valikamam West (Chankanai)	0.61
117	NJF033	Alliapulam Veethy	Valikamam West (Chankanai)	0.50
118	NJF034	Munkodai Veethy	Valikamam West (Chankanai)	0.86
119	NJF036	Kiravoolai Veethy	Valikamam West (Chankanai)	2.75
120	NJF037	Moolai 4th Veethy	Valikamam West (Chankanai)	0.99
121	NJF038	Vaddu South Primary Health Care Veethy	Valikamam West (Chankanai)	0.44

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
122	NJF039	Anthiran Branch Lane Sections I & II	Valikamam West (Chankanai)	0.88
123	NJF041	Gnanasampanthar - Muthali Kovil Veethy	Valikamam West (Chankanai)	1.56
124	NJF042	Sulipuram Nelliyan Road	Valikamam West (Chankanai)	2.35
125	NJF045	Chankanai Thoddiladi Veethy Section I	Valikamam West (Chankanai)	0.75
126	NJF251	Hospital Road, Chankanai Sections I, II & III	Valikamam West (Chankanai)	1.85
127	NJF252	Mluwai Road Sections I & II	Valikamam West (Chankanai)	3.89

Source: Asian Development Bank.

## II.2. Kilinochchi District

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
1	NKL046	Kanadwalai - Punnaineeravi Road Sections I & II	Kandavalai	4.84
2	NKL047	Ramanathapuram - Tharnapuram Road	Kandavalai	7.56
3	NKL048	Kumarapuram second road	Kandavalai	1.64
4	NKL049	Aavaaranchaaddi Road	Kandavalai	1.94
5	NKL050	4th Junction to Cemetery - Addition	Kandavalai	1.21
6	NKL051	4th Unit Road	Kandavalai	1.26
7	NKL052	Murugan Temple Road	Kandavalai	1.06
8	NKL053	Second Unit School Road	Kandavalai	2.25
9	NKL054	Uppukkulam Road	Kandavalai	1.28
10	NKL055	Punnai Neeravi Piramanthanaaru Road	Kandavalai	2.84
11	NKL056	Naga Thampran Temple to Kallveddithidal School Road	Kandavalai	2.18
12	NKL057	Visvamadu to Piramanthanaaru Road	Kandavalai	2.10
13	NKL058	Muthirampiddi Housing Scheme Internal Road Section I to VI	Kandavalai	2.98
14	NKL001	Murukandy - Akkarayankulam - Vanerikulam Road	Karachchi	10.25
15	NKL003	Alakaratnam Road	Karachchi	7.96
16	NKL004	Taylor Road	Karachchi	10.54
17	NKL005	Murukandy - Kanakapuram	Karachchi	9.21
18	NKL007	Rose Road	Karachchi	3.08
19	NKL008	Puthumurippu - Konavil Road	Karachchi	3.02
20	NKL009	Konavil Skanthapuram Road	Karachchi	1.47
21	NKL010	Ampaalkulam Central Road	Karachchi	1.63
22	NKL012	Konavil Union Kulam Road	Karachchi	2.03
23	NKL013	Thirukkudumpa Kanniyar Madam Road Sections I & II	Karachchi	2.84
24	NKL014	Kanagapuram Road	Karachchi	1.00
25	NKL015	Vannerikulam Road Sections I & II	Karachchi	2.25
26	NKL017	Thirunagar Kanagapuram Road	Karachchi	1.17
27	NKL018	Kumaraswamy Road	Karachchi	1.80
28	NKL019	Main Road	Karachchi	2.85

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
29	NKL059	Hudson Road	Karachchi	3.48
30	NKL060	Hudson Road 2nd	Karachchi	2.78
31	NKL061	Silva Road Sections I & II	Karachchi	1.92
32	NKL062	Arumukam Road (Krishnan Kovil Road)	Karachchi	1.55
33	NKL063	Sivasuntharam Road	Karachchi	1.80
34	NKL016	Main Road	Karachchi	2.71
35	NKL034	Kachchai Ketpeli Elephantpass Road	Pachchilaipalli	7.29
36	NKL035	Palai Road (Pulopalai - Allippalai Road)	Pachchilaipalli	3.57
37	NKL037	Masar road	Pachchilaipalli	2.03
38	NKL040	Sinnaththalaipadi road (A9 joint road)	Pachchilaipalli	2.35
39	NKL020	Chempankundu Palavi Kiranchi Road	Poonakary	22.01
40	NKL022	Vannerikulam - Pallavarayankaddu Road	Poonakary	8.73
41	NKL024	Veeravil - Valaipadu Fisheries Road	Poonakary	2.67
42	NKL026	Veerapandiyan Road	Poonakary	3.00
43	NKL027	Anaikkaddy Road	Poonakary	2.76
44	NKL029	Veddukkaddu Road Sections I & III	Poonakary	4.10
45	NKL032	Sekkalai Mudkompan Road	Poonakary	3.03
46	NKL002	Akkarayankulam L.B. Main Chl - Nallur Road	Poonakary	4.19
47	NKL006	Vannerikulam Jeyapuram Road	Poonakary	7.57

Source: Asian Development Bank.

### II.3. Manner District

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
1	NMA020	Sinnpandivirichan Oeriyapandivirichan Link Road	Madhu	5.06
2	NMA087	Mahilankulam-Pallamadhu Road NPC009 Section II	Madhu	11.20
3	NMA089	Poovarasankulam-Thunukkai Road	Madhu	14.74
4	NMA098	Pannavedduvan Old Village Road Sections I & II	Madhu	1.06
5	NMA110	Madhu Road Housing Scheme Internal Road	Madhu	0.90
6	NMA024	Thiruketheeswaram Road Section I	Mannar Town	3.00
7	NMA025	Mannar-Thalvupaddu-Tharapuram Road	Mannar Town	6.40
8	NMA026	Jubilee Road	Mannar Town	2.62
9	NMA029	South bar Main Road	Mannar Town	0.57
10	NMA031	Pansalai 1st, 2nd Lane 1st Lane Sections I & II	Mannar Town	0.85
11	NMA032	St. Xavier Road	Mannar Town	0.55
12	NMA034	Puthumai Matha Lane	Mannar Town	0.80
13	NMA036	Kadaleri Veethi (end of fish market )	Mannar Town	0.50
14	NMA038	St. Thomas 1st Lane	Mannar Town	0.60
15	NMA039	Thomayar Main Road	Mannar Town	0.90
16	NMA040	Eluthoor Main Road	Mannar Town	0.46

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
17	NMA041	Periyakamam to Eluthoor Joint Road	Mannar Town	0.42
18	NMA048	Thamotharanpillai Road	Mannar Town	0.76
19	NMA052	Uppukkulam Anni Illam Hostol Road	Mannar Town	0.40
20	NMA054	Manokarakurukkal Road	Mannar Town	0.40
21	NMA056	Building Department 2nd Lane Sections I & II	Mannar Town	0.35
22	NMA059	Konthaipiddy Road	Mannar Town	0.30
23	NMA060	Uppukkulam Mannar Gust House Road	Mannar Town	0.40
24	NMA062	J R S Behind Road	Mannar Town	0.45
25	NMA065	Thalaimannar Pier East Internal Road Sections I & II	Mannar Town	0.93
26	NMA069	Thalaimannar Village South Internal Road Sections I to V	Mannar Town	1.08
27	NMA071	Siruthoppu Internal Road Sections I & II	Mannar Town	0.96
28	NMA072	Kaddasapathiri Internal Road Sections I, II & III	Mannar Town	0.93
29	NMA076	Puthukkudiyiruppu Internal Road Sections I, II & III	Mannar Town	1.25
30	NMA077	Thoddaveli Internal Road	Mannar Town	0.56
31	NMA078	Tharapuram West Internal Road Sections I & II	Mannar Town	0.99
32	NMA081	Uyilankulam Internal Road Sections I & II	Mannar Town	0.76
33	NMA082	Neelasenai Internal Road	Mannar Town	0.81
34	NMA086	Parapankandal Internal Road	Mannar Town	1.18
35	NMA001	Uyilankulam - Adampan Road	Manthai West	5.54
36	NMA002	Vellankulam - Thevanpiddy Road	Manthai West	2.10
37	NMA003	Adampan - Kandal Road	Manthai West	3.94
38	NMA004	Pallamadhu - Alkadively Road	Manthai West	3.64
39	NMA005	Kaddadivayal Ramayankulam	Manthai West	17.10
40	NMA010	Thetavady Internal Road	Manthai West	1.34
41	NMA013	Kalliyadi Internal Road Sections I & II	Manthai West	1.10
42	NMA015	Adampan Internal Road	Manthai West	0.80
43	NMA123	Peryapulathusenai - Potkerny - Bandaeavelly Road	Musalai	6.10
44	NMA124	Maruchukady - Uvaiyadikulam Road	Musalai	4.10
45	NMA126	A.S. Kuluam Internal Road	Musalai	1.00
46	NMA127	Vappankulam alakkaddu Internal Road	Musalai	1.60
47	NMA138	Palakkuli Internal Road Sections I & II	Musalai	1.00
48	NMA139	Mullikkulam Internal Road	Musalai	1.13
49	NMA140	Karadikkuli Internal Road Sections I & II	Musalai	1.12
50	NMA093	Achchankulam Village Road	Nanaddan	0.60
51	NMA095	Murungan Pididi Internal Road Sections I, II, III & IV	Nanaddan	0.81
52	NMA097	Arthikuly Village Road	Nanaddan	1.02
53	NMA091	Murunkan - Nanaddan Road Sections I & II	Nanaddan	6.10
54	NMA092	Uyilankulam - Mankulam - Nanaddan Road	Nanaddan	5.56

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
		Sections I & II		
55	NMA099	Vankalai Word - 05 Internal Road Sections I & II	Nanaddan	0.51
56	NMA100	Razoolputhuvely Village Road	Nanaddan	1.60
57	NMA101	Parikarikandal Internal Road Sections I, II & III	Nanaddan	0.58
58	NMA102	Thomasपुरi Internal Road	Nanaddan	0.60
59	NMA104	Sirukandal Village Road	Nanaddan	0.66
60	NMA106	Pidarikulam Village Road	Nanaddan	0.70
61	NMA107	Katkadanthakulam Village Road	Nanaddan	1.15
62	NMA108	Vankalai - Eraththinapury Internal Road	Nanaddan	0.63
63	NMA114	Vanchiyankulam Village Road	Nanaddan	0.48
64	NMA116	Vankalai Word - 06,07 Internal Road Sections I & II	Nanaddan	0.40
65	NMA117	Ilanthaikulam Internal Road	Nanaddan	0.50
66	NMA118	Vankakai Suganthapuri Internal Road	Nanaddan	0.70
67	NMA120	Vankalai - Gunavarthana Road Sections I & II	Nanaddan	0.39

Source: Asian Development Bank.

#### II.4. Mullaitivu District

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
1	NMU046	Poovarasankulam Thunukai Road	Manthai East	24.53
2	NMU047	Pandiyankulam to Mallavi Link Road	Manthai East	3.32
3	NMU050	Karumpulliyam Internal Road Sections I & II	Manthai East	3.71
4	NMU001	Thanniyoottu Kumulamunai Alampil Road	Maritimepattu	13.71
5	NMU013	Thilakam Mill Road Sections I & II	Maritimepattu	0.84
6	NMU014	2nd Crossroad	Maritimepattu	2.01
7	NMU017	Navatkadu Cemetary Road	Maritimepattu	1.03
8	NMU018	Semmankunru Right side Road	Maritimepattu	1.04
9	NMU023	Kallappadu Kadtkarai Main Road	Maritimepattu	2.13
10	NMU044	Koolamurippu kerudamadu enaippu veethi	Maritimepattu	4.86
11	NMU072	Nelumwewa Sinhapura Road	Maritimepattu	7.04
12	NMU069	Kanagarayankulam District Boundary Road	Oddusuddan	2.08
13	NMU039	Thapaalaga veethi Sections I & II	Oddusuddan	1.90
14	NMU041	Olumadu paadasaalai veethi	Oddusuddan	3.01
15	NMU043	Saalampan veethi	Oddusuddan	5.74
16	NMU070	Thanduvan Periyakulam Road	Oddusuddan	8.26
17	NMU071	Olumadu Pullmachchinathikulam Ampakamam Road	Oddusuddan	6.33
18	NMU027	Thevipuram Road	Puthukudiyiruppu	2.32
19	NMU028	Kaiveli elukai veethi	Puthukudiyiruppu	1.39
20	NMU029	Visuvamadu athisaja vinajagar aalaja veethi Section I	Puthukudiyiruppu	3.34

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
21	NMU030	Udaijaar kaddu sudalai veethi	Puthukudiyiruppu	2.20
22	NMU031	Jesuthas veethy	Puthukudiyiruppu	2.32
23	NMU032	Kaaddu athisaja pillaijaar veethi	Puthukudiyiruppu	1.35
24	NMU034	Kulanthai jesu kovil veethi	Puthukudiyiruppu	0.87
25	NMU035	Suwaiyuttu veethy	Puthukudiyiruppu	1.49
26	NMU036	Theravil Ilankopurm veethi	Puthukudiyiruppu	2.17
27	NMU037	Valluvarpurm pirathaana veethi Sections I & II	Puthukudiyiruppu	1.70
28	NMU073	Oddusuddan Puthukudiyiruppu Road	Puthukudiyiruppu	12.12
29	NMU057	Kokkavil Thunukkai Road	Thunukkai	2.32
30	NMU058	Hospital front Road	Thunukkai	0.83
31	NMU059	Mallavi 3rd Crossroad	Thunukkai	0.98
32	NMU060	Mallavi 6th Crossroad	Thunukkai	1.07
33	NMU062	Aninchiyankulam 6th Lane Road	Thunukkai	1.01
34	NMU063	Arokkiyapuram	Thunukkai	3.55
35	NMU064	Iyankulam palayamurukandy Road	Thunukkai	1.62
36	NMU068	Baarathinagar to Pugalenthinagar link road	Thunukkai	7.15

Source: Asian Development Bank.

## II.5. Vavuniya District

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
1	NVA042	Katkulam Sithamparapuram Internal Road	Vavuniya	1.18
2	NVA043	Oyarsinnakulam Sections I & II (2nd & 4th)	Vavuniya	2.35
3	NVA046	Srinagar Section I (4th)	Vavuniya	0.17
4	NVA047	Crusher Road	Vavuniya	1.25
5	NVA048	Maharampaikulam Kanthy Road	Vavuniya	0.70
6	NVA049	Sriramapuram Housing Scheme 1st Cross Lane	Vavuniya	0.60
7	NVA050	Koomankulam Main Road	Vavuniya	1.65
8	NVA051	Kanthankulam Main Road	Vavuniya	1.83
9	NVA052	Rasenthirankulam Mail Road	Vavuniya	0.90
10	NVA053	Pampaimadhu Sundarapuram Road	Vavuniya	2.10
11	NVA055	Sivapuram Main Road	Vavuniya	2.15
12	NVA056	Marukarampalai Vinayagar Viddalaya Road	Vavuniya	2.57
13	NVA001	Omanthai - Elamaruthankulam Road	Vavuniya	9.00
14	NVA002	Navatkulam - Maraiyadithakulam Road	Vavuniya	8.45
15	NVA003	Palamoddai - Moondumurippu Road	Vavuniya	5.45
16	NVA004	Pandikeithakulam - Maraiyadithakulam Road	Vavuniya	3.75
17	NVA005	Poovarasankulam - Thunukkai Road	Vavuniya	10.60
18	NVA006	Malikai-Chemamadu Road	Vavuniya	2.06
19	NVA007	Kulumadu Junction to Marakkarampalai	Vavuniya	3.40

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
		veethy		
20	NVA008	Mathavuvaithakuiam-Kanthapuram-Veethy	Vavuniya	2.91
21	NVA009	Kanthapuram-Rajendirankuiam-Veethy	Vavuniya	3.10
22	NVA011	Kalnatinakulam - Asikulam Road	Vavuniya	4.20
23	NVA012	Poonthoddam - Santhasolai Road	Vavuniya	4.10
24	NVA013	Sanakarapillai Road	Vavuniya	0.93
25	NVA014	Mannar Road 6th Lane	Vavuniya	1.35
26	NVA016	Kovilkulam Sudalai Road	Vavuniya	1.00
27	NVA019	Pandarikulam Amman Kovil Road	Vavuniya	0.70
28	NVA020	Velikulam Amman Kovil Road	Vavuniya	0.70
29	NVA021	Sinkala Divisional Secretariat Road - Section I	Vavuniya	0.43
30	NVA022	Thirunavatkulam 1st Lane	Vavuniya	0.97
31	NVA010	From A 9 Road to Puthoor Kovil Road	Vavuniya North	6.10
32	NVA023	Nainamadu - Samalankulam Road	Vavuniya North	12.60
33	NVA024	Nedunkerny - Koolankulam Road	Vavuniya North	15.00
34	NVA025	Kanagarayankulam-Karappukuthi Road	Vavuniya North	3.90
35	NVA026	Nainamadu-Karapukuthi Road	Vavuniya North	8.65
36	NVA027	Nedunkerny Welioya Connection road	Vavuniya North	7.00
37	NVA028	School Front Road Nagarkulam	Vavuniya North	1.55
38	NVA029	Pillayarkovil Front Road	Vavuniya North	1.83
39	NVA031	Maaraillupai Kulavisuddan Road	Vavuniya North	4.76
40	NVA032	Maaraillupai Nedunkerny Road	Vavuniya North	2.20
41	NVA038	Navalar Road	Vavuniya North	0.80
42	NVA039	Nedunkerny North Amman Road	Vavuniya North	1.13
43	NVA041	Maniyarkulam - Pirappamadu Road	Vavuniya South	8.35
44	NVA040	Ulukulam - Varikudiyoor Road	Vavuniya South	10.21
45	NVA059	Kokaliya Akpopura Main Road	Vavuniya South	3.60
46	NVA062	Alakala Paddy Field Road	Vavuniya South	1.25
47	NVA065	Acre 400 3rd Crossroad	Vavuniya South	1.05
48	NVA066	Aluthpirapamaduwa Transformer Road	Vavuniya South	1.00
49	NVA067	Nawakamuva Road	Vavuniya South	0.53
50	NVA069	Poovarasankulam - Cheddikulam Road	Vengalacheddikulam	12.30
51	NVA070	Piramanalankulam - Parappukadanthan Road	Vengalacheddikulam	9.15
52	NVA071	Veppankulam Kallaaru Road	Vengalacheddikulam	2.45
53	NVA073	Paththinathapuram Road	Vengalacheddikulam	0.88
54	NVA075	Puliyankulam Road	Vengalacheddikulam	1.80
55	NVA076	Jayanthinagar Erukkalankal Road	Vengalacheddikulam	1.60
56	NVA077	Pavatkulam Unit 4 to Thalikkulam Road	Vengalacheddikulam	5.00
57	NVA078	Pavatkulam Unit 2 Road	Vengalacheddikulam	1.73
58	NVA079	Muthaliyarkulam housing Scheem Road - Sections I to X	Vengalacheddikulam	7.00

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
59	NVA080	Mankulam SDO Road	Vengalacheddikulam	1.15
60	NVA081	Sinnakulam Internal Road	Vengalacheddikulam	2.45
61	NVA082	Sinnathampanai School Road	Vengalacheddikulam	2.25
62	NVA083	Menifarm Unite 2	Vengalacheddikulam	1.96

Source: Asian Development Bank.

## II.6. National Roads

Serial No.	Code	Road Name	Length (kilometer)
1	NP001	Mannar - Thalaimannar Road (A014)	28.58
2	NP003	Point Pedro Maruthankemi Road (B371)	29.10
3	NP004	Vavuniya - Parayanalakulam Road (A030)	35.59
4	NP005	Vavuniya - Neriyaikulam Road (B325)	21.62

Source: Asian Development Bank.

## III. Uva Province

### III.1. Badulla District

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
1	UBA074	Atabagahakadura to Kendagolla Dabagasgoda Bridge	Badulla	2.85
2	UBA240	Malangamuwa Road	Badulla	3.33
3	UBA301	Rilpola-Kalugalpitiya Road	Badulla	2.88
4	UBA003	3 milepost to Diyagala Division Road Sections I & II	Badulla	7.74
5	UBA021	Andeniya Kurugahapathana Main Road	Badulla	1.24
6	UBA022	Andeniya Main Road (Pansala Mawatha)	Badulla	0.94
7	UBA026	Approach road to Badulla Weeriyapura Bishop's road	Badulla	0.50
8	UBA032	Badulla Kalanwatta Road	Badulla	0.54
9	UBA033	Badulla Meda Pathana Road	Badulla	1.11
10	UBA040	Badulupitiya Road	Badulla	0.68
11	UBA091	Hindagoda Water Tank Road to Passara Main Road	Badulla	1.00
12	UBA094	Kailagoda Wadu School to Kshethrarama Temple	Badulla	0.60
13	UBA096	Kendagolla Cemetery Junction to Muthumala Guru Bittiya	Badulla	3.13
14	UBA097	Kendagolla Maha Vidyala to Vadipola Kanda Arawa Road	Badulla	3.78
15	UBA098	Kendagolla Yodun Ulpatha Bridge to Gurubiththiya Junction	Badulla	2.29
16	UBA099	Keppetipola Road to Wimaladarma Road	Badulla	1.16
17	UBA147	Goradiyawaka - Ampitiya-Kandearawa Road	Badulla	2.29



Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
18	UBA161	Heennarangolla Meemamalahinna Road	Badulla	2.60
19	UBA172	Ihala Aluth Ela Road	Badulla	0.67
20	UBA195	Katupelellagama Main Road	Badulla	1.92
21	UBA291	Pilipothagama Road	Badulla	1.21
22	UBA346	Vineethagama Wewessegama via 4th milepost road	Badulla	1.38
23	UBA356	Weeryapura Main Road Section I	Badulla	1.55
24	UBA366	Yalpanawatta Internal Road	Badulla	0.51
25	UBA016	Ambegoda-Galahitiyawa-Sirimalwatta-Gaswatta Road	Bandarawela	1.76
26	UBA245	Mathatilla-Daluk Ella Road	Bandarawela	2.37
27	UBA324	Sumudugama, Sholand Road	Bandarawela	1.42
28	UBA012	Allethota to South Kebillawala Piriwena Road	Bandarawela	1.26
29	UBA013	Allimale junction to Ambadandegama road	Bandarawela	6.20
30	UBA015	Alwatta, Obada Ella via Gonamatawatta Road	Bandarawela	3.25
31	UBA120	From Udaperuwa to Railway Line Road	Bandarawela	1.32
32	UBA177	Jalasha Kanda Galwala handiya Road	Bandarawela	1.69
33	UBA201	Kinigama junction to Mahaulpotha-Kandearawa-Heeloya Road	Bandarawela	3.80
34	UBA228	Liyangolla Hospital Road Sections I & II	Bandarawela	4.70
35	UBA271	North Kebillewela-Bindunuwewa Road	Bandarawela	2.82
36	UBA088	Halpe Junction to Maduragama via Demodara Bogaha Jc.	Ella	3.36
37	UBA293	Piyarapandowa Neluwa Road	Ella	5.15
38	UBA055	Demodara, Gawarawela, Beddewela via Balla ketuwa Road	Ella	2.51
39	UBA109	Millagama junction to Piyarapandowa via Welsiwattha Road	Ella	4.99
40	UBA137	Gawarakele-Nahawila-Hindagala Road	Ella	6.55
41	UBA155	Halpe Kandekubura Road	Ella	1.29
42	UBA258	Nawelagama Baddearawa Road Sections I & II	Ella	7.06
43	UBA297	Pupula Temple Road	Ella	1.85
44	UBA322	Springvally to Gawarakale Nahawilla Road	Ella	3.74
45	UBA017	Ampitikanda to Ampitikanda Lover Division	Haldummulla	1.54
46	UBA076	Badulla-Colombo main road to Bathgoda Okwel Road	Haldummulla	1.19
47	UBA077	Badulla-Colombo Road to Bathgoda Ranwanguhawa Road	Haldummulla	1.04
48	UBA124	From We Eliya junction to School Road	Haldummulla	0.93
49	UBA135	Gampaha, Kolongastenna Road	Haldummulla	8.15
50	UBA148	Haalatutenna, Idalgashinna road remaining area	Haldummulla	6.25
51	UBA162	Heewelkadura, Nikapitiya Road	Haldummulla	7.19
52	UBA196	Kelipanawela Road	Haldummulla	3.83
53	UBA273	Ohiya Udaweriya Kalupahana Road	Haldummulla	4.82

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
54	UBA312	Seelathenna Madola Road	Haldummulla	1.84
55	UBA067	Etampitiya Gawela Main Road Sections I, II & III	Hali-Ela	9.82
56	UBA075	Attampitiya Estate 1 Div. Kovil to Paratugolla A.T.P. Div.	Hali-Ela	1.45
57	UBA090	Hathakama Waralkatiya to Serandip Waththa	Hali-Ela	2.85
58	UBA151.I	Hali Ela Outer Circular Road Section I	Hali-Ela	16.19
59	UBA151.II	Hali Ela Outer Circular Road Section II	Hali-Ela	6.94
60	UBA151.III	Hali Ela Outer Circular Road Section III	Hali-Ela	4.22
61	UBA151.IV	Hali Ela Outer Circular Road Section IV	Hali-Ela	7.76
62	UBA151.IX	Hali Ela Outer Circular Road Section IX	Hali-Ela	5.83
63	UBA151.V	Hali Ela Outer Circular Road Section V	Hali-Ela	4.85
64	UBA151.VII	Hali Ela Outer Circular Road Section VII	Hali-Ela	3.97
65	UBA373	Chelsiwatta-Lower Katugaha Road	Hali-Ela	3.54
66	UBA019	Ampitiya Kandagolla Road	Hali-Ela	3.29
67	UBA023	Anthuduawela Queenstown Road to Mahakubura	Hali-Ela	0.94
68	UBA024	Anthuduawela-Amudaweli Road	Hali-Ela	2.20
69	UBA054	Dematawalhinna via Dalukhinna Road	Hali-Ela	4.08
70	UBA200	Ketawela-Panakanniya-Medagedara Road	Hali-Ela	6.16
71	UBA214	Kottagoda 6 Division-Springwelliwatta-Kottagoda Kadana Road	Hali-Ela	1.92
72	UBA219	Kudumahawela-Heenanarangolla	Hali-Ela	2.72
73	UBA223	Kurukudegama Post Office to Warakadanda Pitakadura Road	Hali-Ela	1.68
74	UBA244	Malpola to Ambewela bypass road	Hali-Ela	0.98
75	UBA253	Morethota St. James Kovil Junction to Abewela School Road	Hali-Ela	2.02
76	UBA276	Oththekade-Katawala Road	Hali-Ela	2.08
77	UBA316	Silpolagama Road to Unagolla Road	Hali-Ela	2.21
78	UBA334	Udakohovila Sri Kali - Amman Kovil Road	Hali-Ela	2.94
79	UBA341	Unagolla to Hali-Ela Road	Hali-Ela	2.99
80	UBA391	Mahathanna Bypass Road	Hali-Ela	0.91
81	UBA278	Pahalakadurugamuwa Road	Haputale	3.00
82	UBA043	Bandarawela Diyabibila Road	Haputale	0.81
83	UBA045	Bingetenna, Rathpaha Road	Haputale	0.68
84	UBA115	Rohamtan Estate to Madawalakapalla Road	Haputale	1.28
85	UBA142	Glennoure Estate to Bauvais Division	Haputale	2.19
86	UBA163	Hela muduna-Atthalapitiya-Watagamuwa Road	Haputale	2.28
87	UBA127	From Wewathenna to Thaldena (Old Kandy Road)	Kandaketiya	4.64
88	UBA129	Galauda-Ampitiya Road	Kandaketiya	3.95
89	UBA130	Galauda-Bokkanoruwa Road	Kandaketiya	3.39
90	UBA131	Galauda-Labugasthalawa Road	Kandaketiya	3.57

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
91	UBA132	Galauda-Wasanagama Road	Kandaketiya	2.45
92	UBA181	Kadapoththawa Rural Entrance Road	Kandaketiya	1.91
93	UBA047	Bubula, Mahathenna, Dadayamthalawa Road	Kandaketiya	2.94
94	UBA095	Kandeketiya Badulu Oya Junction to Thennagammanaya Road	Kandaketiya	4.14
95	UBA331	Thunnawa Road	Kandaketiya	2.05
96	UBA008	Adawaththa Lunugala Division	Lunugala	4.67
97	UBA178	Janathapura Road Sections I & II	Lunugala	3.99
98	UBA233	Mahadowa Estate to Lunugala Road	Lunugala	7.20
99	UBA250	Metigahathenna-Akiriya-Megolla Road	Lunugala	7.07
100	UBA004	45 milepost-Elewela Road	Mahiyanganaya	1.65
101	UBA011	Alewela-Damarawa-Dehigolla Sections I & II	Mahiyanganaya	4.00
102	UBA104	Mapakadawewa 20th milepost Junction to 50 Acres Road	Mahiyanganaya	3.06
103	UBA105	Mapakadawewa 20th Milepost Jc. to Paharagammana Road	Mahiyanganaya	1.81
104	UBA113	Paharagammana Road (Bodiya) to Senanigama School Road	Mahiyanganaya	0.87
105	UBA248	Meegahahena-Watawana Road	Mahiyanganaya	5.30
106	UBA303	Roberiyawa Ulhitiya Village entrance to Ulpitiya Temple Road	Mahiyanganaya	1.44
107	UBA199	Keselwatta Lunugala Road	Meegahakivula	1.75
108	UBA212	Komarika Galkada Road	Meegahakivula	1.69
109	UBA238	Makulgolla Welan Landa Road	Meegahakivula	1.83
110	UBA295	Polgaha Arawa Main Road	Meegahakivula	4.42
111	UBA327	Thalde-Galgelanda Road	Meegahakivula	2.57
112	UBA329	Thaldena-Bathalawatta Nagolla Road	Meegahakivula	3.83
113	UBA009	Adiyarawatta to Ellanda, Rambukhella, Ilukwela	Paranagama	1.75
114	UBA063	Downside to N.G. Division	Paranagama	2.58
115	UBA116	Sapugollagama to Nahakadiya via Telembuwela Road	Paranagama	1.95
116	UBA282	Panagoda to Halabe Bridge	Paranagama	3.40
117	UBA314	Senanayaka Jc. to Kirawanagama, Galketiya Mankada Road	Paranagama	7.76
118	UBA336	Uduhawara-Koradekumbura Road	Paranagama	2.92
119	UBA348	Waldimar to Alugala Junction	Paranagama	4.34
120	UBA362	Welimada-Yahalagaha Arawa Imbulgashinna Rahupola Road	Paranagama	14.08
121	UBA308	Sagabo Mawatha Road	Passara	1.76
122	UBA182	Kanawaralla Idamegedara to Maussagolla Hingurugamawa Road	Passara	2.75
123	UBA249	Meeriyabedda Road	Passara	4.91
124	UBA279	Pallegama via Udagama Road	Passara	5.67

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
125	UBA289	Pelgathenna Nawa Janapadaya Kirimaduthenna Road	Passara	2.52
126	UBA002	2F South Keselpotha to Ikiraya Goda Road	Rideemaliyadda	12.63
127	UBA133	Galbokka to Gadaboketiya	Rideemaliyadda	2.64
128	UBA165	Hewanwatta Kumbukgolla to Polwagawa Sections I & II	Rideemaliyadda	2.79
129	UBA005	50th Milepost-Keselpotha-Mapakada Road	Rideemaliyadda	10.28
130	UBA119	Thissapura Keselpotha Junction to Aadaulpatha Road	Rideemaliyadda	6.02
131	UBA299	Rideemaliyadda Gamunupura Remnple Road	Rideemaliyadda	1.27
132	UBA345	Uraniya-Mahapitiya-Nagadeepa Road	Rideemaliyadda	4.12
133	UBA107	Meegahawela to Dabagahapitiya Road	Soranathota	2.57
134	UBA035	Badulla Rideepanawaththa Ulpatha Left Road	Soranathota	0.94
135	UBA189	Kandedgedara Weeragama Inner Road	Soranathota	1.16
136	UBA224	Kuttiyagolla-Ethgala Road	Soranathota	2.90
137	UBA254	Nagolla Maliyadda Road	Soranathota	2.85
138	UBA257	Narangala Kovil to Meeriyagala	Soranathota	6.45
139	UBA358	Wekada Kosgolla Road	Soranathota	3.15
140	UBA167	Hinnarangolla-Gambedda-Galadanda Road	Welimada	5.72
141	UBA078	Bandarawela Road to Amunumulla Road	Welimada	1.51
142	UBA141	Glanore waththa Idalgashinna Road	Welimada	1.91
143	UBA198	Keppetipola-Hewankumbura-Ambagasdowa Road	Welimada	6.72
144	UBA204	Kirinda Road	Welimada	1.62
145	UBA290	Pelwinna Road (from Pelwinna Junction)	Welimada	1.38
146	UBA310	Sapukade Junction to Ambagasdowagama Road Sections I & II	Welimada	3.37
147	UBA361	Welimada-Kerandimulla Road	Welimada	7.16

Source: Asian Development Bank.

**III.2. Monaragala District**

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
1	UMO126	Randeniya-Siyabalagune Higurukaduwa Road	Badalkumbura	2.36
2	UMO004	2nd Milepost, Meegahayaaya via Bogahapelessa Road	Badalkumbura	3.63
3	UMO016	Alupotha Junction to Kalugaha Wadiya Road	Badalkumbura	2.92
4	UMO025	Atpattiya- Karagaskadura-Meyanakadura-Ranugalla	Badalkumbura	4.93
5	UMO028	Badalkubura-Karawilaella Road	Badalkumbura	7.91
6	UMO031	Balakumbura-Bogahapelassa (Lunugala Janapadaya) Road	Badalkumbura	12.18
7	UMO058	Madamagama Junction to Yatimulla, Karadawatta Sections I & II	Badalkumbura	3.97
8	UMO093	Madukotan Arawa to Udagangoda Road	Badalkumbura	3.45

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
9	UMO094	Madukotan Arawa Tuntala Athlaamulla Road	Badalkumbura	6.39
10	UMO098	Maligathanna Road	Badalkumbura	2.26
11	UMO110	Namunukula-Miyanakadura Road	Badalkumbura	14.72
12	UMO143	11 Kanuwa, Madugahapitiya Road	Badalkumbura	1.44
13	UMO147	Madukotan Arawa Helathunthala Punsisigama Junction Road	Badalkumbura	2.71
14	UMO061	From Rathupasketiya to Kawdulla Road	Bibile	5.54
15	UMO001	Abagolla-Sinhapura Road	Bibile	5.95
16	UMO005	5th Milepost to Thiththawalkula	Bibile	4.26
17	UMO006	5th Milepost Yalkubura Road (via Kotagama Mallhewa )	Bibile	8.24
18	UMO039	Bibila Watta Road	Bibile	2.96
19	UMO047	Development of Saddhathissa road in Maligawila	Buttala	1.99
20	UMO050	Development of Weliara Ilukpitiya Road	Buttala	2.00
21	UMO087	Kukurampola Junction - Janawasa (4/9/11) - Hadapanaagala	Buttala	2.89
22	UMO120	Okkampitiya Dabeyaya	Buttala	1.37
23	UMO121.i	Old Buththala Junction to Kukurampoala Junction Section I	Buttala	10.53
24	UMO121.II	Old Buththala Junction to Kukurampoala Junction Section II	Buttala	8.07
25	UMO121.vi	Old Buththala Junction to Kukurampoala Junction Section VI	Buttala	10.15
26	UMO122	Palwatta Cooperative via Gonagodalla-Kukurampola Road	Buttala	1.95
27	UMO123	Pethiyanara to Walapanegama, Bubula to Udarawa Sections I & II	Buttala	9.19
28	UMO137	Unawatuna, Pasal Mawatha, Lunugala janapadaya	Buttala	2.81
29	UMO042	Crossroad in Diyawara Gammamaya	Katharagama	1.00
30	UMO064	Galahitiya Road, Katharagama	Katharagama	1.15
31	UMO065	Galbokka to Therela	Madulla	2.99
32	UMO092	Maariarawa Muthukandiya 6 Milepost Road	Madulla	4.22
33	UMO010	Abalanda Alupathagala Road	Madulla	7.17
34	UMO054	Dombagahawela-Dematabedda-Maria Arawa Road	Madulla	8.05
35	UMO104	Mariarawa-Ritigahawatta-Buddama Road	Madulla	11.06
36	UMO076	Kahatyanwela Mellagama Road	Medagama	5.81
37	UMO128	Rattanadeniya-Polgahapitiya-Bakinigahawela Road	Medagama	7.11
38	UMO008	8 Milepost Dahagoniya Nakkalagoda Road	Medagama	1.45
39	UMO013	Aiwela, Senapatiya Road	Medagama	1.21
40	UMO015	Alhena 8 Milepost Road (near Anandaraama Temple)	Medagama	1.40
41	UMO038	Bibila Mulla Yalkumbura Road	Medagama	6.57

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
42	UMO111	Nannapurawa - Bibilamulla Road	Medagama	1.47
43	UMO112	Nannapurawa Dahamgama Alutwela Road	Medagama	9.19
44	UMO048	Development of the Keppetipola lane	Moneragala	0.60
45	UMO072	Horambawa-Suduwathura aara-Galtemandiya Road	Moneragala	13.06
46	UMO075	Kahambana Kalugammulla Road	Moneragala	1.99
47	UMO144	Batugammana Waralanda Nawugala Road	Moneragala	2.78
48	UMO035	Beraliyapola-Kolonwinna Road	Moneragala	7.20
49	UMO041	Buthsaranapitiya-Guruhela Road	Moneragala	2.36
50	UMO049	Mr. Proyantha's boutique to Wedikumbura	Moneragala	1.98
51	UMO106	Monaragala Jiloon Road	Moneragala	5.29
52	UMO108	Nakkala Mediriya Kubukkana Road	Moneragala	9.80
53	UMO116	Nearby Sirigale Hospital to Magandana Mulla Road	Moneragala	1.53
54	UMO140	Weheragala-Ampitiya Road	Moneragala	5.68
55	UMO138	Via Pokunuthanna to Thanamalwila/weelioya Main Road	Sevanagala	3.32
56	UMO148	Mahagama Bandara Mawatha Sections I, II & III	Sevanagala	2.15
57	UMO149	Mahagama Ranaviru Mawatha Sections I to V	Sevanagala	4.64
58	UMO150	Mahagama Saliya Mawatha Sections I to VII	Sevanagala	4.42
59	UMO151	Mihidugama Main Road Sections I & II	Sevanagala	2.48
60	UMO152	Mihidupura Main Road	Sevanagala	2.60
61	UMO155	Thalapatha ginigala Road	Sevanagala	2.81
62	UMO003	1st Lane, Bogaha Junction	Sevanagala	1.23
63	UMO034	Below the habaraluwawa bridge to waliaara Main Road	Sevanagala	1.29
64	UMO052	Diwlana to Kirilbannara	Sevanagala	3.71
65	UMO074	Indikolapelessa first road school to Second Village Road	Sevanagala	2.16
66	UMO115	Kirilbannawa Bandaranayaka School to Left Bank Road	Sevanagala	1.11
67	UMO145	Dalukkatiya watarawuma Road Sections I & II	Sevanagala	2.66
68	UMO146	Habaraththawela Diwulmandiya Main Road Sections I & II	Sevanagala	3.14
69	UMO024	Atimale Kotiyagala via 22	Siyambalanduwa	8.65
70	UMO055	Dombaghawela-Ampitiya-Pahatha Arawa-Wiloya Road	Siyambalanduwa	14.16
71	UMO057	From 9th milepost to Buddama	Siyambalanduwa	7.54
72	UMO077	Kandauda Panguwe 6 milepost Kongaspitiya	Siyambalanduwa	7.57
73	UMO091	Maariarawa Buddama Road	Siyambalanduwa	2.54
74	UMO130	Siyabalanduwa Ampara (4 Village, 2 Village)	Siyambalanduwa	3.61
75	UMO131	Siyabalanduwa Kolongaspitiya Road	Siyambalanduwa	11.56
76	UMO079	Kandiyapita-Bogaswewa junction to Diulana	Thanamalvila	1.86
77	UMO012	Agunakolapalassa 17 to Wijayapura School	Thanamalvila	2.29

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
78	UMO069	Hambegamuwa Junction to Rathwalawa Road Sections I & II	Thanamalvila	7.68
79	UMO070	Hambegamuwa Temple junction to Rathabalawa	Thanamalvila	2.55
80	UMO089	Laginagala Road Galeramankada to Bogaswawa	Thanamalvila	3.27
81	UMO090	Laginagala-Damwelodaya Road	Thanamalvila	4.58
82	UMO097	Kiwula to Kandiypita	Thanamalvila	10.07
83	UMO007	68 Junction to Hadapanagala Malwaththawela Section I	Wellawaya	2.88
84	UMO011	Handapanagala School to Randenigodayaya	Wellawaya	4.57
85	UMO019	Athiliwawa Aluthhela Road Sections I & II	Wellawaya	17.10
86	UMO020	Athiliwawa - D.S. Gama Road	Wellawaya	4.18
87	UMO021	Athiliwawa Junction to D.S.Gama Sections I & II	Wellawaya	10.66
88	UMO022	Athiliwawa-Mahaaragama Ulkanda-Hadapanagala Road	Wellawaya	11.65
89	UMO060	From Randeniya Statue to Siyambalagunaya Road	Wellawaya	5.19
90	UMO062	From Weherayaya Junction to Siripuragama	Wellawaya	5.34
91	UMO068	Hadapanagala Junction-Hadapanagala Road	Wellawaya	7.89
92	UMO086	Kudaoya Purana Balaharuwa Road	Wellawaya	3.51
93	UMO117	Near the Buduruwagala school to Buduruwagala road	Wellawaya	2.18
94	UMO118	Waligamwehera Temple to Rabukkatiya	Wellawaya	5.75
95	UMO139	Watahelayaya to Heenapahuwa junction in Warunagama	Wellawaya	1.64

Source: Asian Development Bank.

### III.3. National Roads

Serial No.	Code	Road Name	Length (kilometer)
1	UBA061	Diyathalawa, Welanhinna, Walgahawela Road	2.50
2	UBA069	Akiriya to Madolsima Road	11.80
3	UBA081	Demodara-Baddegama-Springwelly-Rockhill to Badulla	22.00
4	UBA084	Ella to 3rd Milepost (Ella Passara Road via Balleketuwa)	4.50
5	UBA101	Koslanda to Punagala Road	11.30
6	UBA242	Maligatenna to Bandarawela main road	9.10
7	UMO059	From Pelwatta Junction to Passara Road	11.70

Source: Asian Development Bank.

## IV. Western Province

## IV.1. Colombo District

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
1	WCO026	Develop the Hath Bodiya Road	Dehiwala	0.61
2	WCO031	Develop the Bodiyaawatta Road	Dehiwala	0.54
3	WCO035	Develop the Kalubowila Temple Road	Dehiwala	0.77
4	WCO038	Develop the Gensonwaththa Road Sections I & II	Dehiwala	0.63
5	WCO039	Develop the Field Mw	Dehiwala	0.51
6	WCO040	Develop the Rohini Road	Dehiwala	0.58
7	WCO124	Walauwa Road	Homagama	0.73
8	WCO126	Nagaraseema Mawatha	Homagama	1.24
9	WCO129	Habarakada Mullegama J.A. Karunasena Mawatha	Homagama	0.90
10	WCO133	Habarakada Kamath godalla road	Homagama	0.60
11	WCO136	Jalthara Aramaya road to jaya Mw junction falls through the city of west auctioning land	Homagama	1.70
12	WCO141	Welipillawa to Batawala Road	Homagama	1.30
13	WCO147	Meegodadeniya Main road	Homagama	3.10
14	WCO149	Wataraka North Somarathana Mawatha Gammana Road	Homagama	1.35
15	WCO152	Udagewatta, Gurugewatte, road	Homagama	1.70
16	WCO154	Dampe Kajugahawatta deniya - Dehigahawita Road	Homagama	2.10
17	WCO155	Godagama Palpolawatta Road Sections I & II	Homagama	1.10
18	WCO156	Panagoda-Romiyel Mawatha	Homagama	2.10
19	WCO157	Panagoda-Kompayahena Road	Homagama	1.30
20	WCO158	Layanel Jayasinghe Mawatha (Karuwalapitiya) to Nawalamulla Road	Homagama	1.00
21	WCO159	Layanel Jayasinghe Mawatha to Ranaviru Gammana Village Sections I & II	Homagama	1.60
22	WCO160	Kiriberiyakale Prithika Mawatha	Homagama	0.74
23	WCO161	Dolahena Govijanapadaya road	Homagama	1.90
24	WCO162	Dolahena Moonamale road	Homagama	1.73
25	WCO163	Uduwana Delgaha Watta road	Homagama	1.70
26	WCO165	Katuwana Daham Mawatha	Homagama	0.73
27	WCO166	Somalankara Mawatha - from Magammana junction to Niyadagala junction	Homagama	1.20
28	WCO167	Magammana Kothalawala Road	Homagama	0.81
29	WCO168	Magammana Batahena Road	Homagama	0.80
30	WCO169	Kahathuduwa Pragathi Mawatha	Homagama	1.40
31	WCO172	First Stage of Sumana Mw od Kahathuduwa-Ukkotuwa Main Road	Homagama	1.20
32	WCO174	Ruban Amarathunga Byroad of Jambugasmulla Kahathuduwa	Homagama	0.85



Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
33	WCO176	Kiriwaththuduwa Kithulawila road	Homagama	1.84
34	WCO177	Mattegoda - Kirigampamunuwa Main Road	Homagama	1.97
35	WCO178	Asiri Uyana Main Road in mattegoda	Homagama	0.82
36	WCO179	Cemetery Road in Sandun pura in mattegoda	Homagama	1.00
37	WCO181	D.C Attanayaka Mawata	Homagama	1.60
38	WCO182	Jayaliyagama Udagammana road	Homagama	2.24
39	WCO183	Welakumbura Mawatha	Homagama	0.75
40	WCO184	Main road from Ambagashandiya junction up to koraleima	Homagama	3.85
41	WCO185	From Munamale Main Road, Hakurudeniya to Subodarama Temple to Thoramulla	Homagama	1.30
42	WCO186	Papiliwala road from salgas mw in mattegoda up to brahamanagama junction	Homagama	1.50
43	WCO187	Kandawathe Sections I & II	Homagama	1.28
44	WCO208	Road from the Thekotuwa junction to steelwork shop in Kahathuduwa	Homagama	3.95
45	WCO263	Naduhena-Nawalamulla-Welipillewa	Homagama	4.90
46	WCO265	Dampe - Pitipana	Homagama	2.60
47	WCO271	Wetara - Weedagama	Homagama	3.85
48	WCO272	Kahatuduwa - Diyakade	Homagama	2.40
49	WCO008	Hewagama Ramahera Road	Kaduwela	1.81
50	WCO083	Medadanda Mawatha in front of Seelalankara Mawatha	Kaduwela	1.31
51	WCO084	Shantha Mariya Mawatha (Weliwita)	Kaduwela	1.60
52	WCO085	Weliwita Wewa Road	Kaduwela	1.41
53	WCO086	Kothalawala Gamunupura Main Road to IDL	Kaduwela	1.48
54	WCO087	Kakirideniya Road (from 177 main road to Vihara Mawatha) Sections I & II	Kaduwela	1.13
55	WCO091	Kanadawatta Road	Kaduwela	0.80
56	WCO092	Shanthiyogashrama Road	Kaduwela	0.66
57	WCO095	Laka Road near lake basin to Hokandara Thalawathugoda Road	Kaduwela	1.27
58	WCO096	Palawatta Perera Mawatha	Kaduwela	0.78
59	WCO100	Galpoththe Road (190 main road) to front of Ceylon steel PVT Ltd.	Kaduwela	1.61
60	WCO101	Korathota Alwiswatta Madha Para	Kaduwela	0.93
61	WCO120	Sri Nandarama Road	Kaduwela	1.45
62	WCO047	Keels housing road Papiliyana	Kesbewa	0.64
63	WCO048	Wickramarathna Mw Papiliyana	Kesbewa	0.86
64	WCO049	Suriyamal Mawatha Diulapitiya	Kesbewa	0.70
65	WCO050	Bodhisiha Mw Dulapitiya	Kesbewa	0.88
66	WCO051	Mampe Koskanatha Mawatha	Kesbewa	1.03

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
67	WCO055	Palanwatta Mavithara Road	Kesbewa	0.96
68	WCO056	Mahalwarawa Bangalawattha Jayapura Road	Kesbewa	1.10
69	WCO058	Hermanminer Mawatha	Kesbewa	1.60
70	WCO059	Halpita pasal mawatha (2 Step)	Kesbewa	2.14
71	WCO060	Makandana Sudarshama Mawatha	Kesbewa	0.82
72	WCO061	Kesbewa Thanayama Road	Kesbewa	0.82
73	WCO062	Nampamunuwa Jayanthi Mawath	Kesbewa	0.92
74	WCO102	Developing Maharagama Ananda Maithree Mawatha	Kesbewa	1.04
75	WCO103	Developing Pannipitiya Cemetery Road	Maharagama	0.83
76	WCO106	Developing weeramawatha Munamale plase	Maharagama	0.56
77	WCO107	Developing Pannipitiya Bogahawaththa Road	Maharagama	1.12
78	WCO110	Developing Rukmale Nugeamulla junction to the Nugeamulla Road	Maharagama	0.84
79	WCO111	Developing Balance Part of Maharagama Kalalgoda Meemanagoda road	Maharagama	1.45
80	WCO113	Developing Pannipitya Pragathi Mawatha	Maharagama	0.60
81	WCO114	From Araliya Uyana Depanama Pannipitiya to Dambahena Road, Temple Road	Maharagama	2.09
82	WCO115	Developing Maharagama Pamunuwa railway avenue to Pannipitiya Bridge	Maharagama	1.31
83	WCO275	From Angulana Statin Road (to Uyana Rd)	Moratuwa	1.37
84	WCO276	Lunawa Uyana Road	Moratuwa	1.02
85	WCO278	Kaldemulla Eabert Lane	Moratuwa	1.03
86	WCO064	Padukka ring road Sections I, II, III & IV	Padukka	0.80
87	WCO065	Padukka Nimalsiri Mawatha	Padukka	1.60
88	WCO067	Kahawala Nakandala Road	Padukka	1.90
89	WCO068	Malagala Yatawathura Rathmalgoda Road	Padukka	2.90
90	WCO069	Yatawathura Kahawala Road	Padukka	1.10
91	WCO071	Padukka Jayanthi Mawatha 1	Padukka	1.50
92	WCO072	Udumulla Angamuwa Road	Padukka	1.98
93	WCO073	Meeriyagalla Weragala Road	Padukka	1.40
94	WCO074	Weragala Kudagala Road	Padukka	1.10
95	WCO075	Angamuwa Weragala Road	Padukka	1.15
96	WCO076	Weheragala Mawatha (Weheragala)	Padukka	0.80
97	WCO078	Bope Siyambalawa Road	Padukka	0.20
98	WCO079	Padukka Pusweli Mawatha	Padukka	0.78
99	WCO080	Arukwaththa Angampitiya Ganegoda Road	Padukka	1.40
100	WCO081	Angampitiya Fausy road	Padukka	2.20
101	WCO151	Poregedara Liyanwala road	Padukka	1.56

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
102	WCO153	Dampe Baige Watta road	Padukka	2.40
103	WCO197	Bope Wewalketiya Mahingala road	Padukka	2.30
104	WCO198	Bopewaththa road	Padukka	1.15
105	WCO199	Waga Bope Halpewaththa road	Padukka	5.30
106	WCO201	Pallewasala Kelimadala road	Padukka	1.15
107	WCO205	Waga Thiruwana main road	Padukka	0.75
108	WCO207	Angampitiya Uggalla Galkaduwa Kelimadala road	Padukka	3.70
109	WCO226	Halpe Pussagala road	Padukka	1.80
110	WCO229	Halpewaththa road	Padukka	4.65
111	WCO234	Pitumpe Annasigalahena road	Padukka	1.02
112	WCO235	Carpat laying & Development Road from waga iridapola to hlpe estate through boraluwatenna	Padukka	3.60
113	WCO258	Karadana-Wewita-Udugama-Bope kade	Padukka	4.80
114	WCO259	Arukwatta-Angamuwa-Meeriyagalla	Padukka	5.80
115	WCO260	Liyanwala - Kurugala	Padukka	3.35
116	WCO264	Horagala - Dampe	Padukka	2.90
117	WCO053	Develop the Garden Road (Rathmalana)	Ratmalana	0.52
118	WCO131	Develop the Bdowita 2nd Step, from Abesekara Mw	Ratmalana	0.55
119	WCO188	Hanwella central college road	Seethawaka	0.76
120	WCO189	Diddeniya Kehelhenakanda road	Seethawaka	1.92
121	WCO191	Diddeniya Bandarawaththa road	Seethawaka	1.53
122	WCO192	Diddeniya kammalwaththa road	Seethawaka	1.03
123	WCO193	E/Hanwella Eriyagolla Road	Seethawaka	1.38
124	WCO194	Tuntana Mahakanda Road	Seethawaka	2.97
125	WCO195	Hanwella Jayaweeragoda Road	Seethawaka	3.54
126	WCO196	Pahala Hanwella Walauwaththa road Sections I & II	Seethawaka	1.35
127	WCO209	Kosgama Balika road, from high-level road to Mawalgama road	Seethawaka	2.05
128	WCO210	Kadugoda railway station road	Seethawaka	0.92
129	WCO211	Mawalgama Kadugoda road	Seethawaka	1.41
130	WCO213	Arapangama Mawalgama road	Seethawaka	1.91
131	WCO214	Ihala Kosgama Aluboodala road	Seethawaka	2.71
132	WCO216	Weragollawatha Main road	Seethawaka	1.51
133	WCO217	Dunkalahena road	Seethawaka	3.05
134	WCO218	Ilukowita Koswaththa road	Seethawaka	1.09
135	WCO219	Thummodara paggnagula road	Seethawaka	3.22
136	WCO220	Ilkowita Digana Road	Seethawaka	0.90
137	WCO221	Welikanna Milladanda Elamalawala road	Seethawaka	2.07
138	WCO222	Welikanna Elamalawala road	Seethawaka	1.23

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
139	WCO224	Kadugoda Kahahena road	Seethawaka	3.18
140	WCO225	Brandigampala suduwella road	Seethawaka	1.37
141	WCO227	Main road and byroads from the police station on Aradanakanda Awissawella Mw to Aradandanakanda Watta	Seethawaka	0.89
142	WCO230	Development of Honigama road from the Kudagama road to JAK Bangalow	Seethawaka	0.91
143	WCO231	Developmant of Kudagama Menguswatta road	Seethawaka	1.00
144	WCO233	Byroads at Pragathipura	Seethawaka	0.95
145	WCO253	Avissawella - Kudagama	Seethawaka	2.54
146	WCO254	Puwakkpitiya - Kaluadura	Seethawaka	4.12
147	WCO255	Kosgama- Welikanna	Seethawaka	8.61
148	WCO256	Shantha Mariya Mawatha	Seethawaka	2.14
149	WCO289	Vidyala Road - 2nd Lane	Seethawaka	0.51

Source: Asian Development Bank.

#### IV.2. Gampaha District

Serial No.	Code	Road Name	Divisional Seretariat's Division	Length (kilometer)
1	WGA299	Nikahatikanda Karasnagala	Attanagalla	2.65
2	WGA300	Halgampitiya Thiriwanagala	Attanagalla	1.67
3	WGA331	Podu Jana Mawatha, Nittambuwa	Attanagalla	1.08
4	WGA332	St. Anthony Road, Nittambuwa	Attanagalla	0.65
5	WGA333	Nagoda, Gama meda Road	Attanagalla	3.43
6	WGA334	Bonegala Gama meda Road	Attanagalla	1.16
7	WGA335	Kuruduwattha road	Attanagalla	0.94
8	WGA336	Sudu Nelum Mawatha, Pannila	Attanagalla	1.47
9	WGA337	Opathella, Galboda Road	Attanagalla	0.93
10	WGA338	Welagedara Jaya Mawatha	Attanagalla	1.17
11	WGA339	Meewitagammana Yatawaka road	Attanagalla	1.66
12	WGA340	Aliwalapalla Rukmale road	Attanagalla	2.69
13	WGA341	Dadagamuwa meda road	Attanagalla	0.91
14	WGA344	All Closed Road of the Wetex Ground	Attanagalla	0.59
15	WGA347	Alawala Mahakanda road	Attanagalla	1.65
16	WGA348	Welikadamulla road	Attanagalla	2.51
17	WGA349	Udammita Ambalama Road	Attanagalla	2.30
18	WGA350	Katuwasgoda Road	Attanagalla	1.39
19	WGA351	Mahalegoda Road	Attanagalla	1.21
20	WGA352	Heendeniya Pattiyagoda Province Road	Attanagalla	0.90
21	WGA357	Bopaththa piriewna Road	Attanagalla	1.31
22	WGA358	Kalotuwawa Thapowana Road	Attanagalla	1.44

Serial No.	Code	Road Name	Divisional Seretariat's Division	Length (kilometer)
23	WGA411	Meegalla gammada Road	Attanagalla	1.80
24	WGA004	Ganawala Kohalwila	Biyagama	1.28
25	WGA122	Nalla Road	Divulapitiya	0.95
26	WGA186	The road from east Dagonna up to Halgahawela	Divulapitiya	2.46
27	WGA187	Road from Godigamuwa junction across temple junction up to Dehigahapallama Sections I & II	Divulapitiya	3.88
28	WGA188	Road across Kahabiliyawa Janapadhyia up to Allugolla	Divulapitiya	1.11
29	WGA189	Akaragama Mamit Janapadha Road	Divulapitiya	1.67
30	WGA191	Road from Karabotuwwewa up to Heralugedara	Divulapitiya	2.92
31	WGA192	Road from Aswennawatta up to Delgahamula junction	Divulapitiya	1.72
32	WGA193	Asswennawatta Ranaviru Mawatha from Nalapha junction up to Kurunegala Road	Divulapitiya	2.59
33	WGA194	Weragodamulla Arama Road from Asswennawatta Nawaloka junction up to Thambili Uyana Sudugolla junction	Divulapitiya	2.17
34	WGA195	Road from Ballapana Austin Glouse junction up to Ballapana through Madiththagama village	Divulapitiya	1.46
35	WGA196	Weeheana watta Road from Ulukade junction up to 12th milepost of Kurunegala road near the Sanasa Bank	Divulapitiya	0.53
36	WGA197	Road from Uorapana junction up to Hapugahagama School	Divulapitiya	2.24
37	WGA198	Road from Hapugahagama Cooperative junction up to Thammita Bomaluwa temple	Divulapitiya	1.20
38	WGA199	Road from Dissagewaththa up to Dagonna "Wela mada"	Divulapitiya	1.81
39	WGA202	Palliya Para Road from Waradala Minuwangoda Road statue up to Welihinda	Divulapitiya	1.48
40	WGA203	Polwaththa road from Waradala Negombo Road Junction	Divulapitiya	1.96
41	WGA204	Waradala Nagahalanda Road from Mr. Lionals Dispensary Junction up to Nagahalanda	Divulapitiya	1.28
42	WGA205	Road from Ambalangoda transformer up to Kelegedara junction Mr Ananada Boqtue	Divulapitiya	0.79
43	WGA207	Pitipanawatta Road from Kurunegala Road via C.T.B. Depot up to Ghanawasa Mawatha	Divulapitiya	1.48
44	WGA208	Ghanawasa Mawatha from Mirigama Road up to Pinnakele watta	Divulapitiya	1.50
45	WGA209	Road from Manikwaththa Jayabima Boutique up to Kasiwaththa	Divulapitiya	2.83
46	WGA210	Road from Katukenda up to Maningamuwa Alugolla junction to Mallawagedara Road	Divulapitiya	3.99
47	WGA211	St. Anthony's road from Katana Miriswatta road up to Katana Disagewatta Road	Divulapitiya	1.58
48	WGA212	Road from Hunumulla via Palliyapitiya up to Nelligahamula coconut factory	Divulapitiya	2.42
49	WGA213	Wewapara from Aluthapola road up to Katuwellegama temple	Divulapitiya	1.59

Serial No.	Code	Road Name	Divisional Seretariat's Division	Length (kilometer)
50	WGA214	Kandekale road from Madithiyawala Kopiwatta upto Medikale	Divulapitiya	2.01
51	WGA215	Kurundu waththa road from Kurunduwaththa up to Medikale	Divulapitiya	1.03
52	WGA216	Lunumidella Watta road from Walpita up to Kopiwatta	Divulapitiya	1.68
53	WGA217	Madagama Halpe main road from Meerigama Main road up to Kosatadeniya Hakurukumbura road	Divulapitiya	1.53
54	WGA218	Road from Diviapitiya main road opposite Dunagaha Deavalaya upto Palliyapitiya	Divulapitiya	1.17
55	WGA220	Road from Negambo main road up to Walpola via Dagonna Wimalananda School	Divulapitiya	0.93
56	WGA221	Road from Nalapana up to Diyagampola	Divulapitiya	3.49
57	WGA222	Welikatiya Rajagahapura road from Godigamuwa main road up to Palliyapitiya	Divulapitiya	1.93
58	WGA223	Road from Katukenda up to Kasiwatta	Divulapitiya	3.88
59	WGA224	Pothu Kepilla road from Dunagaha Thambilikatuwa up to south Kehelella	Divulapitiya	1.91
60	WGA225	Road from Kehelella colony up to Badalgama main road	Divulapitiya	1.22
61	WGA229	Road from Pitiyegedara Pillawa junction up to Halpe Batapotha	Divulapitiya	1.49
62	WGA230	Road from Mirigama road via Balagalla Privena up to Hanchapola	Divulapitiya	1.38
63	WGA231	Doonagaha Sevana Road from Induraga temple Road up to Godigamuwa Doonagaha Road Sections I & II	Divulapitiya	1.03
64	WGA232	The road to the West palliyapiiya started near the baseball Institute Godigamuwa road	Divulapitiya	0.98
65	WGA234	Sirigapathawatta Road up to Pethiyagoda School	Divulapitiya	2.55
66	WGA235	Halpe Kosatadeniya	Divulapitiya	1.52
67	WGA236	Akarawita Galwala	Divulapitiya	1.94
68	WGA238	Kaluwarippuwa Kangodamulla	Divulapitiya	1.58
69	WGA239	Thammita Delwagura	Divulapitiya	1.71
70	WGA415	Negombo - meerigama 242 bus route 12 Milepost to Till Hapuwalana Temple Sections I & II	Divulapitiya	2.82
71	WGA416	Negombo - meerigama 242 bus route - 12 Milepost to Ulukade Junction near 164/IA, Sewana Home Junction to Ganewaththa Temple	Divulapitiya	1.17
72	WGA417	Meegamuwa - meerigama 251 Bus Route Katana - Near Halpe icon to koongodamulla Church Junction - mawatha	Divulapitiya	1.87
73	WGA039	Kajuwattawila Indolamulla Road	Dompe	0.58
74	WGA040	Udugama Dangalla Road	Dompe	3.58
75	WGA043	Owutigama North Koshena Road	Dompe	0.87
76	WGA044	Kimbulwilawatta Morahena Road	Dompe	1.98
77	WGA047	Udamapitigama Meepavita Main Road	Dompe	2.30

Serial No.	Code	Road Name	Divisional Seretariat's Division	Length (kilometer)
78	WGA049	Keragala Danawkanda road via Estate	Dompe	1.12
79	WGA050	From Pelahela 1 Pole to Demalagama	Dompe	1.57
80	WGA051	Putupala Rambutanwatta Road	Dompe	2.66
81	WGA052	Pugoda Deththemulla Road	Dompe	1.22
82	WGA053	Werahera Hiswella Road	Dompe	1.99
83	WGA054	Alikehena Lansiyawatta Road	Dompe	0.94
84	WGA055	Palugama Pelangashena Gebrial Appuhami Mw	Dompe	2.44
85	WGA057	Katukanda Demalagama Main Road	Dompe	2.00
86	WGA061	Gampolagedara Pepolgahadeniya Section II	Dompe	3.01
87	WGA062	Henegama Wanaluwawa	Dompe	2.09
88	WGA065	Pugoda Mandawala	Dompe	4.67
89	WGA066	Waharaka Putupagala Keragala Road	Dompe	4.00
90	WGA361	Gampalagedara-Pepolgahadeniya road	Dompe	4.43
91	WGA363	Pahala Mapitigama, Keragala Mawatha (Ganga Mitiyawatha Road	Dompe	2.65
92	WGA370	Demalagama-Madurawa road	Dompe	2.13
93	WGA375	Pingamuwa-Kendagolla road	Dompe	3.32
94	WGA005	Parakum Mawatha	Gampaha	1.11
95	WGA006	Belummahara Jayasumanarama Road Sections I & II	Gampaha	1.46
96	WGA007	A.K.C. Amarasinghe Mawatha	Gampaha	1.09
97	WGA011	Imbulgoda Saliya Bathik Road	Gampaha	0.75
98	WGA014	Neduna Road	Gampaha	0.76
99	WGA020	Pathahawatta Road	Gampaha	0.88
100	WGA031	Ganemulla Bulugahagoda	Gampaha	2.85
101	WGA032	Horagolla Makilangamuwa	Gampaha	1.84
102	WGA033	Imbulgoda Ihalayagoda Moragoda	Gampaha	3.50
103	WGA034	Yagoda Thonduwa	Gampaha	1.33
104	WGA277	Suriyapaluwa Alhenawatha - Road	Gampaha	0.83
105	WGA294	Nedungahahena Embaraluwa	Gampaha	1.59
106	WGA069	Kudahakapola Temple Road	Ja-Ela	1.66
107	WGA072	Ragama Ketagewatta Road	Ja-Ela	1.33
108	WGA074	Kapuwagara Road	Ja-Ela	2.02
109	WGA075	De Mezanad College Road	Ja-Ela	0.57
110	WGA078	Narangodapaluwa Gemunu Mawatha	Ja-Ela	2.03
111	WGA080	Polpitimukalana Jaya Mawatha	Ja-Ela	1.00
112	WGA081	Yakkaduwa Vila Road	Ja-Ela	1.32
113	WGA083	Nivandama Galhidahena Road	Ja-Ela	1.75
114	WGA084	Nivandama Hambana Road Sections I & II	Ja-Ela	1.22
115	WGA087	Batuwatta Kendaliyaddapaluwa Road	Ja-Ela	0.95
116	WGA088	Batuwatta Gamini Mawatha Sections I & II	Ja-Ela	1.48
117	WGA241	Thoppuwa D.J. Fernandopulle Mw	Katana	1.98

Serial No.	Code	Road Name	Divisional Seretariat's Division	Length (kilometer)
118	WGA244	Udagangawa New Lanka Road	Katana	1.42
119	WGA245	Bambukuliya St. Micle Mw	Katana	1.19
120	WGA246	Udagangawa Welakkanny Road	Katana	0.64
121	WGA248	Road near Dewamottawa subost office	Katana	0.50
122	WGA249	Dewamottawa Banduwatta Road	Katana	1.11
123	WGA251	Gothamiland Road - Kasagahawatta	Katana	0.83
124	WGA254	Galmankada Molawaatta Road	Katana	1.67
125	WGA255	Kussala Katana Meda Para	Katana	0.77
126	WGA377	Kibulapitiya Paththayamwathhha Road	Katana	1.60
127	WGA385	Madawala Aramba road	Katana	0.72
128	WGA095	Sudama Road	Kelaniya	1.13
129	WGA096	Sewalee Kelanitissa Road (Welikeliya)	Kelaniya	0.63
130	WGA008	Nedungamuwa Wanatha Road Sections I & II	Mahara	1.25
131	WGA276	Suriyapaluwa Batahena - Main Road	Mahara	1.03
132	WGA280	Mahara Nugegoda Devala Road	Mahara	1.50
133	WGA281	Ihala Karagahamuna Mangala Mawatha	Mahara	1.38
134	WGA282	Polhena Road - Kandaliyaddapaluwa	Mahara	1.01
135	WGA284	Ihala Karagahamuna School Road	Mahara	1.79
136	WGA286	Balivila Road	Mahara	2.70
137	WGA289	Kanatha Road Gonahena	Mahara	1.53
138	WGA291	Buthpitiya Ginigesma	Mahara	2.63
139	WGA292	Gonahena Weboda	Mahara	1.58
140	WGA293	Kirikitta Onauwkanda	Mahara	1.38
141	WGA295	Pasgammana Ambagaspitiya	Mahara	1.62
142	WGA296	Rathupaswala Henegama	Mahara	3.96
143	WGA297	Weboda Embaraluwa	Mahara	1.27
144	WGA301	292 Village Winibula North Pinthaliya Road	Mahara	1.36
145	WGA400	Neelamahara Doranadiwela Road	Mahara	1.51
146	WGA401	Amunukumbura Jambu Gahamula Main Road	Mahara	1.55
147	WGA402	Henagama Gadumana Rajapaksha mawatha	Mahara	2.42
148	WGA403	Keenigama Dambuwawaththa Main Road	Mahara	1.16
149	WGA404	Neelamahara to Aramangoda North Main Road	Mahara	1.57
150	WGA405	Henagama Imbula Junction to kerikiththa Halwaththa Main Road	Mahara	1.03
151	WGA406	Uruwala Boogahawatta road	Mahara	1.31
152	WGA407	Kandaliyaddapaluwa keselwaththa road	Mahara	0.74
153	WGA408	Gonahena eksath samagi mawatha	Mahara	1.12
154	WGA409	Gonahena nagahakumbura road	Mahara	1.13
155	WGA412	Mahara ihala karagamulla gamini mawatha	Mahara	0.97
156	WGA413	Kadawatha Ganemulla Road - main road of 100 Athkam niwasa	Mahara	0.64
157	WGA258	Madurawila Gammeda Road	Minuwangoda	1.22



Serial No.	Code	Road Name	Divisional Seretariat's Division	Length (kilometer)
158	WGA259	Pethiyagoda Bandaranayaka Road	Minuwangoda	1.37
159	WGA260	Marapola Gamamedda Road	Minuwangoda	1.73
160	WGA261	Vigoda - Marapola Main Road	Minuwangoda	1.78
161	WGA262	Metikotamulla - Walpitamulla Main road	Minuwangoda	1.85
162	WGA264	Siyabalapitiya Lokingamuwa	Minuwangoda	1.24
163	WGA265	Uggalboda Dewala Mawatha	Minuwangoda	1.69
164	WGA268	Thammita Katugasthota	Minuwangoda	1.81
165	WGA107	Deverlopment of public road at Loluwigoda Harankahawa	Mirigama	1.69
166	WGA113	Deverlopment of public road at Mottunna Puhulowita 1st & 2nd lane	Mirigama	1.21
167	WGA114	Deverlopment of public road at Kappitiwalana Hirikuluwa	Mirigama	0.96
168	WGA118	Development of the public road Ambepussa near Army camp	Mirigama	2.34
169	WGA123	Development of the public road Radawadunna near temple	Mirigama	0.72
170	WGA124	Development of public road to Naligama from Lindara	Mirigama	1.40
171	WGA126	Development of public road at Waththe Gedara Mangedara	Mirigama	0.69
172	WGA127	Development of the public road at Ambalanwththa near police station	Mirigama	0.74
173	WGA128	Development of the public road at Mirigama Ambalanwththa near Plat	Mirigama	1.80
174	WGA136	Weyangoda Diulgashandiya	Mirigama	6.80
175	WGA298	Kongasdeniya Panawala	Mirigama	3.00
176	WGA318	Pahala Mottawa waththa near Mr. Upasena's Home-Common Road Sections I & II	Mirigama	1.23
177	WGA320	Main road of Ambanawaththa Flat to Common Road	Mirigama	1.07
178	WGA137	Nawammahara Main Road	Wattala	1.87
179	WGA146	Thuduwe Gedara Jude Mawatha	Wattala	1.56
180	WGA153	Maradana Road	Wattala	0.95
181	WGA177	Bant Road	Wattala	0.74
182	WGA180	Weliamuna Road	Wattala	1.27
183	WGA184	Prakrama Road from Negombo Road to Guludupita	Wattala	1.28

Source: Asian Development Bank.

**IV.3. Kalutara District**

Serial No.	Code	Road Name	Divisional Seretariat's Division	Length (kilometer)
1	WKL005	Harankahapatha road	Agalawatta	3.44
2	WKL007	Kudakalupahana road	Agalawatta	4.46
3	WKL010	Nivithigala Navitigala road	Agalawatta	2.04

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
4	WKL235	Bellana Egoda Watta road	Agalawatta	2.71
5	WKL170	Tissa Mawatha	Bandaragama	1.00
6	WKL172	Retiyalagoda Road Magederawatta	Bandaragama	1.84
7	WKL174	Rerukana Samaranayaka Road	Bandaragama	1.24
9	WKL191	Galtude - Weedagama	Bandaragama	4.35
10	WKL015	Rockland Road	Beruwala	1.88
11	WKL017	Ambalppala Road	Beruwala	1.14
12	WKL019	Danwaththagoda - Maddegoda - Kalawila Road Section I	Beruwala	1.10
13	WKL021	Sahira College Road	Beruwala	0.73
14	WKL023	Maggonna Kudawa Road	Beruwala	0.70
15	WKL026	From Kalawellawa Via Mirishena to Govinna Dambalanawatta Road	Bulathsinhala	3.34
16	WKL027	Paragoda Gamage Watta Road	Bulathsinhala	2.60
17	WKL029	Eta Kanda Road	Bulathsinhala	1.89
18	WKL030	From Galahena Junction to Mirishena Factory	Bulathsinhala	2.13
19	WKL267	Kobawakalhala Opalla Road	Bulathsinhala	4.72
20	WKL040	Bombuwela Alhenkanda Ruwanmaga Road	Dodangoda	2.40
21	WKL043	Malaboda Mithurugama Road	Dodangoda	1.65
22	WKL044	Dikhena Pahanwaththa Main Road	Dodangoda	1.64
23	WKL047	Bombuwela Thotagewatta Road	Dodangoda	1.95
24	WKL048	Serupita Pitawila Road	Dodangoda	2.76
25	WKL049	Kethhena water pump house Road	Dodangoda	0.69
26	WKL051	Naboda Deegalla Road	Dodangoda	2.00
27	WKL059	Dodangoda - Tebuwana	Dodangoda	3.00
28	WKL061	Kumbuka Narangahahena Road	Horana	2.10
29	WKL062	Meewanapalana Siriltonwatta Diganwela Road	Horana	1.37
30	WKL063	Millewa Miriswatta Road	Horana	2.83
31	WKL064	Horaketiya Meewanapalana Road	Horana	2.89
32	WKL065	Kahattagoda Road	Horana	2.35
33	WKL071	From Moragahahena Main Road, Welekade to Batuwita Junction across the kahatapitiya	Horana	2.57
34	WKL072	Dambara Millewa Road	Horana	5.67
35	WKL073	Handupelpola Kahawala Road	Horana	1.62
36	WKL074	Kidelpitiya Kahawala Road	Horana	2.02
37	WKL075	Kudauduwa Handupelpola	Horana	2.50
38	WKL076	Kumbuka Pansala Road	Horana	1.41
39	WKL078	Perengiyawala Munagama Road	Horana	5.00
40	WKL208	Koskolawatta Road	Horana	1.41
41	WKL265	Ranawiru Samantha Mawatha	Horana	1.85

Serial No.	Code	Road Name	Divisional Secretariat's Division	Length (kilometer)
42	WKL066	Ingiriya Manana Dombagaskanda Road	Ingiriya	3.72
43	WKL067	Handapangoda Getakossawa Road	Ingiriya	2.65
44	WKL068	Palpitigoda Maputugala Road	Ingiriya	2.93
45	WKL069	Elabada Para MahalIngiriya	Ingiriya	2.00
46	WKL260	Kekulandola Batugampola Kirigala Road	Ingiriya	1.47
47	WKL263	Rathmalgoda Hadapangoda	Ingiriya	7.56
48	WKL264	Delgashandiya Rathmalgoda Road (Kajuwetiya)	Ingiriya	1.45
49	WKL131	Gonaduwa Kawatayagoda Dilwella Road	Kalutara	1.85
50	WKL133	Mawala Weniwelgala Road	Kalutara	1.39
51	WKL136	Mawala Kuruduwatta Road	Kalutara	1.00
52	WKL139	Uggalboda Edirikele Road	Kalutara	2.40
53	WKL141	Palathota Samagi Road	Kalutara	1.02
54	WKL144	Egoda Malegama Road	Kalutara	0.66
55	WKL145	Mihikathawatta Road Sections I, II & III	Kalutara	1.08
56	WKL147	Duwa Temple Road	Kalutara	0.59
57	WKL150	Ethanamadala - Jawatta	Kalutara	1.25
58	WKL153	Malwatta - Jawatta	Kalutara	2.55
59	WKL159	Diyagama - Gangabada	Kalutara	1.65
60	WKL168	Uggalboda - Kudaduwegama	Kalutara	2.20
61	WKL082	Ampitigala Road to Anguruwatota	Madurawala	4.53
62	WKL083	Warakagoda Mathru Sayana Road to Ihala Karannagoda	Madurawala	1.77
63	WKL084	Warakagoda Gamagoda Road to Kottayahena	Madurawala	1.36
64	WKL085	Batawala Road	Madurawala	1.88
65	WKL086	Dewananda Road	Madurawala	2.03
66	WKL087	Welipotha Road Dikhenapura	Madurawala	1.72
67	WKL090	Sirikandura junction to Sandasirigama via Valiketiya road	Mathugama	7.41
68	WKL092	Horakandamulla road	Mathugama	1.60
69	WKL093	Pallegodawatta road	Mathugama	1.42
70	WKL094	Manannawatta road	Mathugama	1.29
71	WKL097	Welipenna Uragoda road	Mathugama	2.02
72	WKL105	Mathugama Manana Bopitiya	Mathugama	4.56
73	WKL106	Keeranthidiya Palligoda	Mathugama	2.22
74	WKL266	Puwakwaththa Keppetiyagahalanda Road	Mathugama	0.58
75	WKL053	Tebuwana–Aguruwatota	Millaniya	4.73
76	WKL182	Millaniya Deldorawatta Road	Millaniya	1.01
77	WKL185	Kelesgamuwa Road	Millaniya	2.10
78	WKL186	Lenawara Tibbatugoda Road	Millaniya	0.82

<b>Serial No.</b>	<b>Code</b>	<b>Road Name</b>	<b>Divisinal Secretariat's Division</b>	<b>Length (kilometer)</b>
79	WKL187	Weniwelpitiya Road	Millaniya	2.00
80	WKL188	Lenawara Koskandawatta Road	Millaniya	1.16
81	WKL255	Haltota - Manana	Millaniya	5.25
82	WKL258	Panagoda - Uduwara	Millaniya	6.78
83	WKL268	Pethigamuwakanda Main Road	Millaniya	2.32
84	WKL011	Lathpandura - Erigiriya	Palindanuware	1.06
85	WKL014	Baduraliya - Magutra - Panigala	Palindanuware	3.94
86	WKL238	Magura Gurugoda road	Palindanuware	2.08
87	WKL243	To Kanatthagoda Magura Temple road	Palindanuware	0.52
88	WKL253	Seeladola - Thawana	Palindanuware	8.42
89	WKL213	Development of Walana Gamunu Mw	Panadura	1.57
90	WKL214	Thanthirimulla Dharmarama Mw	Panadura	0.84
91	WKL218	Thanthirimulla Galgoda Rd	Panadura	0.83
92	WKL223	Panadura - Kindelpitiya	Panadura	7.50
93	WKL224	Piliyandala - Henamulla	Panadura	2.01
94	WKL227	Walana - Bekkegama - Hirana	Panadura	3.50
95	WKL112	Miriswatta School road	Walallavita	1.67
96	WKL113	Bothalawa road	Walallavita	4.09
97	WKL115	Gulanawatta Nawala Mandagala road	Walallavita	4.11
98	WKL117	Uthuru Pitigala road	Walallavita	1.31
99	WKL118	Horana Peruwa road	Walallavita	2.28
100	WKL119	Barodelwatta road	Walallavita	2.02
101	WKL121	Gallenamulla Pansala road	Walallavita	1.65
102	WKL123	Neluwa - Karapagala	Walallavita	2.32

Source: Asian Development Bank.

**LIST OF DELETED PROJECTS (IN WESTERN PROVINCE) DUE TO IMPROVEMENTS BY  
LOCAL ROAD AGENCIES AS OF APPRAISAL OF TRANCHE 2**

Serial No.	Code	Road Name	Length (km)	SD Division
1	WCO026	Develop the Hath Bodiya Road	0.61	Dehiwala
2	WCO031	Develop the Bodiya Road	0.54	
3	WCO096	Palawatta Perera Mawatha	0.78	Kaduwa
4	WCO048	Wickramarathna Mw Papiliyana	0.86	Kesbewa
5	WCO056	Mahalwarawa Bangalawatta Jayapura Road	1.10	
6	WCO060	Makandana Sudarshana Mawatha	0.82	
7	WCO103	Developing Pannipitiya Cemetery Road	0.79	Maharagama
8	WCO106	Developing weeramawatha Munamale place	0.56	
9	WCO107	Developing Pannipitiya Bogahawaththa Road	1.12	
10	WCO110	Developing Rukmale Nugeamulla junction to the Nugeamulla Road	0.84	
11	WCO111	Developing Balance Part of Maharagama Kalalgoda Meemanagoda road	1.45	
12	WCO113	Developing Pannipitiya Pragathi Mawatha	0.60	
13	WCO114	From Araliya Uyana Depanama Pannipitiya to Dambahena Road, Temple Road	2.09	
14	WCO053	Develop the Garden Road (Rathmalana)	0.52	Ratmalana
15	WCO179	Cemetery Road in Sandun pura in mattegoda	1.00	Homagama
16	WCO272	Kahatuduwa - Diyakade	2.33	
17	WCO126	Nagaraseema Mawatha	1.24	
18	WCO129	Habarakada Mullegama J.A. Karunasena Mawatha	0.90	
19	WCO133	Habarakada Kamath godalla road	0.60	
20	WCO136	Jalithara Aramaya road to jaya Mw junction falls through the city of west auctioning land	1.70	
21	WCO152	Udagewatta Gurugewatte road	1.70	
22	WCO156	Panagoda-Romiyel mawatha	2.10	
23	WCO159	Layanel Jayasinghe Mawatha towards to Ranaviru Gammana Village. Sections I & II	1.60	
24	WCO265	Dampe - Pitipana	2.60	
25	WCO195	Hanwella Jayaweeragoda Road	3.54	Seethawaka
26	WCO217	Dunkalahena road	3.05	
27	WCO227	Main road and By-roads from the Police station on Aradanakanda Awissawella Mw to Aradandanakanda Watta	0.89	
28	WCO230	Development of Honigama road from the Kudagama road to JAK Bangalow	0.91	
29	WCO253	Avissawella - Kudagama	2.54	
30	WCO188	Hanwella central college road	0.76	
31	WKL172	Retiyalagoda Road Magederawatta	1.84	Bandaragama
32	WKL180	Alubomulla I R Perera Mawatha	0.74	
33	WKL069	Elabada Para Mahalingiriya	2.00	Ingiriya
34	WKL213	Development of Walana Gamunu Mw	1.57	Panadura
35	WKL053	Tebuwana-Aguruwatota	4.73	Millaniya
36	WGA055	Palugama Pelangashena Gebrial Appuhami Mw	2.44	Dompe
37	WGA057	Katukanda Demalagama Main Road	2.00	
38	WGA061	Gampolagedara Pepolghadeniya <b>Section II</b>	3.01	
39	WGA062	Henegama Wanaluwawa	2.09	
40	WGA065	Pugoda Mandawala	4.67	
41	WGA066	Waharaka Putupagala Keragala Road	4.00	

42	WGA361	Gampalagedara-Pepolgahadeniya road	4.43	
43	WGA280	Mahara Nugegoda Devala Road	1.50	Mahara
44	WGA281	Ihala Karagahamuna Mangala Mawatha	1.38	
45	WGA286	Balivila Road	2.70	
46	WGA300	Halgampitiya Thiriwanagala	1.67	Attanagalla
47	WGA331	Podu Jana Mawatha, Nittambuwa	1.08	
48	WGA294	Nedungahahena Embaraluwa	1.59	Gampaha
49	WGA075	De Mezanad College Road	0.57	Ja-Ela
50	WGA083	Nivandama Galhidahena Road	1.75	
51	WGA241	Thoppuwa D.J. Fernandopulle Mw	1.98	Katana
52	WGA244	Udagangawa New Lanka Road	1.42	
53	WGA246	Udagangawa Welakkanny Road	0.64	
54	WGA377	Kibulapitiya Paththayamwathhha Road	1.60	
55	WGA276	Suriyapaluwa Batahena - Main Road	1.03	Mahara
56	WGA260	Marapola Gamamedda Road	1.73	Minuwangoda
<b>Total</b>			<b>94.30</b>	

Source: Asian Development Bank.

**LIST OF ADDITIONAL NATIONAL ROADS (IN WESTERN PROVINCE) INCLUDED UNDER  
THE PROGRAM AS OF APPRAISAL OF TRANCHE 3**

<b>Serial No.</b>	<b>Code</b>	<b>Road Name</b>	<b>Length (km)</b>
1	A002	Colombo-Galle-Hambanthota-Wellawaya Road from William Junction to Maliban Junction (8+320 – 13+350 km)	5.03
2	B389	Ratmalana-Mirihana Road from Ratmalana to Bekariya Junction (0+000 – 2+300 km)	2.30
3	A003	Peliyagoda-Puttalam Road from Peliyagoda Roundabout to Nawaloka roundabout & Dandugama to Kochchikade bridge (0+000 - 0+600) & (19+000 – 37+600 km)	19.20
4	B214	Kelaniya-Mudungoda road from Nagahamula Junction to Belummahara (6+000 – 29+100 km)	23.10
5	B240	Kotte-Bope Road from Malabe to Godagama (5+000 – 16+800 km)	11.80
6	B263	Malabe-Kaduwela road (0+000 – 5+630 km)	5.63
7	B062	Borella-Rajagiriya road (0+000 – 1+380 km)	1.38
8	B345	Pagoda-Pitakotte road (0+000 – 1+530 km)	1.53
9	B368	Pitakotte-Thalawathugoda road (0+000 – 4+230 km)	4.23
<b>Total</b>			<b>74.20</b>

km = kilometer.

Source: Asian Development Bank.

**LIST OF EQUIPMENT TO BE PROCURED UNDER THE MULTITRANCHE FINANCING FACILITY**

No.	Name of Equipment	No. of Equipment
<b>Pavement Investigation/Design and Asphalt Content Testing</b>		
1	Falling Weight Deflectometer (FWD) with Ground Penetrating Radar (GPR) including a tow vehicle	1
2	LFWD (Lightweight FWD) with remote control	2
3	Pavement friction tester (PFT)/Locked wheel skid tester with tow vehicle	1
4	Dynamic Testing System (25 kN, Triaxial test cell, indirect tensile strength test Jig)	1
5	Heavy duty digital oven for asphalt mixture	1
6	Four-Point Bending Beam Test Fixture	1
7	H-type strain gauge for asphalt pavement (5), aggregate strain gauge (5), pressure cell (5), thermocouples (10) with 12-channel data logger (1)	16
8	MMLS (Mobile Load Simulator)	1
9	Hamburg wheel-tracking device	1
10	Portable skid tester (British pendulum)	2
11	Skid tester slider	30
12	Portable GPS	2
<b>Soil Testing</b>		
1	Automatic Triaxial Tester with software (soil)	1
2	Field CBR tester & KIT with vehicle bracket	1
3	Multispeed CBR tester	1
4	Fully automated consolidation system	1
5	Universal hydraulic extruder	1
6	Electronic oven (250 cc + 2x100 cc)	3
7	Bending Beam Rheometer	1
8	Dynamic Shear Rheometer	1
9	Compaction moulds	50
10	Speedy moisture tester	3
11	Motor-operated digital dynamic cone penetrometer	2
12	Hydrometer	1
13	Twelve channel data acquisition and processing system	1
14	Automatic, programmable PROCTOR / CBR compactor with microprocessor	1
15	Rapid Moisture Meter Kit	2
16	Cassegrande apparatus (LL, PL)	2
17	Linear shrinkage moulds	10
18	Proctor Compaction Hammer (Modified)	3
19	Proctor Compaction Hammer (Standard)	3
20	Proctor moulds (50), compaction disk (10), cutting collar (10)	70
<b>Bitumen, Emulsion and Thermoplastic Road Marking Testing</b>		
1	Thermometers for softening point (-2°C to +80°C)	6
2	Thermometers for penetration test (19°C to 27°C)	6
3	Thermometers for flash point & fire point (-6°C to 400°C)	6
4	Hubbard specific gravity bottles, 24 ml capacity	10



No.	Name of Equipment	No. of Equipment
5	Glass funnels long stem, 50 mm dia	5
6	Surface thermometers (Infrared) -50°C to 250°C	10
7	Digital thermometers (300 mm length), (0°C –250°C)	6
8	Dial thermometers 300 mm X 12, 450 mm X 3	15
9	Hot plate	3
10	Ductility bath (Digital)	1
11	Distillation apparatus (Emulsion)	3
12	Water bath (Heat & Cooling)	2
13	Deep Freezer	1
14	Heat resisting gloves	60
15	Neopreneg	36
16	Bitumen SG apparatus (Digital)	2
17	Distillation apparatus (Cut Back)	2
18	Emulsion SG apparatus (Digital)	1
19	Digital flash point and Fire Point Apparatus	1
20	Furnace (1200C)	1
21	Fume cupboard	2
22	Travelling beam data logger rolls	50
23	Kinematic Viscometer Tube No-4 ASTM-D 2170	4
24	Kinematic Viscometer Tube No-5 ASTM-D 2170	4
25	Kinematic Viscometer Tube No-6 ASTM-D 2170	4
26	Kinematic Viscometer Tube No-7 ASTM-D 2170	10
27	Asphalt extractor	3
28	Digital balance (Minimum 0.1 g) 6 kg	3
29	Digital balance (Minimum 0.001 g) 210 g	2
30	Glass tube 16 mm Pirex	15
31	Gas jar 315 x 75 mm	8
32	Digital thickness gauge	2
33	Marshal compactor	3
34	Solubility apparatus (ASTM D - 2042)	3
35	Hot plates 300 x 600 mm rectangular	1
36	Beaker 800 ml	10
37	Beaker 600 ml	10
38	Beaker 1000 ml	10
39	Set of sieves (200 mm to 75 microns)	2
40	Sieve shaker	1
41	Compressor with installment for Gyrator compactor	1
<b>Concrete Testing</b>		
1	Temperature control curing tank with cooler unit – Large (min 15°C)	1
2	Temperature control curing tank with cooler unit – Small (min 15°C)	1
3	30 kg digital balance (0.1 g)	5
4	Digital penetrometer (ASTM-D5)	1
5	Digital balance 50 kg (0.1 g)	1
6	Humidity cabinet	1

No.	Name of Equipment	No. of Equipment
7	Hydraulic rebar bend re-bend testing machine	1
8	Digital point load test apparatus	1
9	Point load tester	1
10	Angle metal grinder	1
11	Cement mortar mixer & molds	1
12	Jolting apparatus	1
13	Compression testing machine (300 kN)	1
14	Cement strength test cube moulds	30
15	Test mould (cube and cylinder)	50
16	Flexural strength testing machine	1
<b>Chemical Testing</b>		
1	Atomic absorption spectrophotometer	1
2	FTIR (Fourier Transform Infra Red) Tester	1
3	Refrigerator	2
4	Microscope	1
5	Fume cupboard	1
6	Procurement of chemicals	Lump sum
<b>Ground Investigation</b>		
1	Boring machine (100 m* NW casing spindle type) with pressure pump (P250, three piston)	1
2	Boom truck	1
3	Pressure pump (P250, Three piston)	1
<b>Laboratory/Office Items</b>		
1	Air condition (18000BTU)	6
2	Electrical maintenance toolbox (Clipon Multimeter)	1
3	Laboratory management system (software) with accessories	1
4	Computer	20
5	Laptops	10
6	High-speed color printer	1
7	Digital camera	6
8	Black laser printer	5
9	Scanner	4
10	Photocopier	1
11	Multimedia projector with accessories	2
11	Sound system with 3 Fm mics and amplifier	1
12	Improve office network + server	1
13	Projector screen	1
14	Lecture room chairs	80
15	Safety helmets	30
16	Telephone system	1
16	Procurement of standards/test methods/books	
17	Mobile lab with testing equipment	1
18	Procurement of equipment to enhance the Provincial Laboratories	
19	Power generator (100 kVA)	1

No.	Name of Equipment	No. of Equipment
20	Commercial vehicle (van)	2
21	Thermometer with data logger	10

Source: Asian Development Bank.

## DESIGN AND MONITORING FRAMEWORK OF THE MULTITRANCHE FINANCING FACILITY

Impact the Program is Aligned with:			
Connectivity between rural communities and socioeconomic centers in Sri Lanka improved (Public Investment Programme, 2017–2020) <sup>a</sup>			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
<b>Outcome</b> Transport efficiency on project roads increased	By 2027: a. Travel time on rural project roads reduced by 20% from 2016 rate (2016 baseline: travel time of each project)  b. Travel time on national project roads reduced by 10% from 2016 rate (2016 baseline: travel time of each project)  c. Average daily vehicle-km increased to 4.6 million (2016 baseline: 3.5 million vehicle-km)	a.–c. RDA survey	Government's budgetary constraints lead to inadequate maintenance of road assets.
<b>Outputs</b> 1. Road conditions between the selected rural communities and socioeconomic centers improved	1a. By 2024: At least 3,400 km of rural access roads improved to an all-weather standard and maintained under PBM contracts (2017 baseline: Not improved)  1b. By 2026: At least 340 km of national roads rehabilitated and maintained under PBM contracts (2017 baseline: Not rehabilitated)  1c. By 2024: At least three awareness sessions per district held on (i) road safety, with women comprising more than 50% of participants; and (ii) sexually transmitted diseases, including HIV, with women comprising more than 40% of participants (2017 baseline: Not applicable)  1d. By 2026: At least 30% of local maintenance workers hired are women (2017 baseline: Not applicable)	1a.–1d. RDA project performance monitoring system	Implementation is delayed by extreme weather conditions.
2. Capacity of road agencies enhanced	By 2024: 2a. Knowledge and skills of at least 100 road agency staff regarding safeguards, road safety awareness, PBM contract management, and rural road design and construction	2a. Training program reports	

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
	<p>increased (2017 baseline: Not applicable)</p> <p>2b. Full set of research equipment commissioned and action plan for research capacity enhancement implemented (2017 baseline: Not commissioned and implemented)</p> <p>2c. Mechanistic–empirical pavement design, road asset management system, information management system, and rural road safety guidelines developed (2017 baseline: Not developed)</p> <p>2d. Policy measures on financial sustainability endorsed by the MOHW and the RDA (2017 baseline: Not endorsed)</p>	2b–2d. Capacity building program reports	
<b>Key Activities with Milestones</b> <p><b>1. Road conditions between the selected rural communities and socioeconomic centers improved</b></p> <p>1.1 Mobilize project implementation consultants by 2018.</p> <p>1.2 Complete engineering design and bidding documents by 2017.</p> <p>1.3 Award all contracts for civil works by 2019.</p> <p>1.4 Complete civil works by 2021.</p> <p>1.5 Implement performance monitoring survey of the investment program from 2017 to 2027.</p> <p><b>2. Capacity of road agencies enhanced</b></p> <p>2.1 Mobilize project implementation consultants by 2018 and other capacity development consultants by 2019.</p> <p>2.2 Develop capacity development training programs for road agencies by 2019.</p> <p>2.3 Procure equipment by 2020 and implement action plan for research capacity enhancement by 2024.</p> <p>2.4 Develop mechanistic–empirical pavement design, road asset management system, information management system, and rural road safety guidelines by 2021.</p> <p>2.5 Develop policy alternatives to improve financial sustainability by 2019, have the MOHW and the RDA endorse the most suitable policy arrangements by 2020, and implement the identified policy by 2022.</p> <p>2.6 Conduct the training programs by 2024.</p>			
<b>Inputs</b> <p>ADB: \$900 million (loan)</p> <p>Government: \$184.6 million</p>			
<b>Assumptions for Partner Financing</b> <p>Not Applicable</p>			

ADB = Asian Development Bank, km = kilometer, MOHW = Ministry of Highways, PBM = performance-based maintenance, RDA = Road Development Authority.

<sup>a</sup> Government of Sri Lanka, Department of National Planning, Ministry of National Policies and Economic Affairs. 2017. Public Investment Programme 2017–2020. Colombo.

Source: Asian Development Bank.

### DESIGN AND MONITORING FRAMEWORK FOR TRANCHE 3

<b>Impact the Program is Aligned with:</b> Connectivity between rural communities and socioeconomic centers in Sri Lanka improved (Public Investment Programme, 2017–2020) <sup>a</sup>			
<b>Results Chain</b>	<b>Performance Indicators with Targets and Baselines</b>	<b>Data Sources and Reporting Mechanisms</b>	<b>Risks</b>
<b>Outcome</b> Transport efficiency on project roads increased	By 2027: a. Travel time on rural project roads reduced by 20% from 2016 rate (2016 baseline: travel time of each project) (OP 2.4.1; OP 5.1.1)  b. Travel time on national project roads reduced by 10% from 2016 rate (2016 baseline: travel time of each project) (OP 2.4.1)  c. Average daily vehicle-km increased to 4.6 million (2016 baseline: 3.5 million vehicle-km)	a.–c. RDA survey	Government's budgetary constraints lead to inadequate maintenance of road assets.
<b>Outputs</b> 1. Road conditions between the selected rural communities and socioeconomic centers improved	1a. By 2024: At least 3,400 km of rural access roads improved to an all-weather standard and maintained under PBM contracts (2017 baseline: Not improved) (OP 1.3.1; OP 3.2.5; OP 5.1.1)  1b. By 2026: At least 340 km of national roads rehabilitated and maintained under PBM contracts (2017 baseline: Not rehabilitated) (OP 1.3.1; OP 3.2.5)  1c. By 2024: At least three awareness sessions per district held on (i) road safety, with women comprising more than 50% of participants; and (ii) sexually transmitted diseases, including HIV, with women comprising more than 40% of participants (2017 baseline: Not applicable)  1d. By 2026: At least 30% of local maintenance workers hired are women (2017 baseline: Not applicable)	1a.–d. RDA project performance monitoring system	Implementation is delayed by extreme weather conditions.
2. Capacity of road agencies enhanced	By 2024: 2a. Knowledge and skills of at least 100 road agency staff regarding safeguards, road safety awareness, PBM contract management, and rural	2a. Training program reports	

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
	road design and construction increased (2017 baseline: Not applicable) (OP 6.1.1)		
	2b. Full set of research equipment commissioned and action plan for research capacity enhancement implemented (2017 baseline: Not commissioned and implemented)	2b.–2d. Capacity building program reports	
	2c. Mechanistic–empirical pavement design, road asset management system, information management system, and rural road safety guidelines developed (2017 baseline: Not developed)		
	2d. Policy measures on financial sustainability endorsed by the MOHW and the RDA (2017 baseline: Not endorsed)		

**Key Activities with Milestones (to be conducted during the implementation of tranche 3)**
**1. Road conditions between the selected rural communities and socioeconomic centers improved**

- 1.1 Complete 70% of physical works by 2023.
- 1.2 Conduct the performance monitoring survey of the investment program during the implementation of tranche 3.
- 1.3 Conduct at least two awareness session per district on road safety and sexually transmitted diseases by 2023.

**2. Capacity of road agencies enhanced**

- 2.1 Mobilize all necessary capacity development consultants by 2022.
- 2.2 Develop capacity development training programs for road agencies by 2021.
- 2.3 Start the equipment procurement in 2021 and complete it by 2022, commence to implement action plan for research capacity enhancement in 2022.
- 2.4 Develop mechanistic–empirical pavement design by 2023.
- 2.5 Commence policy alternatives to improve financial sustainability by 2021, have the MOHW and the RDA endorse the most suitable policy arrangements by 2023.
- 2.6 Knowledge and skills of at least 70 road agency staff regarding safeguards, road safety awareness, PBM contract management, and rural road design and construction increased by 2023.

**Inputs**

Facility	Tranche 3
Asian Development Bank: \$900 million (loan)	\$200 million (loan)
Government of Sri Lanka: \$184.6 million	\$15.7 million

**Assumptions for Partner Financing**

Not Applicable

km = kilometer, OP = operational priority, PBM = performance-based maintenance, RDA = Road Development Authority.

Noted: Because of the time-slice nature of the multitranche financing facility, the design and monitoring framework reflects the impact, outcome, and outputs of the facility. The specific deliverables of tranche 3 are indicated under Key Activities with Milestones.

<sup>a</sup> Government of Sri Lanka, Department of National Planning, Ministry of National Policies and Economic Affairs. 2017. [\*Public Investment Programme, 2017–2020\*](#). Colombo. The impact is also aligned with [\*National Policy Framework Vistas of Prosperity and Splendour, 2020-2025\*](#).

**Contribution to Strategy 2030 Operational Priorities**

Expected values and methodological details for all OP indicators to which this operation will contribute results are detailed in Contribution to Strategy 2030 Operational Priorities (accessible from Appendix 6).

Source: Asian Development Bank.



## PROCUREMENT PLAN

### Basic Data

<b>Project Name:</b> Second Integrated Road Investment Program–Tranche 1, Tranche 2, and Tranche 3	
<b>Project Number:</b> 50301-002 (Tranche 1) 50301-003 (Tranche 2) 50301-003 (Tranche 3)	<b>Approval Number:</b> 3579/3580 (Tranche 1) 3851 (Tranche 2) xxxx (Tranche 3)
<b>Country:</b> Sri Lanka	<b>Executing Agency:</b> Ministry of Highways (formerly Ministry of Higher Education and Highways)
<b>Project Procurement Classification:</b> Category B	<b>Implementing Agency:</b> Road Development Authority
<b>Project Procurement Risk:</b> Medium	
<b>Tranche 1</b> <b>Project Financing Amount:</b> \$172,100,000 <b>ADB Financing:</b> \$150,000,000 <b>Cofinancing (ADB Administered):</b> <b>Non-ADB Financing:</b> \$22,100,000  <b>Tranche 2</b> <b>Project Financing Amount:</b> \$171,800,000 <b>ADB Financing:</b> \$150,000,000 <b>Cofinancing (ADB Administered):</b> <b>Non-ADB Financing:</b> \$21,800,000  <b>Tranche 3</b> <b>Project Financing Amount:</b> \$215,720,000 <b>ADB Financing:</b> \$200,000,000 <b>Cofinancing (ADB Administered):</b> <b>Non-ADB Financing:</b> \$15,720,000	<b>Project Closing Date:</b> 31 December 2020 (Tranche 1) 31 December 2022 (Tranche 2) 31 December 2023 (Tranche 3)
<b>Date of First Procurement Plan:</b> 10 August 2017	<b>Date of this Procurement Plan:</b> 22 February 2021
<b>Advance Contracting:</b> Yes	<b>e-GP:</b> No

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

#### 1. Procurement and Consulting Methods and Thresholds

1. 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 (ICB) for Goods	\$2,000,000 and above	
National Competitive Bidding (NCB) for Goods	Between \$100,000 and \$1,999,999	The first NCB is subject to prior review, thereafter, post review. Eligible international bidders from the member countries are allowed to participate in the NCB.
Shopping for Goods	Up to \$99,999	
International Competitive Bidding for Works	\$15,000,000 and above	
National Competitive Bidding for	Between \$100,000 and	The first NCB is subject to prior

Procurement of Goods and Works		
Method	Threshold	Comments
Works	\$14,999,999	review, thereafter, post review. Eligible international bidders from the member countries are allowed to participate in the NCB.
Shopping for Works	Up to \$99,999	

Consulting Services	
Method	Comments
Quality- and Cost-Based Selection for Consulting Firm	90:10 quality to cost ratio
Individual Consultant Selection for Individual Consultant	

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

2. 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
None							

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

3. 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
IC-IC1 (International)	Road asset management specialist	\$430,000.00	ICS	Post (Sampling)	Q1 /2024		Assignment: International  Expertise: Road asset management specialist  Covid-19 Response? No
IC-IC2 (International)	Road safety specialist	\$430,000.00	ICS	Post (Sampling)	Q1 / 2022		Assignment: International  Expertise: Road safety specialist  Covid-19 Response? No
IC-IC3 (International)	Public finance management specialist	\$260,000.00	ICS	Post (Sampling)	Q2 / 2021		Assignment: International  Expertise: Public finance management specialist  Covid-19 Response? No

Package Number	General Description	Estimated Value	Recruitment Method	Review (Prior/ Post)	Advertisement Date (quarter/year)	Type of Proposal	Comments
IC-IC4 (International)	Road maintenance specialist	\$260,000.00	ICS	Post (Sampling)	Q2 / 2021		Assignment: International  Expertise: Road maintenance specialist  Covid-19 Response? No
ME-IC1 (International)	ME specialist	430,000.00	ICS	Post (Sampling)	Q4 / 2021		Assignment: International  Expertise: ME specialist  Covid-19 Response? No
ME-NC1 (National)	ME engineer	\$130,000.00	ICS	Post (Sampling)	Q3 / 2021		Assignment: National  Expertise: ME engineer  Covid-19 Response? No
ME-NC2 (National)	Pavement engineer	\$130,000.00	ICS	Post (Sampling)	Q3 / 2021		Assignment: National  Expertise: Pavement engineer  Covid-19 Response? No
RC-IC1 (International)	Geotechnical engineer for research capacity enhancement	\$430,000.00	ICS	Post (Sampling)	Q3 / 2022		Assignment: International  Expertise: Geotechnical engineering  Covid-19 Response? No
RC-IC2 (International)	Materials engineer for research capacity enhancement	\$430,000.00	ICS	Post (Sampling)	Q1 / 2023		Assignment: International  Expertise: Materials engineering  Covid-19 Response? No
RC-NC1 (National)	Geotechnical engineer for research capacity enhancement	\$130,000.00	ICS	Post (Sampling)	Q3 / 2022		Assignment: National  Expertise: Geotechnical engineering  Covid-19 Response? No

Package Number	General Description	Estimated Value	Recruitment Method	Review (Prior/ Post)	Advertisement Date (quarter/year)	Type of Proposal	Comments
RC-NC2 (National)	Materials engineer for research capacity enhancement	\$130,000.00	ICS	Post (Sampling)	Q1 / 2023		Assignment: National  Expertise: Materials engineer  Covid-19 Response? No
IC-NC3 (National)	Public administration specialist	\$72,000.00	ICS	Post (Sampling)	Q2 / 2021		Assignment: National  Expertise: Public finance  Covid-19 Response? No

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

4. 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
EQ1	Falling Weight Deflectometer including tow vehicle and Light Weight Deflectometer with remote control	860,000.00	1	SHOPPING	Post		Q1 / 2022	Advanced Contracting: No  Covid-19 Response? No
EQ-10 (National)	Power Generator	60,000.00	1	SHOPPING	Post		Q3 / 2021	Advanced Contracting: No  Covid-19 Response? No
EQ-11 (National)	Vehicles	360,000.00	1	SHOPPING	Post		Q2 / 2021	Advanced Contracting: No  Covid-19 Response? No
EQ2	Pavement Friction Tester	430,000.00	1	SHOPPING	Post		Q3 / 2021	Advanced Contracting: No  Covid-19 Response? No

Goods and Works								
Package Number	General Description	Estimated Value	Number of Contracts	Procurement Method	Review (Prior/ Post)	Bidding Procedure	Advertisement Date (quarter/year)	Comments
EQ3 (National)	Dynamic Testing System	920,000.00	1	SHOPPING	Post		Q2 / 2021	Advanced Contracting: No  Covid-19 Response? No
EQ4 (National)	Four-point bending beam test fixture, etc.	280,000.00	1	SHOPPING	Post		Q2 / 2022	Advanced Contracting: No  Covid-19 Response? No
EQ5 (National)	Equipment for Pavement Investigation/ Design, Asphalt Testing and Soil Testing	240,000.00	1	SHOPPING	Post		Q2 / 2021	Advanced Contracting: No  Covid-19 Response? No
EQ6 (National)	Equipment for Bitumen, Emulsion & Thermoplastic Road Marking Testing	110,000.00	1	SHOPPING	Post		Q2 / 2021	Advanced Contracting: No  Covid-19 Response? No
EQ7 (National)	Equipment for Concrete Testing and Chemical Testing	180,000.00	1	SHOPPING	Post		Q4 / 2021	Advanced Contracting: No  Covid-19 Response? No
EQ8 (National)	Equipment for Laboratory and Office Items	240,000.00	1	SHOPPING	Post		Q2 / 2021	Advanced Contracting: No  Covid-19 Response? No
EQ9 (National)	Equipment to enhance the Provincial Laboratories	330,000.00	1	SHOPPING	Post		Q2 / 2021	Advanced Contracting: No  Covid-19 Response? No

Consulting Services								
Package Number	General Description	Estimated Value	Number of Contracts	Recruitment Method	Review (Prior/ Post)	Advertisement Date (quarter/year)	Type of Proposal	Comments
IC-NC2	Rural Road Specialist	70,000.00	1	ICS	Post	Q2/2021		Assignment: National  Expertise: Rural road  Advanced

								Contracting: No
								Covid-19 Response? No

## B. Indicative List of Packages Required Under the Project

5. 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	Number of Contracts	Recruitment Method	Review (Prior/Post)	Type of Proposal	Comments
None							

## C. List of Awarded and Ongoing, and Completed Contracts

6. The following tables list the awarded and ongoing 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
NP/VA-04	Rehabilitation/ improvement and maintenance of 100.31 km rural roads in Vavuniya district in Northern Province – Package 4	\$15,990,000	\$20,003,050.79	ICB	Q3 / 2018	17-JUN-19	
NP/JF-01	Rehabilitation/ improvement and maintenance of 56.57 km rural roads in Jaffna district, Northern Province – Package 1	\$13,300,000	\$17,023,239.71	NCB	Q3 / 2018	03-MAY-19	
NP/MU-02	Rehabilitation/ improvement and maintenance of 68.01 km rural roads in Mulaitivu district, Northern	\$14,950,000	\$19,391,974.06	NCB	Q3 / 2018	17-JUN-19	

	Province – Package 2						
NP/MU-01	Rehabilitation/ improvement and maintenance of 73.33 km rural roads in Mulaitivu district, Northern Province – Package 1	\$13,840,000	\$17,538,757.03	NCB	Q3 / 2018	17-JUN-19	
UVA/BA-01	Rehabilitation/ Improvement and maintenance of 57.88 km rural roads in Badulla district in the Uva Province – Package 1	\$14,420,000	\$13,246,760.42	NCB	Q2 / 2017	12-FEB-18	
UVA/BA-08	Rehabilitation/ Improvement and maintenance of 60.82 km rural roads in Badulla district in the Uva Province – Package 8	\$12,190,000	\$11,905,448.34	NCB	Q2 / 2017	12-FEB-18	
UVA/MO-02	Rehabilitation/ Improvement and maintenance of 63.29 km rural roads in Monaragala district in the Uva Province – Package 2	\$11,700,000	\$12,189,947.6	NCB	Q2 / 2017	12-FEB-18	
UVA/MO-01	Rehabilitation/ Improvement and maintenance of 63.76 km rural roads in Monaragala district in the Uva Province – Package 1	\$13,640,000	\$14,440,951.39	NCB	Q2 / 2017	12-FEB-18	
UVA/MO-05	Rehabilitation/ Improvement and maintenance of 64.15 km rural roads in Monaragala district in the Uva Province – Package 5	\$13,600,000	\$13,252,562.15	NCB	Q2 / 2017	12-FEB-18	
UVA/MO-07	Rehabilitation/ Improvement and maintenance of 64.80 km rural roads in Monaragala district in the Uva Province – Package 7	\$11,760,000	\$11,972,213	NCB	Q2 / 2017	12-FEB-18	

UVA/BA-04	Rehabilitation/Improvement and maintenance of 65.46 km rural roads in Badulla district in the Uva Province – Package 4	\$11,570,000	\$13,651,634.91	NCB	Q2 / 2017	12-FEB-18	
UVA/MO-04	Rehabilitation/Improvement and maintenance of 65.78 km rural roads in Monaragala district in the Uva Province – Package 4	\$13,560,000	\$14,655,225.58	NCB	Q2 / 2017	12-FEB-18	
UVA/MO-03	Rehabilitation/Improvement and maintenance of 70.02 km rural roads in Monaragala district in the Uva Province – Package 3	\$11,990,000	\$14,184,773.39	NCB	Q2 / 2017	12-FEB-18	
EP/AM-05	Rehabilitation/Improvement and maintenance of 71.97 km rural roads in Ampara district, Eastern Province – Package 5	\$16,360,000	\$17,285,380.77	ICB	Q2 / 2018	03-MAY-19	
EP/AM-04	Rehabilitation/Improvement and maintenance of 75.46 km rural roads in Ampara district, Eastern Province – Package 4	\$16,420,000	\$16,779,229.08	ICB	Q2 / 2018	03-MAY-19	
UVA/BA-05	Rehabilitation/Improvement and maintenance of 77.99 km rural roads in Badulla district in the Uva Province – Package 5	\$14,500,000	\$16,140,251.08	NCB	Q2 / 2017	12-FEB-18	
UVA/BA-02	Rehabilitation/Improvement and maintenance of 79.86 km rural roads in Badulla district in the Uva Province – Package 2	\$14,820,000	\$14,580,046.12	NCB	Q2 / 2017	12-FEB-18	
EP/AM-03	Rehabilitation/Improvement and maintenance of 80.93 km rural	\$16,480,000	\$15,166,278.59	ICB	Q2 / 2018	03-MAY-19	



	roads in Ampara district, Eastern Province – Package 3						
EP/AM-01	Rehabilitation/ Improvement and maintenance of 82.67 km rural roads in Ampara district, Eastern Province – Package 1	\$13,370,000	\$11,819,760.48	NCB	Q2 / 2018	03-MAY-19	
UVA/MO-06	Rehabilitation/ Improvement and maintenance of 96.98 km rural roads in Monaragala district in the Uva Province – Package 6	\$14,830,000	\$17,483,535.01	NCB	Q2 / 2017	12-FEB-18	
EP/AM-02	Rehabilitation/ Improvement and maintenance of 97.59 km rural roads in Ampara district, Eastern Province – Package 2	\$14,280,000	\$13,001,645.96	NCB	Q2 / 2018	03-MAY-19	
WP ICB Rural Road	Rehabilitation/ improvement and maintenance of rural roads Western Province	\$97,860,000	\$83,127,522.68	ICB	Q2 / 2019		
WP NCB Rural Road	Rehabilitation/ improvement and maintenance of rural roads in Western Province – Package 3	\$55,420,000	\$47,079,108.69	NCB	Q2 / 2019		
EP/TR-01	Rehabilitation/ improvement and maintenance of 59.66 km rural roads in Trincomalee district, Eastern Province – Package 1	\$17,380,000	\$15,623,788.25	ICB	Q2 / 2018	03-MAY-19	
NP/KN-03	Rehabilitation/ improvement and maintenance of 60.31 km rural roads in Kilinochchi district, Northern Province – Package 3	\$13,100,000	\$16,895,093.47	NCB	Q3 / 2018	17-JUN-19	
EP/BT-01	Rehabilitation/ improvement	\$17,590,000	\$15,750,597.95	ICB	Q2 / 2018	03-MAY-19	

	and maintenance of 71.98 km rural roads in Batticaloa district, Eastern Province – Package 1						
EP/BT-03	Rehabilitation/ improvement and maintenance of 72.54 km rural roads in Batticaloa district, Eastern Province – Package 3	\$15,920,000	\$16,914,811.8	ICB	Q2 / 2018	03-MAY-19	
EP/TR-02	Rehabilitation/ improvement and maintenance of 75.95 km rural roads in Trincomalee district, Eastern Province – Package 2	\$15,120,000	\$15,085,539.63	ICB	Q2 / 2018	03-MAY-19	
EP/BT-02	Rehabilitation/ improvement and maintenance of 76.76 km rural roads in Batticaloa district, Eastern Province – Package 2	\$17,740,000	\$15,734,650.56	ICB	Q2 / 2018	03-MAY-19	
NP/JF-04	Rehabilitation/ improvement and maintenance of 29.10 km rural roads in Jaffna district, Northern Province – Package 4	\$7,220,000	\$9,140,687.51	NCB	Q3 / 2018	17-JUN-19	
NP/VA-03	Rehabilitation/ improvement and maintenance of 35.60 km rural roads in Vavuniya district, Northern Province – Package 3	\$11,610,000	\$15,129,508.27	NCB	Q3 / 2018	17-JUN-19	
NP/VA-02	Rehabilitation/ improvement and maintenance of 47.59 km rural roads in Vavuniya district, Northern Province – Package 2	\$10,240,000	\$13,168,140.19	NCB	Q3 / 2018	17-JUN-19	
NP/MN-03	Rehabilitation/ improvement and	\$10,740,000	\$13,648,578.5	NCB	Q3 / 2018	17-JUN-19	

	maintenance of 49.01 km rural roads in Mannar district, Northern Province – Package 3						
NP/KN-02	Rehabilitation/ improvement and maintenance of 53.60 km rural roads in Kilinochchi district, Northern Province – Package 2	\$10,870,000	\$14,019,929.56	NCB	Q3 / 2018	17-JUN-19	
NP/MN-01	Rehabilitation/ improvement and maintenance of 56.03 km rural roads in Mannar district, Northern Province – Package 1	\$17,750,000	\$16,895,093.47	ICB	Q3 / 2018	17-JUN-19	
NP/MN-02	Rehabilitation/ improvement and maintenance of 61.30 km rural roads in Mannar district, Northern Province – Package 2	\$12,600,000	\$14,864,900.45	NCB	Q3 / 2018	17-JUN-19	
NP/JF-05	Rehabilitation/ improvement and maintenance of 64.22 km rural roads in Jaffna district, Northern Province – Package 5	\$16,450,000	\$20,922,658.97	ICB	Q3 / 2018	17-JUN-19	
NP/JF-02	Rehabilitation/ improvement and maintenance of 67.64 km rural roads in Jaffna district, Northern Province – Package 2	\$15,820,000	\$16,935,856.79	ICB	Q3 / 2018	17-JUN-19	
NP/KN-01	Rehabilitation/ improvement and maintenance of 67.87 km rural roads in Kilinochchi district, Northern Province – Package 1	\$11,810,000	\$13,467,126.29	NCB	Q3 / 2018	17-JUN-19	
NP/JF-03	Rehabilitation/ improvement and maintenance of 71.81 km rural roads in Jaffna district, Northern Province –	\$17,650,000	\$18,065,017.57	ICB	Q3 / 2018	17-JUN-19	

	Package 3						
EP/TR-03	Rehabilitation/ improvement and maintenance of 80.32 km rural roads in Trincomalee district, Eastern Province – Package 3	\$13,950,000	\$15,183,016.19	NCB	Q2 / 2018	03-MAY-19	
NP/VA-01	Rehabilitation/ improvement and maintenance of 95.48 km rural roads in Vavuniya district, Northern Province – Package 1	\$16,260,000	\$21,129,106.8	ICB	Q3 / 2018	17-JUN-19	
UVA/BA-06	Rehabilitation/ improvement and maintenance of 63.00 km rural roads in Badulla district in Uva Province – Package 6	13,850,000.00	15,114,693.46	NCB	Q2 / 2017	12-FEB-18	
UVA/BA-07	Rehabilitation/ improvement and maintenance of 67.19 km rural roads in Badulla district in Uva Province – Package 7	13,570,000.00	15,859,703.60	NCB	Q2 / 2017	12-FEB-18	
UVA/BA-03	Rehabilitation/ improvement and maintenance of 83.53 km rural roads in Badulla district in Uva Province – Package 3	13,930,000.00	15,843,836.31	NCB	Q2 / 2017	12-FEB-18	

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
PIC05	Project implementation consultants (Eastern Province)	\$7,790,000	\$5,474,187.28	QCBS	Q2 / 2017	18-FEB-19	
PIC 06	Project implementation consultants (Uva Province)	\$8,690,000	\$6,649,451.19	QCBS	Q2 / 2017	20-JUN-18	
PIC 07	Project implementation consultants (Western Province)	\$6,920,000	\$5,612,825.13	QCBS	Q2 / 2017	25-SEP-19	
PIC04	Project	\$9,730,000	\$6,644,431.05	QCBS	Q2 / 2017	03-AUG-19	

	implementation consultants (Northern Province)						
ME-IC2 (International)	Pavement engineer	\$430,000	\$128,250	ICS	Q3 / 2019	18-FEB-20	
IC-NC1 (National)	Information technology specialist	\$200,000	\$23,140.76	ICS	Q3 / 2019	01-DEC-19	

## **D. National Competitive Bidding**

### **A. Regulation and Reference Documents**

7. The procedures to be followed for national competitive bidding (NCB) shall conform to the provisions prescribed in the Procurement Guidelines 2006 for Goods and Works issued in January 2006 by the National Procurement Agency, and the specific procedures prescribed by the Procurement Manual issued in March 2006, with the clarifications and modifications described in the following paragraphs required for compliance with the provisions of the ADB Procurement Guidelines (2015, as amended from time to time).

### **E. Procurement Procedures**

#### **1. Eligibility**

8. The eligibility of bidders shall be as defined under Section I of ADB's Procurement Guidelines. Accordingly, no bidder or potential bidder should be declared ineligible for reasons other than those provided in Section I of these guidelines.

#### **2. Registration and Sanctioning**

9. Registration is acceptable under the following conditions:

- (i) Bidding shall not be restricted to pre-registered firms under the national registration system of the Construction Industry Development Authority (CIDA), and such registration shall not be a condition for the submission of bids in the bidding process.
- (ii) Where registration is required prior to award of contract, bidders (i) shall be allowed a reasonable time to complete the CIDA registration process; and (ii) shall not be denied registration for reasons unrelated to their capability and resources to successfully perform the contract, which shall be verified through post-qualification.
- (iii) National sanction lists or blacklists may be applied only with prior approval of ADB.

#### **3. Prequalification**

10. Prequalification is discouraged for NCB. When used, particularly for works contracts, an individual prequalification exercise is acceptable for each contract as is the use of a registration system (or approved standing list) of contractors based on criteria such as experience, financial capacity, and technical capacity. Foreign bidders from eligible countries must, however, be allowed to register and to bid without unreasonable cost or additional requirements.

#### **4. Advertising**

11. The posting of NCB specific notices for contracts valued at less than \$1 million on ADB's website is not required but is highly recommended.

#### **5. Preferences**

12. The following shall be observed:

- (i) No preference of any kind shall be given to domestic bidders or for domestically manufactured goods.
- (ii) Foreign suppliers and contractors from ADB member countries shall be allowed to bid, without registration, licensing, and other government authorizations, leaving compliance with these requirements for after award and before signing of contract.

#### **6. Participation by Government-Owned Enterprises**

13. Government-owned enterprises in the Democratic Socialist Republic of Sri Lanka shall be eligible to participate only if they can establish that they are legally and financially autonomous, operate under commercial law, and are not a dependent agency of the procuring entity, or the project executing agency or implementing agency.

#### **7. Rejection of Bids and Rebidding**

14. Bids shall not be subjected to a test for unrealistic rates. No lowest evaluated and substantially responsive bid shall be rejected on the basis of comparison to rates, including but not limited to market, historical, or agency established rates, without prior approval of ADB.

15. Bids shall not be rejected and new bids solicited without ADB's prior concurrence.

#### **8. Price Negotiations**

16. Price negotiation shall be allowed only where the price offered by the lowest evaluated and substantially responsive bidder substantially exceeds cost estimates. Approval of ADB is required prior to any negotiation of prices.

### **F. Bidding Documents**

#### **1. Acceptable Bidding Documents**

17. Procuring entities shall use standard bidding documents acceptable to ADB for the Procurement of Goods, Works and Consulting Services, based ideally on the standard bidding documents issued by ADB.

#### **2. Bid Security**

18. Where required, bid security shall be in the form of a certified check, a letter of credit, or a bank guarantee from a reputable bank.

### **3. ADB Policy Clauses**

19. 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.

20. 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, coercive or obstructive practices in competing for the contract in question.

21. 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 ADB 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.

## TERMS OF REFERENCE FOR EASTERN PROVINCE

### A. Project Implementation

#### 1. Background

1. The Road Development Authority (RDA), with the funding assistance of the Asian Development Bank (ADB), is implementing the Integrated Road Investment Program–Phase 1 in Sri Lanka to enhance the connectivity of rural socioeconomic centers. About 3,130 kilometers (km) of rural roads are being rehabilitated and maintained through this program in Central, North Central, North Western, Sabaragamuwa, and Southern provinces and Kalutara district in Western Province.

2. In this context, the Democratic Socialist Republic of Sri Lanka has applied for a multitranche financing facility (MFF) from ADB for the Second Integrated Road Investment Program (iRoad 2) to enhance the scope for the remaining areas of Eastern, Northern, Uva, and Western provinces and to improve the access routes between rural areas and socioeconomic centers. The program includes the rehabilitation and improvement of approximately 3,650 km of roads in four separate geographical areas through conventional road contracts (CRC) covering rural access roads and national roads, including post-construction performance-based maintenance. Part of the funds from the MFF shall be used to engage an international consultancy firm as project implementation consultant (PIC) to assist the RDA in project implementation, including construction supervision, supervision of post-construction maintenance work, contract management, and other implementation activities in the CRC component. This outline provides the terms of reference (TOR) for PIC services for the CRC in Eastern Province.

3. The executing agency (EA) of the iRoad 2 program is the Ministry of Higher Education and Highways (MOHWEH) and the implementing agency (IA) is the RDA. Project implementation consultants are to be engaged. The overall proposed PIC organizational arrangement is in Appendix E.

4. The general roles and responsibilities of the various parties for iRoad 2 are as follows (Table E.1):

**Table E.1: Project Participants and Roles**

<b>iROAD 2 Participants</b>	<b>General Roles and Responsibilities</b>
PIU	<ul style="list-style-type: none"> <li>• Project and safeguards management</li> <li>• Approval of all variations of contracts for consulting services and civil works</li> </ul>
Advisory Consultants Individual Consultants	<ul style="list-style-type: none"> <li>• Assisting the PIU in areas requiring special expertise, e.g., contract management, procurement, information technology, institutional strengthening, capacity development, and road safety</li> </ul>
SAPE Team	<ul style="list-style-type: none"> <li>• Feasibility study, safeguard documents, and level-2 designs</li> <li>• Community consultation along project roads</li> </ul>
PIC (CRC)	<ul style="list-style-type: none"> <li>• Reviewing and confirming the design and scope of works when the contractors apply the level-2 designs to the roads under CRC packages</li> <li>• Construction supervision of CRC packages</li> <li>• Supervision of post-construction maintenance work in CRC packages</li> <li>• Monitoring safeguard activities</li> <li>• Providing on-the-job training to the PIU, EA, IA, and provincial and local road agencies in project management and contract administration</li> </ul>



iROAD 2 Participants	General Roles and Responsibilities
Contractors	<ul style="list-style-type: none"> <li>Detailed design based on the level-2 design for CRC packages, or the conceptual design for the road management contract packages</li> <li>Delivering the physical works as required in the CRC, or the level of services as required in the road management contract</li> <li>For the road management contract packages, the work includes various asset management tasks</li> <li>Implementing safeguards requirements in the contract</li> </ul>

CRC = conventional road contracts, EA = executing agency, IA = implementing agency, iRoad 2 = Second Integrated Road Investment Program, PIC = project implementation consultant, PIU = project implementation unit, SAPE = survey and preliminary engineering.

Source: Asian Development Bank.

5. Among other scopes of consulting services, the main task of the PIC is to assist the RDA in supervising and/or implementing the civil works in the CRC component of the iRoad 2 program.

6. In the CRC component, conventional measure and value contracts, requiring detailed contract supervision, will be used for road rehabilitation. Initial construction is to be completed in the first 2 years, followed by a 3-year performance-based maintenance period. The roads under the contract packages will be isolated length.

7. The tentative number of contract packages of civil works to be monitored and supervised by the PIC in Eastern Province are indicated below (Table E.2).

**Table E.2: Tentative Number of Civil Works Contract Packages**

Name of District	Tentative Number of Contract Packages
Ampara	4
Batticaloa	4
Trincomalee	4

Source: Asian Development Bank.

8. Approximately 900 km of rural and provincial roads will be rehabilitated in Eastern Province. Contract package size would be SLRs2,100 million.

9. The PIC for Eastern Province will assist the project implementation unit (PIU) in the implementation of the contracts, including site supervision of construction activities, monitoring maintenance performance, and other due diligence as defined in further detail in the next paragraphs.

10. The indicative timeline for implementation of the physical works is as follows (Table E.3):

**Table E.3: Implementation Timeline**

Item	Conventional Road Contract Packages
Physical works commence	Tentatively in first quarter of 2018
Duration of rehabilitation works	2 years
End of performance-based maintenance period	3 or 5 years from end of rehabilitation works

Source: Asian Development Bank.

11. **The team leader of the PIC will act as the engineer in the contracts.** The consultant will also be required to discharge other responsibilities outlined in the TOR.

12. The PIC for Eastern Province shall use the most up-to-date software and technology for administration of the construction contracts. The consultant shall ensure that all electronic files in relation to the deliverables of this TOR are in a format compatible with those used by the EA. The EA uses the Microsoft Office suite of software, ArcGIS for geographic information system applications, and AutoCad for drawings. Further clarification on any aspect of this requirement can be obtained from the PIU. All files are to be provided in soft copy and hard copies of reports are also required as defined below. Subject to request by the PIU, some reports should also be provided in PDF format.

## **2. Project Administration in Eastern Province**

13. Civil works under the CRC packages will be carried out based on the International Federation of Consulting Engineers (FIDIC) Construction Contract MDB Harmonised Edition (June 2010).

14. The PIC for Eastern Province will (i) undertake contract administration based on the FIDIC contract; (ii) undertake safeguards compliance to ensure that all safeguards (social, environmental, and indigenous peoples) are complied with under the project; (iii) carry out the project performance and monitoring survey 3 times—at the start of the consultancy contract, at midterm (end of the construction period), and at the end of the project (end of performance-based maintenance period); (iv) prepare and implement a capacity development program, including training, workshops, and seminars on project management and contract administration for the staff of MOHWEH, the RDA, and provincial and local road agencies; (v) prepare monthly reports on project progress and other issues; (vi) prepare a project completion report when the project is substantially completed, incorporating comments from the PIU, the IA, the EA, and ADB.

15. The PIC for Eastern Province will administer the construction contracts and ensure that the contractual clauses for both quality and specifications of works are complied with, and the works are constructed in accordance with the provisions of the construction contracts.

16. The PIC for Eastern Province, while supervising construction works, will make all necessary arrangements for the implementation of quality assurance and quality control plans following industry standards and best practices. In consultation with the PIU and EA. The PIC for Eastern Province will make all engineering decisions required for the successful and timely completion of the construction contracts, and will have all the powers defined as those of the engineer under the FIDIC.

17. If necessary, the PIC for Eastern Province will liaise with other co-financiers under the project to keep them briefed about the project.

## **3. Detailed Scope of PIC Consulting Services for Eastern Province**

18. Contract administration is in accordance with the FIDIC Conditions of Contract MDB Harmonised Edition (June 2010):

- (i) Administer the contractors' work in accordance with the FIDIC conditions of contract.
- (ii) Supervise the contractors' work and certify the works in accordance with contract conditions. Ensure the construction methods proposed by the contractor for carrying out the works are satisfactory.

- (iii) Arrange site meetings with contractors at regular intervals to discuss progress and quality of works, and to resolve any related problems.
- (iv) Verify geometric designs, including embankments, designs of structure, and the pavement design of project roads by design consultants. If necessary, make necessary amendments as and when required.
- (v) Review and approve contractors' working drawings, method statements, programs, and any other documents.
- (vi) Develop quality assurance system and inspection and testing plan.
- (vii) Inspect contractors' construction equipment, results of material and soil tests, and safety of the work, property, and personnel. Inspect and test all materials and works to ensure compliance with specifications, and give immediate notice to the contractor to undertake remedies in the event that such materials and works fail to comply with the specifications.
- (viii) Recommend to the IA the rates for any unscheduled items of work that may arise.
- (ix) Certify work volume and process interim and final payments of the contractors.
- (x) Establish efficient procedures for verifying contractor performance and control reports, quality survey records, requests for variations or change orders, requests for time extensions, and contractor's claims and invoices.
- (xi) Ensure project financial management procedures are in place and strictly followed, specifically relating to payments, financial accounting, financial reporting, and record keeping.
- (xii) Check as-built drawings prepared by the contractors. Keep and record a complete set of as-built drawings in paper and electronic formats for safekeeping in the employer's repository.
- (xiii) Ensure road safety design requirements are implemented in accordance with the contract documents and specifications.
- (xiv) Monitor contractor's conformity with traffic control and road safety action plans during construction.
- (xv) Assist the IA in the provisional and final handover of works by the contractors.

19. The bill of quantities for civil works contracts in the project has been prepared based on preliminary designs. During the civil works contract implementation, the respective civil works contractor will carry out detailed designs and prepare accordingly the cost to completion of civil works contracts. The PIC for Eastern Province has to review and approve all designs for construction.

20. All the necessary designs and the cost to completion for the civil works contract must be prepared by the contractor and reviewed and approved by the PIC for Eastern Province within 4 months from the start date of the civil works contract. The same design including cost to completion shall, if necessary, be reviewed and revised every 3 months. A detailed timeline for this exercise must be agreed between the PIC for Eastern Province and the contractor for the design work at the beginning of the civil works contract.

21. Findings of the transect walk during the survey and preliminary engineering stage have to be incorporated in the detailed design based on the concept of the Context Sensitive Design approach.

22. Based on the details submitted by civil works contractors, the PIC for Eastern Province should evaluate the cost to completion of each civil works contract every 3 months and advise the project director accordingly.

23. The quality assurance system will be adopted for all civil works contracts in the projects. The PIC for Eastern Province should review and approve of the quality assurance system and the inspection and testing plan. The consultant should also monitor the implementation of quality assurance systems in civil works contracts.

24. Most of the project roads are located in rural areas and scattered. When reviewing contractors' method statements and programs, the consultant should review whether the contractors execute the work with minimum inconvenience to the public.

25. Any contractors' proposals for adopting new methods or technology in construction to overcome material scarcity should be reviewed and the RDA and the contractor advised accordingly.

26. Following are measures for safeguard compliance monitoring:

- (i) Ensure the project complies with requirements stipulated in the environmental assessment review framework (EARF), the resettlement framework, and the indigenous peoples planning framework that were developed for the project based on ADB's Safeguard Policy Statement (2009) and the conditions and guidelines stipulated by the Central Environmental Authority of Sri Lanka.
- (ii) Assist and guide the IA in ensuring compliance with environmental and social safeguards.
- (iii) Assist and guide the IA and contractors in complying with requirements stipulated in the gender action plan.
- (iv) Assist and guide the IA on the land donation process (as per the resettlement framework) and, if required, collect baseline data to prepare a land acquisition and resettlement plan (for national roads where land acquisition is permitted) and carry out other impact assessments in accordance with the resettlement framework, EARF, ADB's Safeguard Policy Statement (2009), and the relevant laws and regulations of the host country.
- (v) Update the resettlement plans when necessary and help the employer in seeking necessary approvals of the government and ADB.
- (vi) If land acquisition and resettlement are necessary, assist the IA in preparing and supervising the implementation of the land acquisition and resettlement plan.
- (vii) Assist the IA in establishing a grievance redress mechanism and in its proper functioning and management.
- (viii) Monitor the implementation of the gender action plan and ensure activities are carried out as planned and relevant baseline and monitoring data are collected.
- (ix) Carry out the following duties related to environmental safeguards:
  - (a) ensure all environmental mitigation measures as outlined in the initial environmental examination report (IEER) for required implementation are incorporated in the contract documents;
  - (b) ensure the contractor prepares site-specific environmental management action plans (SSEMAP) and secures its approval before commencement of construction work;
  - (c) supervise and monitor the implementation of the SSEMAP;
  - (d) in the event of any unexpected environmental impacts, coordinate with the contractor and employer to ensure that necessary mitigation measures are implemented;
  - (e) provide technical advice to the contractors;
  - (f) prepare periodic monitoring reports monthly (as part of the monthly progress report) and annually and submit these to the IA; and

- (g) facilitate grievance redress in the case of environment related issues.
  - (x) Carry out the following duties related to social safeguards:
    - (a) ensure the establishment of grievance redress committees as per the guidelines in the resettlement framework and facilitate grievance redress in the case of social related issues;
    - (b) ensure the IA follows due process in land donation in the case of rural roads; and
    - (c) prepare periodic monitoring reports monthly (as part of the monthly progress report) and semi-annually and submit these to the IA.
  - (xi) Monitor contractors' compliance with and performance of required actions, such as awareness and education of workers, regarding health and sexually transmitted diseases (including HIV/AIDS), human trafficking, and core labor standards in accordance with the contract documents.
27. Following are measures related to the project performance and monitoring survey:
- (i) Establish the project performance and monitoring system within the first 6 months of the consultancy contract.
  - (ii) Develop performance indicators based on the design and monitoring framework provided by the IA in close cooperation with the employer and, if necessary, coordinate with the relevant local authorities.
  - (iii) Collect baseline data based on the indicators agreed upon in the project's design and monitoring framework at the start of the project, and measure the indicators over time during the assignment period. Undertake project performance monitoring and evaluation in accordance with the project framework and ADB's Project Performance Management System Handbook. Design a simple MS Excel or similar system for recording the baseline and periodic data.
  - (iv) Assess the indicators at midterm (end of construction period) and after completion of construction (end of performance-based maintenance).
  - (v) Assess the socioeconomic impacts of the project on potential beneficiaries through selective household surveys and participatory research methods.
  - (vi) Assess the environmental sustainability of the project.
  - (vii) Conduct training in operational social research methods and building employer's capacity on performing management and impact assessments.
  - (viii) Establish a system for monitoring socioeconomic indicators in the selected habitation served by the investment program roads as compared to the unconnected habitations, such as (i) poverty rates, (ii) number of maternal and infant deaths, (iii) number of total deliveries versus safe deliveries, (iv) immunization rates, (v) unemployment rates, (vi) agricultural production of perishable goods, (vii) income and expenditure of rural households, and (viii) district cash turnover of agricultural produce in local markets served by the investment program roads, etc.
28. The PIC for Eastern Province shall arrange workshops on project performance and training programs for the IA staff. It will also facilitate overseas training of IA staff in gaining the latest technology and experience in rural road pavement designs, contract management, and environmental and social safeguards based on the terms of reference cited in Appendix C.
29. Following are measures related to the project completion report:
- (i) Prepare a project completion report in accordance with the procedures of ADB as spelled out in relevant project administration instructions of ADB. The format can be obtained from the employer or ADB's relevant project officer.

- (ii) Assist the employer in seeking comments from ADB and co-financiers, if required, and finalize these for submission by the employer to ADB.

30. If so required by the IA, the PIC will provide any of the following as additional services: (i) prepare reports, including technical appraisals, additional contract documentation, and/or reviews and comments on the contractor's proposals as may be required for the successful completion of the project; and (ii) provide any other specialist services as may be required from time to time.

31. The IA will authorize any additional service, other than minor extras that do not materially affect the scope of the design review, procurement, and supervision work, at the rates established in the construction supervision contract, or at the rates mutually agreed upon when the services require the use of specialists not listed in the contract.

32. In the event of including additional roads for improvements, for the preparation of designs, estimates, social and environmental reports, and any other reports, the RDA will engage the consultant through a contract variation.

#### 4. Consultancy Inputs and Qualifications of Staffs

33. The consulting services will be carried out by international firm/s in association with national consultants to be selected by the IA in accordance with ADB's Guidelines on the Use of Consultants (2010, as amended from time to time). A total of 36 person-months of international consultant inputs and 570 person-months of key national consultant inputs will be required.

34. Consulting services are expected to take about 60 months (actual duration of service shall be in line with the civil works schedule). All experts, international and national, must be proficient in both written and spoken English. The key positions are given in Table E.4 below.

**Table E.4: Key Consultancy Positions**

Position	No.	Inputs	Total
		(person-month)	
International Key Experts			
Team Leader/Chief Resident Engineer	1	30	30
FIDIC Contract & Claims Specialist	1	6	6
Subtotal	2		36
National Key Experts			
For the Construction Period			
Deputy Team Leader	1	30	30
Resident Engineers	3	27	81
Rural Road Design and Safety Engineers	2	24	48
Structural Engineer	2	12	24
Materials Engineer	3	24	72
Quantity Surveyor	3	27	81
Environmental Specialist	1	24	24
Social/Gender/Resettlement Specialist	1	24	24
Contracts and Claims Engineer	1	27	27
Assistant Resident Engineer	3	27	81
For the Maintenance Period			
Resident Engineer (Maintenance)	1	39	39
Quantity Surveyor (Maintenance)	1	39	39
Subtotal	22		570
Non-key Experts			

Position	No.	Inputs	Total
		(person-month)	
For the Construction Period			
Planning Engineer	1	27	27
Construction Engineers	16	27	432
Junior Engineers	3	24	72
Land Surveyors	3	24	72
Technical Officers (Construction)	27	24	648
For the Maintenance Period			
Technical Officers (Maintenance)	12	36	432
Subtotal	62		1,683
TOTAL	86		2,289

FIDIC = International Federation of Consulting Engineers.

Notes:

- Curriculum vitae (CV) of the Planning Engineer, Construction Engineers, Land Surveyor, and Technical Officers are not required for inclusion in the proposal and will not be evaluated. However, CVs must be submitted to the client for approval prior to mobilization.
- The estimated person-months are indicative, and the actual will vary based on actual duration of works and will be paid on actual time basis. As common basis for financial proposal, the consultant must use the staff person-months indicated above.
- FIDIC Contract & Claims Specialist (International) will be mobilized on as-needed basis. His/her CV is required for inclusion in the technical proposal and will be evaluated.
- Membership numbers of professional qualified bodies should be stated in the CV.

Source: Asian Development Bank.

35. The PIC for Eastern Province is required to propose assignment of experts in accordance with the scope and expected deliverables. The qualifications and responsibilities of key positions are described as follows. Regional and country experience of the international staff is preferable.

36. **Team Leader and/or Chief Resident Engineer (International, 30 person-months)** shall be responsible for the overall tasks as defined here under the scope. He/she shall preferably have a bachelor's degree in civil engineering, professionally qualified, and have a master's degree in road engineering and/or contracts management. He/she shall have preferably 15 years of experience and minimum 10 years of experience in road construction. He/she shall be familiar with various international standards for design and construction (FIDIC), including stages of work and methods of construction such as temporary works, construction plans, schedules, construction method, assignments of equipment and personnel, testing and trials, and drawings. The Team Leader will (i) maintain records and advise the PIU on the day-to-day coordination and supervision of the project and its components, including the preparation of regular progress reports; (ii) coordinate and review updated designs and cost estimates as required by the contract; (iii) coordinate and supervise the work of field teams in certifying construction in accordance with contract conditions; (iv) coordinate and liaise with the employer; attend meetings arranged by the employer; update the employer regularly on progress of work, delays, and variations; and recommend remedial measures; (v) submit to the employer and obtain approval on variations, extension of time, and other specific items defined in the Particular Conditions of Contract; and (vii) chair the site progress review meeting. He/she will ensure compliance with the safeguard aspects under the project. He/she will also ensure that specifications under the contract are being met, and quality is maintained.

37. **FIDIC Contract & Claims Specialist (International, 6 person-months)** shall have a bachelor's degree in civil engineering, professionally qualified, preferably with a master's degree in construction/contract management, and preferably with 15 years of experience and minimum 10 years of experience in road works contract administration, including FIDIC contract

administration. He/she will (i) evaluate and settle variations and standard format of claims, and (ii) guide the employer in case of disputes by the contractor on claims settlement.

**38. Deputy Team Leader (for the construction period) (National, 30 person-months)** shall assist the Team Leader on coordination and supervision of road construction works in the field. He/she shall have a bachelor's degree in civil engineering or the equivalent, professionally qualified, preferably with postgraduate diploma in road construction, and with 12 years of experience and minimum 10 years of experience in road construction/management.

**39. Resident Engineers (for the construction period) (National, 120 person-months, 3 experts)** shall assist the Team Leader on coordination and supervision of road construction works in the field. The Resident Engineer shall have a bachelor's degree in civil engineering or the equivalent, professionally qualified, and with 10 years of experience and minimum 8 years of experience in road construction supervision and/or management. He/she will (i) conduct day-to-day construction supervision, (ii) monitor schedules, (iii) prepare monthly certificates, and (iv) review and approve shop drawings and as-built drawings. He/she will issue site instructions in consultation with the Team Leader. He/she will timely inform the Team Leader about issues relating to the quality of works, progress of work, and any other constraints affecting the work.

**40.** One of the Resident Engineers shall remain for the 3-year performance-based maintenance period.

**41. Assistant Resident Engineers (National, 81 person-months, 3 experts)** shall assist the Resident Engineers on day-to-day coordination activities with the contractor. The Assistant Resident Engineer shall have a bachelor's degree in civil engineering or the equivalent, and with 7 years of experience and minimum 5 years of experience in road construction supervision and/or management. He/she will assist Resident Engineers in (i) supervising day-to-day construction, (ii) monitoring schedules, (iii) checking monthly certificates, and (iv) reviewing shop drawings and as-built drawings.

**42. Rural Road Design and Safety Engineers (National, 48 person-months, 2 experts)** shall have a bachelor's degree in civil engineering or the equivalent, and with 5 years of experience and minimum 3 years of experience in road design. He/she will assist the Resident Engineer in (i) reviewing the rural road and pavement design by the CRC contractors, (ii) checking design centerline set-out and making necessary adjustments, and (iii) issuing instructions to the contractors. He/she will also (i) conduct systematic road safety audits of 10% of preliminary design and 10% of detailed design, including preparation of formal road safety audits and safety check reports; (ii) conduct systematic road safety inspections on a randomly selected sample of roads under maintenance, and document issues and countermeasures; (iii) prepare road safety monitoring reports; (iv) provide training and support to the PIU; (v) assist the PIU with road safety complaints and accident investigations; and (vi) assess the effectiveness of road safety audit procedures and recommend improvements as needed.

**43. Structural Engineers (National, 24 person-months, 2 experts)** shall assist the Resident Engineers in ensuring that the design complies with technical and safety standards. The Structural Engineer shall have a bachelor's degree in civil engineering or the equivalent, professionally qualified, and with 6 years of experience and minimum 3 years of experience in bridge/structural design and construction supervision. He/she will (i) update design and cost estimates prepared by the design consultants, (ii) supervise the bridge/structure constructions, and (iii) assist the Resident Engineers in issuing instructions to the contractors.



44. **Materials Engineers (National, 72 person-months, 3 experts)** shall have (i) a bachelor's degree in civil engineering or the equivalent, with 5 years of overall experience and 3 years of experience as materials engineer; or (ii) a bachelor's degree in engineering or the equivalent, with 8 years of overall experience and 3 years of experience as materials engineer; or (iii) National Diploma in Technology (NDT), with 10 years of overall experience and 5 years of experience as materials engineer; or (iv) National Certificate in Technology (NCT)/Materials Engineer recognized by government institutions, with 15 years of overall experience and minimum 8 years of experience as materials engineer. He/she will (i) undertake day-to-day supervision of compliance with material specifications and testing; (ii) supervise the contractors' work; and (iii) certify the construction in accordance with contract conditions, including acceptance standards of materials, approval of source supply, and material testing methods. He/she will periodically review the contractors' quality assurance system.

45. **Quantity Surveyors (for the construction period) (National, 120 person-months, 3 experts)** shall have (i) a bachelor's degree in civil engineering or bachelor's degree in quantity surveying, with 5 years of experience; or (ii) NDT in civil engineering, with 8 years of experience in quantity surveying and minimum 2 years of experience in road projects. He/she will (i) check and recommend the payment certificates; (ii) maintain measurement records; (iii) review and update the estimates as required; and (iv) assist the Resident Engineers in checking the quantity, variations, and justification.

46. One of the Quantity Surveyors shall remain for the 3-year performance-based maintenance period.

47. **Contract & Claims Engineer (National, 27 person-months)** shall have a bachelor's degree in civil engineering or the equivalent, with 10 years of experience and minimum 8 years of experience in road contract administration, including FIDIC contract administration, and minimum 3 years of experience as a contract engineer. He/she will (i) evaluate and settle variations and standard format of claims; (ii) advise the Chief Resident Engineer and Resident Engineers on potential claims; (iii) assist the contract specialist in evaluating claims and variations; (iv) assist the Chief Resident Engineer and Resident Engineers in responding to the contractors on contractual matters; (v) guide the employer in case of disputes by the contractor on claims settlement; and (vi) assist the employer in establishing a dispute resolution board.

48. **Environmental Specialist (National, 24 person-months)** shall have a bachelor's degree in environmental science or the equivalent, and with 6 years of experience and minimum 3 years of experience in preparing, implementing, and monitoring environment management schemes associated with infrastructure projects. He/she will (i) assist in reviewing the environmental checklists and contract package-specific environmental management action plans (EMAP) for all project roads and ensure that they have been prepared in accordance with the requirements of the EARF for all tranches and the recommendations and guidelines of the Central Environment Authority of Sri Lanka; (ii) during the preparation of the subsequent tranche, ensure all nominated roads comply with the selection criteria provided in the EARF and prepare due diligence reports on 20% of randomly selected sample of roads for all ongoing project tranches; (iii) check compliance of (a) the initial environmental examination (IEE) and standard environmental management plan prepared by the survey and preliminary engineering (SAPE) team with the requirements of the EARF, and (b) the site-specific EMAP with the requirements of the EARF and the respective province-level IEE; (iv) provide technical advice to the contractor and conduct on-the-job training as necessary; (v) prepare monitoring reports on an annual basis based on monitoring checklists completed for each project road during preconstruction, construction, and post-construction or operation stages; and (vi) during the preparation of the subsequent tranche,

prepare due diligence reports, and train the environment and social officers of the PIU on environmental monitoring and reporting.

49. **Social/Gender/Resettlement Specialist (National, 24 person-months)** shall have a bachelor's degree in social science or the equivalent, and with 6 years of experience and minimum 3 years of experience in preparing, implementing, and monitoring social development schemes associated with infrastructure projects. He/she will (i) ensure compliance of all preliminary designs of rural roads and national road projects prepared by the SAPE consultant in accordance with the resettlement framework for all tranches; (ii) check and ensure that the detail designs prepared by civil works contractors have incorporated feasible features based on the outcome from transect walks; (iii) during the preparation of the subsequent tranche, prepare due diligence reports on 20% of randomly selected sample of roads for all ongoing project tranches; (iv) monitor and evaluate the implementation of the community participation process prescribed in the resettlement framework and recommend improvements to the participatory process to ensure broader participation of the rural population in project roads formulation; (v) for rural roads which require land donation, monitor the land donation process and conduct field visits on a monthly basis until land donation is finalized; (vi) during the construction phase, conduct monitoring of all project roads and prepare monitoring reports on a biannual basis for all project tranches; and (vii) during the maintenance phase, conduct monitoring of all project roads and prepare monitoring reports on an annual basis for all project tranches. He/she will also (i) provide training and support to the PIU on implementing the gender action plan (GAP) activities at the field level, (ii) lead the implementation of specific gender-mainstreaming activities as detailed in the GAP, and (iii) monitor and report the overall implementation of relevant activities included in the GAP for all tranches on a semi-annual basis.

50. **Planning Engineer (Non-key)** shall have a bachelor's degree in civil engineering, and with 3 years of experience.

51. **Construction Engineers (Non-key)** shall have a bachelor's degree in civil engineering or the equivalent, and preferably with 3 years of experience and minimum 2 years of experience in road construction. He/she will assist the Chief Resident Engineer, Resident Engineers, and Assistant Resident Engineers on day-to-day works.

52. **Junior Engineers (Non-key)** shall have a bachelor's degree in civil engineering or the equivalent, and preferably with 2 years of experience. He/she will be assigned to coordinate the utility related activities among the stakeholders and assist the Construction Engineers in construction supervision.

53. **Land Surveyor (Non-key)** shall have a bachelor's degree in surveying science, and with 2 years of experience.

54. **Technical Officers (Non-key)** shall have (i) NDT in civil engineering or the equivalent, with 3 years of experience; or (ii) NCT in civil engineering, with 6 years of experience and minimum 2 years of experience in road construction supervision experience. He/she will (i) ensure construction works are carried out according to the drawings and specifications, (ii) take measurements of daily work done, and (iii) coordinate and liaise with the Land Surveyor and Materials Engineer in checking and testing.

## 5. Output and Reporting Requirements

55. The PIC for Eastern Province will prepare reports, including monthly reports, on the project progress in a format and level of detail agreed with the IA and ADB. The consultants will maintain records documenting (i) information supplied by the field teams, (ii) decisions made at meetings, (iii) progress on civil works, (iv) certified achievements and milestones, (v) financial records, and (vi) any deviations from or changes to the contract plans. The consultants will assist the project management unit/PIU in preparing (i) quarterly progress reports; (ii) safeguard compliance reports, including sections on environment, social, and gender; (iii) a project completion report; and (iv) monitoring and evaluation reports as required under the contract. The consultants will also undertake surveys, design reviews and workshops, and submit relevant reports.

56. Following are other reporting requirements:

- (i) Monitor record keeping and instruct the contractor to keep further contemporary records, including statutory requirements concerning the contractor's reporting of dangerous occurrences or accidents to government or public authorities.
- (ii) Report and update the works implementation schedule, highlighting any foreseen delays and timely proposing corrective measures.
- (iii) Maintain up-to-date financial records and other records for review, if and when needed by the IA and ADB.

57. The PIC for Eastern Province will submit reports in hard copy and soft copy as follows (Table E.5):

**Table E.5: Reporting Requirements**

<b>Deliverables</b>	<b>Deadline</b>	<b>Copies</b>
Inception Report <sup>a</sup>	End of month 1	5
Monthly Progress Report on Conventional Road Contract (CRC) Packages <sup>b</sup>	Within a week of the end of the month	5
Project Performance and Monitoring Survey (PPMS) Report	End of month 6 (from the start of the consultancy contract), midterm (end of construction period), and end of the project (end of performance-based maintenance)	5
Social Safeguard Monitoring Report (as per the agreed format by ADB and the RDA)	Semi-annual	5
Environmental Report (as per the agreed format by ADB and the RDA)	Annual	5
Project Completion Report (as per the agreed format by ADB and RDA)	By 1 month prior to project completion	7
Draft Periodic Financing Request (PFR) for iRoad 2 (up to 10 PFRs)	Upon the RDA's request	5
Special Reports (as requested by the RDA)	Upon the RDA's request	5
Environment and Social Safeguards Compliance Due Diligence Reports (as per the agreed format by ADB and the RDA)	Before the fact-finding mission for subsequent tranches	5
Report of Context Sensitive Design (for each CRC package)	After finalizing the design	5

ADB = Asian Development Bank, RDA = Road Development Authority.

Note: All above reports must be submitted in soft copy format as well.

<sup>a</sup> Inception Report: Initial findings and the work program for the balance of the assignment.

<sup>b</sup> Monthly Progress Report: Brief details of the works carried out during the previous month, the problems encountered or anticipated, and financial and physical progress to date along with the S-curve. The format must follow that given in ADB's Project Administration Manual.

Source: Asian Development Bank.

## **6. Facilities Provided by the Client**

58. The PIC for Eastern Province shall maintain a Team Leader's Office in Batticaloa. The client will provide the following:

- (i) Visa supporting letters and registrations for the host country
- (ii) Furnished air-conditioned office spaces
- (iii) Relevant project data and reports
- (iv) Access to data, records, and other information required to perform the assigned tasks

59. The following will be provided under the civil works contracts:

- (i) Office spaces with support facilities (including utilities, furnishings, and fittings) in the construction site
- (ii) Shared housing accommodation for the PIC's national staff: Resident Engineers, Assistant Resident Engineers, and others
- (iii) Vehicles for site supervision:  
International – Team Leader, FIDIC Contract Specialist  
National – Resident Engineers, Assistant Resident Engineers, and others

## **7. Facilities to be Provided by the PIC**

60. The PIC for Eastern Province will be responsible for the following:

- (i) Accommodation for international and national consultants not listed under para 53.
- (ii) Telephone facilities for domestic use only and various equipment required to carry out the assignment
- (iii) Office stationery and supplies
- (iv) Any other items not provided by the RDA or civil works contracts

## **B. Terms of Reference for Institutional Capacity Development on Environmental and Social Safeguards**

### **1. Target Group**

- (i) Provincial Council staff of Provincial Road Development Authority (PRDA)/ Provincial Road Development Department (PRDD): director, deputy directors, engineers, technical officers, development officers, planning officers
- (ii) Road Development Authority staff: provincial director, chief engineers, executive engineers, engineers, technical officers

### **2. Background**

61. Experience was gained during the implementation of the ADB-supported Southern Transport Development Project, which assisted the RDA in establishing the Environment and Social Division (ESD) under Technical Assistance 4736. The ESD became the RDA's safeguard

implementing and monitoring arm and now functions as a separate division called the Environment and Social Development Division (ESDD).

62. As a program that is directly involved with rural environment (including social environment), it is important for iRoad 2 to develop the capacity especially of provincial authorities and local government staff on environmental and social safeguards.

### **3. Scope**

63. This TOR is designed to guide and develop institutional capacity on environmental and social safeguards. Activities under capacity development shall include but not be limited to the following activities:

- (i) Setting terms of reference for environmental and social assessments (including initial environmental examination reports, environmental impact assessment reports, and resettlement plans)
- (ii) Preparation of environmental and social categorization checklists
- (iii) Reviewing and constructive commenting of environmental and social reports, including environmental assessment reports and social assessment reports
- (iv) Field monitoring of environmental and social safeguards compliance
- (v) Preparation of monitoring reports with respect to environmental and social safeguards monitoring
- (vi) Preparation of gender action plans and field monitoring of the implementation of such plans
- (vii) Effective communication and information dissemination on project aspects related to environmental and social safeguards
- (viii) Awareness creation and knowledge accumulation on environmental and social (best) practices

## **C. Terms of Reference for Road Safety Training Program for Schoolchildren**

**1. Target Group:** Schoolchildren and teachers

### **2. Background**

64. The rehabilitated roads with high-speed vehicles and high-volume traffic can cause serious safety concerns to the community. Schoolchildren are most vulnerable and need awareness on road safety.

65. As part of the CDP implementation process, this training program has been organized with the aims of creating awareness among schoolchildren and teachers on road safety and disseminating information on road safety to the community through these two groups.

### **3. Scope**

66. This TOR is developed to create awareness on road safety for schoolchildren. Activities under this program shall include but not be limited to the following activities:

- (i) Aspects of road crossing, pedestrian safety, safe cycling, accident statistics, and new laws related to these topics

- (ii) Demonstrations based on the book *Pedestrian Safety* on the following topics: safe cycling, safe bus travelling, crossing railway tracks safely, and pedestrian safety
- (iii) Outdoor demonstrations for schoolchildren on how to cross roads safely using the zebra pedestrian crossing. Zebra crossing model is to be used

## **D. Terms of Reference for the Training Program on Rural Road Design**

### **1. Target Group**

- (i) Provincial Council staff of PRDA/PRDD: director, deputy directors, engineers, technical officers
- (ii) Road Development Authority staff: provincial director, chief engineers, executive engineers, engineers, technical officers

### **2. Background**

67. The concept and approach of rural road design are very different from the national road design. A lot of factors need to be considered and, generally, the carriageway should be designed within the right-of-way as the roads are narrow. In particular, several social and economic factors need to be considered during the design phase and it is always useful to conduct Context Sensitivity Design as carried out in the iRoad program.

68. Hence, it is very important to educate the officers of the road agency regarding the rural road design concepts, approach, and methodology.

### **3. Scope**

69. This TOR is developed to give the outline of rural road design. Activities under this program shall include but not be limited to the following activities:

- (i) Importance of Context Sensitivity Design
- (ii) Public consultation
- (iii) Codes of design
- (iv) Restriction in design

## **E. Terms of Reference for the Training Program on Performance-based Maintenance of Rehabilitated Roads**

### **1. Target Group**

- (i) Provincial Council staff of PRDA/PRDD: director, deputy directors, engineers, technical officers
- (ii) Road Development Authority staff: provincial director, chief engineers, executive engineers, engineers, technical officers

### **2. Background**

70. The rehabilitation/improvement works include strengthening of existing pavements and widening, resurfacing with asphalt concrete or surface treatment, reconstruction of damaged structures, improvements to drainage, etc.

71. It is vital to adopt a strategy for the maintenance of project roads to sustain the benefits derived from the project. Past experience shows the negligence of maintenance after completion for various reasons, leading to deterioration of roads even within the designed life span despite a huge initial investment on rehabilitation works. ADB and road authorities have looked at this aspect in a pragmatic perspective, paving the way for the performance-based maintenance (PBM) of project roads for 3 to 5 years by the respective rehabilitation work contractors. This is a two-pronged approach: (i) to allow the contractors to maintain the asset developed by them, and (ii) to also become responsible for their own rehabilitation works for a 5-year period. PBM is the global trend now being practiced in many developed countries that has proved to be the most efficient and cost-effective method of management and maintenance of road assets.

72. In this context, it is vital that the road agencies should be aware of the concept, approach, implementation, and other activities related to PBM.

### **3. Scope**

73. This TOR is developed to provide the outline of PBM. Activities under this program shall include but not be limited to the following activities:

- (i) Contractual aspects of PBM
- (ii) Employer's/contractor's role in PBM
- (iii) How to measure the service levels during PBM
- (iv) How to make payment for PBM
- (v) Lessons learned in previous PBM projects

## TERMS OF REFERENCE FOR NORTHERN PROVINCE

### A. Project Implementation

#### 1. Background

1. The Road Development Authority (RDA), with the funding assistance of the Asian Development Bank (ADB), is implementing the Integrated Road Investment Program–Phase 1 in Sri Lanka to enhance the connectivity of rural socioeconomic centers. About 3,130 kilometers (km) of rural roads are being rehabilitated and maintained through this program in Central, North Central, North Western, Sabaragamuwa, and Southern provinces, and Kalutara district in Western Province.

2. In this context, the Democratic Socialist Republic of Sri Lanka has applied for a multitranche financing facility (MFF) from ADB for the Second Integrated Road Investment Program (iRoad 2) to enhance the scope for the remaining areas of Eastern, Northern, Uva, and Western provinces and to improve the access routes between rural areas and socioeconomic centers. The program includes the rehabilitation and improvement of approximately 3,650 km of roads in four separate geographical areas through conventional road contracts (CRC) covering rural access roads and national roads, including post-construction performance-based maintenance. Part of the funds from the MFF shall be used to engage an international consultancy firm as project implementation consultant (PIC) to assist the RDA in project implementation, including construction supervision, supervision of post-construction maintenance work, contract management, and other implementation activities in the CRC component. This outline provides the terms of reference (TOR) for PIC services for the CRC in Northern Province.

3. The executing agency (EA) of the iRoad 2 program is the Ministry of Higher Education and Highways (MOHWEH) and the implementing agency (IA) is the RDA. Project implementation consultants are to be engaged. The overall proposed PIC organizational arrangement is in Appendix C.

4. The general roles and responsibilities of the various parties for iRoad 2 are as follows (Table F.1):

**Table F.1: Project Participants and Roles**

<b>iRoad 2 Participants</b>	<b>General Roles and Responsibilities</b>
PIU	<ul style="list-style-type: none"> <li>• Project and safeguards management</li> <li>• Approval of all variations of contracts for consulting services and civil works</li> </ul>
Advisory Consultants Individual Consultants	<ul style="list-style-type: none"> <li>• Assisting the PIU in areas requiring special expertise, e.g., contract management, procurement, information technology, institutional strengthening, capacity development, and road safety</li> </ul>
SAPE Team	<ul style="list-style-type: none"> <li>• Feasibility study, safeguard documents, and level-2 designs</li> <li>• Community consultation along project roads</li> </ul>
PIC (CRC)	<ul style="list-style-type: none"> <li>• Reviewing and confirming the design and scope of works when the contractors apply the level-2 designs to the roads under CRC packages</li> <li>• Construction supervision of CRC packages</li> <li>• Supervision of post-construction maintenance work in CRC packages</li> <li>• Monitoring safeguard activities</li> <li>• Providing on-the-job training to the PIU, EA, IA, and provincial and local road agencies in project management and contract administration</li> </ul>



<b>iRoad 2 Participants</b>	<b>General Roles and Responsibilities</b>
Contractors	<ul style="list-style-type: none"> <li>Detailed design based on the level-2 design for CRC packages, or the conceptual design for the road management contract packages</li> <li>Delivering the physical works as required in the CRC, or the level of services as required in the road management contract</li> <li>For the road management contract packages, the work includes various asset management tasks</li> <li>Implementing safeguard requirements in the contract</li> </ul>

CRC = conventional road contracts, EA = executing agency, IA = implementing agency, iRoad 2 = Second Integrated Road Investment Program, PIC = project implementation consultant, PIU = project implementation unit, SAPE = survey and preliminary engineering.

Source: Asian Development Bank.

6. Among the scope of consulting services, the main task of the PIC is to assist the RDA in supervising and/or implementing the civil works in the CRC component of the iRoad 2 program.

7. In the CRC component, conventional measure and value contracts, requiring detailed contract supervision, will be used for road rehabilitation. Initial construction is to be completed in the first 2 years, followed by a 3-year performance-based maintenance period. The roads under the contract packages will be isolated length.

8. The tentative number of contract packages of civil works to be monitored and supervised by the PIC in Northern Province are indicated below (Table F.2).

**Table F.2: Tentative Number of Civil Works Contract Packages**

<b>Name of District</b>	<b>Tentative Number of Contract Packages</b>
Jaffna	3
Kilinochchi	3
Mannar	3
Mullaitivu	3
Vavuniya	3

Source: Asian Development Bank.

9. Approximately 950 km of rural and national roads will be rehabilitated in Northern Province. Contract package size would be SLRs2,100 million.

10. The PIC for Northern Province will assist the project implementation unit (PIU) in the implementation of the contracts, including site supervision of construction activities, monitoring maintenance performance, and other due diligence as defined in further detail in the next paragraphs.

11. The indicative timeline for implementation of the physical works is as follows (Table F.3):

**Table F.3: Implementation Timeline**

<b>Item</b>	<b>Conventional Road Contract Packages</b>
Physical works commence	Tentatively in first quarter of 2018
Duration of rehabilitation works	2 years
End of performance-based maintenance period	3 or 5 years from end of rehabilitation works

Source: Asian Development Bank.

12. **The team leader of the PIC will act as the engineer in the contracts.** The consultant will also be required to discharge other responsibilities outlined in the TOR.

13. The PIC for Northern Province shall use the most up-to-date software and technology for administration of the construction contracts. The PIC shall ensure that all electronic files in relation to the deliverables of this TOR are in a format compatible with those used by the EA. The EA uses the Microsoft Office suite of software, ArcGIS for geographic information system applications, and AutoCad for drawings. Further clarification on any aspect of this requirement can be gained from the PIU. All files are to be provided in soft copy and hard copies of reports are also required as defined below. Subject to request by the PIU, some reports should also be provided in PDF format.

## **2. Project Administration in Northern Province**

14. Civil works under the CRC packages will be carried out based on the International Federation of Consulting Engineers (FIDIC) Construction Contract MDB Harmonised Edition (June 2010).

15. The PIC for Northern Province will (i) undertake contract administration based on the FIDIC contract; (ii) undertake safeguards compliance to ensure that all safeguards (social, environmental, and for indigenous peoples) are complied with under the project; (iii) carry out the project performance and monitoring survey 3 times—at the start of the consultancy contract, at midterm (end of the construction period), and at the end of the project (end of performance-based maintenance period); (iv) prepare and implement a capacity development program, including trainings, workshops, and seminars on project management and contract administration for the staffs of MOHWEH, the RDA, and provincial and local road agencies; (v) prepare monthly reports on project progress and other issues; and (vi) prepare a project completion report when the project is substantially completed, incorporating comments from the PIU, the IA, the EA, and ADB.

16. The PIC for Northern Province will administer the construction contracts and ensure that the contractual clauses for both quality and specifications of works are complied with, and the works are constructed in accordance with the provisions of the construction contracts.

17. The PIC for Northern Province, while supervising construction works, will make all necessary arrangements for the implementation of quality assurance and quality control plans following industry standards and best practices. In consultation with the PIU and EA, the PIC will make all engineering decisions required for the successful and timely completion of the construction contracts, and will have all the powers defined as those of the engineer under FIDIC.

18. If necessary, the PIC for Northern Province will liaise with other co-financiers under the project to keep them briefed about the project.

## **3. Detailed Scope of PIC Consulting Services for Northern Province**

19. Contract administration is in accordance with the FIDIC Conditions of Contract MDB Harmonised Edition (June 2010):

- (i) Administer the contractors' work in accordance with the FIDIC conditions of contract.
- (ii) Supervise the contractors' work and certify the works in accordance with contract conditions. Ensure the construction methods proposed by the contractor for carrying out the works are satisfactory.

- (iii) Arrange site meetings with contractors at regular intervals to discuss progress and quality of works and to resolve any related problems.
- (iv) Verify geometric designs, including embankments, designs of structure, and the pavement design of project roads by design consultants. If necessary, make necessary amendments as and when required.
- (v) Review and approve contractors' working drawings, method statements, programs, and any other documents.
- (vi) Develop quality assurance system and inspection and testing plan.
- (vii) Inspect contractors' construction equipment, results of material and soil tests, and safety of the work, property, and personnel. Inspect and test all materials and works to ensure compliance with specifications, and give immediate notice to the contractor to undertake remedies in the event that such materials and works fail to comply with the specifications.
- (viii) Recommend to the IA the rates for any unscheduled items of work that may arise.
- (ix) Certify work volume and process interim and final payments of the contractors.
- (x) Establish efficient procedures for verifying contractor performance and control reports, quality survey records, requests for variations or change orders, requests for time extensions, and contractor's claims and invoices.
- (xi) Ensure project financial management procedures are in place and are strictly followed, specifically relating to payments, financial accounting, financial reporting, and record keeping.
- (xii) Check as-built drawings prepared by the contractors. Keep and record a complete set of as-built drawings in paper and electronic formats for safekeeping in the employer's repository.
- (xiii) Ensure road safety design requirements are implemented in accordance with the contract documents and specifications.
- (xiv) Monitor contractor's conformity with traffic control and road safety action plans during construction.
- (xv) Assist the IA in the provisional and final handover of works by the contractors.

20. The bill of quantities for civil works contracts in the project has been prepared based on preliminary designs. During the civil works contract implementation, the respective civil works contractors will carry out detailed designs and prepare accordingly the cost to completion of civil works contracts. The PIC for Northern Province has to review and approve all designs for construction.

21. All the necessary designs and the cost to completion for the civil works contract must be prepared by the contractor, and reviewed and approved by the PIC for Northern Province within 4 months from the start date of the civil works contract. The same design including cost to completion shall, if necessary, be reviewed and revised every 3 months. A detailed timeline for this exercise must be agreed between the PIC for Northern Province and the contractor for the design work at the beginning of the civil works contract.

22. Findings of the transect walk during the survey and preliminary engineering stage have to be incorporated in the detailed design based on the concept of the Context Sensitive Design approach.

23. Based on the details submitted by civil works contractors, project implementation consultants for Northern Province should evaluate the cost to completion of each civil works contract every 3 months and advise the project director accordingly.

24. The quality assurance system will be adopted for all civil works contracts in the projects. The PIC for Northern Province should review and approve of the quality assurance system and the inspection and testing plan. The consultants should also monitor the implementation of quality assurance systems in civil works contracts.

25. Most of the project roads are located in rural areas and scattered. When reviewing contractors' method statements and programs, the consultant should review whether the contractors execute the work with minimum inconvenience to the public.

26. Any contractors' proposals for adopting new methods or technology in construction to overcome material scarcity should be reviewed and the RDA and the contractor advised accordingly.

27. Following are measures for safeguard compliance monitoring:

- (i) Ensure the project complies with requirements stipulated in the environmental assessment review framework (EARF), the resettlement framework, and the indigenous peoples planning framework that were developed for the project based on ADB's Safeguard Policy Statement (2009) and the conditions and guidelines stipulated by the Central Environmental Authority of Sri Lanka.
- (ii) Assist and guide the IA in ensuring compliance with environmental and social safeguards.
- (iii) Assist and guide the IA and contractors in complying with requirements stipulated in the project's gender action plan.
- (iv) Assist and guide the IA on the land donation process (as per the resettlement framework) and, if required, collect baseline data to prepare a land acquisition and resettlement plan (for national roads where land acquisition is permitted) and carry out other impact assessments in accordance with the resettlement framework, EARF, ADB's Safeguard Policy Statement (2009), and the relevant laws and regulations of the host country.
- (v) Update the resettlement plans when necessary and help the employer in seeking necessary approvals of the government and ADB.
- (vi) If land acquisition and resettlement are necessary, assist the IA in preparing and supervising the implementation of the land acquisition and resettlement plan.
- (vii) Assist the IA in establishing a grievance redress mechanism and in its proper functioning and management.
- (viii) Monitor the implementation of the gender action plan and ensure activities are carried out as planned and relevant baseline and monitoring data are collected.
- (ix) Carry out the following duties related to environmental safeguards:
  - (a) ensure all the environmental mitigation measures as outlined in the initial environmental examination report for required implementation are incorporated in the contract documents;
  - (b) ensure the contractor prepares site-specific environmental management action plans (SSEMAP) and secures its approval before commencement of construction work;
  - (c) supervise and monitor the implementation of the SSEMAP;
  - (d) in the event of any unexpected environmental impacts, coordinate with the contractor and employer to ensure that necessary mitigation measures are implemented;
  - (e) provide technical advice to the contractors;
  - (f) prepare periodic monitoring reports monthly (as part of the monthly progress report) and annually and submit these to the IA; and

- (g) facilitate grievance redress in the case of environment related issues.
  - (x) Carry out the following duties related to social safeguards:
    - (a) ensure the establishment of grievance redress committees as per the guidelines in the resettlement framework and facilitate grievance redress in the case of social related issues;
    - (b) ensure the IA follows due process in land donation in the case of rural roads; and
    - (c) prepare periodic monitoring reports monthly (as part of the monthly progress reports) and semi-annually and submit these to the IA.
  - (xi) Monitor contractors' compliance with and performance of required actions, such as awareness and education of workers, regarding health and sexually transmitted diseases (including HIV/AIDS), human trafficking, and core labor standards in accordance with the contract documents.
28. Following are measures related to the project performance and monitoring survey:
- (i) Establish the project performance and monitoring system within the first 6 months of the consultancy contract.
  - (ii) Develop performance indicators based on the design and monitoring framework provided by the IA in close cooperation with the employer and, if necessary, coordinate with the relevant local authorities.
  - (iii) Collect baseline data based on the indicators agreed upon in the project's design and monitoring framework at the start of the project, and measure the indicators over time during the assignment period. Undertake project performance monitoring and evaluation in accordance with the project framework and ADB's project performance management system requirement. Design a simple MS Excel or similar system for recording the baseline and periodic data.
  - (iv) Assess the indicators at midterm (end of construction period) and after completion of construction (end of performance-based maintenance).
  - (v) Assess the socioeconomic impacts of the project on potential beneficiaries through selective household surveys and participatory research methods.
  - (vi) Assess the environmental sustainability of the project.
  - (vii) Conduct training in operational social research methods and in building employer's capacity on performing management and impact assessments.
  - (viii) Establish a system for monitoring socioeconomic indicators in the selected habitation served by the investment program roads as compared to the unconnected habitations, such as (a) poverty rates, (b) number of maternal and infant deaths, (c) number of total deliveries versus safe deliveries, (d) immunization rates, (e) unemployment rates, (f) agricultural production of perishable goods, (g) income and expenditure of rural households, and (h) district cash turnover of agricultural produce in local markets served by investment program roads, etc.
28. The PIC for Northern Province shall arrange workshops on project performance and training programs for the IA staff. It will also facilitate overseas training of IA staff in gaining the latest technology and experience in rural road pavement designs, contract management, and environmental and social safeguards based on the terms of reference cited in Appendix C.
29. Following are measures related to the project completion report:
- (i) Prepare a project completion report in accordance with the procedures of ADB as spelled out in relevant project administration instructions of ADB. The format can be obtained from the employer or ADB's relevant project officer.

- (ii) Assist the employer in seeking comments from ADB and co-financiers, if required, and finalize these for submission by the employer to ADB.

30. If so required by the IA, the PIC will provide any of the following as additional services: (i) prepare reports, including technical appraisals, additional contract documentation, and/or reviews and comments on the contractor's proposals as may be required for the successful completion of the project; and (ii) provide any other specialist services as may be required from time to time.

31. The IA will authorize any additional service, other than minor extras that do not materially affect the scope of the design review, procurement, and supervision work, at the rates established in the construction supervision contract, or at the rates mutually agreed upon when the services require the use of specialists not listed in the contract.

32. In the event of including additional roads for improvements, for the preparation of designs, estimates, social and environmental reports, and any other reports, the RDA will engage the consultant through a contract variation.

#### 4. Consultancy Inputs and Qualifications of Staffs

33. The consulting services will be carried out by international firm/s in association with national consultants to be selected by the IA in accordance with ADB's Guidelines on the Use of Consultants (2010, as amended from time to time). A total of 36 person-months of international consultant inputs and 804 person-months of key national consultant inputs will be required.

34. Consulting services are expected to take about 60 months (actual duration of service shall be in line with the civil works schedule). All experts, international and national, must be proficient in both written and spoken English. The key positions are given in Table F.4 below.

**Table F.4: Key Consultancy Positions**

Position	No.	Inputs	Total
		(person-month)	
International Key Experts			
Team Leader/Chief Resident Engineer	1	30	30
FIDIC Contract & Claims Specialist	1	6	6
Subtotal	2		36
National Key Experts			
For the Construction Period			
Deputy Team Leader	1	30	30
Resident Engineers	5	27	135
Rural Road Design and Safety Engineers	3	24	72
Structural Engineer	2	12	24
Materials Engineer	5	24	120
Quantity Surveyor	5	27	135
Environmental Specialist	1	24	24
Social/Gender/Resettlement Specialist	1	24	24
Contracts and Claims Engineer	1	27	27
Assistant Resident Engineer	5	27	135
For the Maintenance Period			
Resident Engineer (Maintenance)	1	39	39
Quantity Surveyor (Maintenance)	1	39	39
Subtotal	31		804

Position	No.	Inputs	Total
		(person-month)	
<b>Non-key Experts</b>			
<b>For the Construction Period</b>			
Planning Engineer	1	27	27
Construction Engineers	19	27	513
Junior Engineers	3	24	72
Land Surveyors	5	24	120
Technical Officers (Construction)	35	24	840
<b>For the Maintenance Period</b>			
Technical Officers (Maintenance)	15	36	540
<b>Subtotal</b>	<b>78</b>		<b>2,112</b>
<b>TOTAL</b>	<b>111</b>		<b>2,952</b>

FIDIC = International Federation of Consulting Engineers.

Notes:

1. Curriculum vitae (CV) of the Planning Engineer, Construction Engineers, Land Surveyor, and Technical Officers are not required for inclusion in the proposal and will not be evaluated. However, CVs must be submitted to the client for approval prior to mobilization.
2. The estimated person-months are indicative, and the actual will vary based on actual duration of works and will be paid on actual time basis. As common basis for financial proposal, the consultant must use the staff person-months indicated above.
3. FIDIC Contract & Claims Specialist (International) will be mobilized on as-needed basis. His/her CV is required for inclusion in the technical proposal and will be evaluated.
4. Membership numbers of professional qualified bodies should be stated in the CV.

Source: Asian Development Bank.

35. The PIC for Northern Province is required to propose assignment of experts in accordance with the scope and expected deliverables. The qualifications and responsibilities of key positions are described as follows. Regional and country experience of the international staff is preferable.

36. **Team Leader and/or Chief Resident Engineer (International, 30 person-months)** shall be responsible for the overall tasks as defined here under the scope. He/she shall preferably have a bachelor's degree in civil engineering, professionally qualified, and have a master's degree in road engineering and/or contracts management. He/she shall have preferably 15 years of experience and minimum 10 years of experience in road construction. He/she shall be familiar with various international standards on design and construction (FIDIC), including stages of work and methods of construction such as temporary works, construction plans, schedules, construction method, assignments of equipment and personnel, testing and trials, and drawings. The Team Leader will (i) maintain records and advise the PIU on the day-to-day coordination and supervision of the project and its components, including the preparation of regular progress reports; (ii) coordinate and review updated designs and cost estimates as required by the contract; (iii) coordinate and supervise the work of field teams in certifying construction in accordance with contract conditions; (iv) coordinate and liaise with the employer; attend meetings arranged by the employer; update the employer regularly on progress of work, delays, and variations; recommend remedial measures; (v) submit to the employer and obtain approval on variations, extension of time, and other specific items defined in the Particular Conditions of Contract; and (vii) chair the site progress review meeting. He/she will ensure compliance with the safeguard aspects under the project. He/she will also ensure that specifications under the contract are being met, and quality is maintained.

37. **FIDIC Contract & Claims Specialist (International, 6 person-months)** shall have a bachelor's degree in civil engineering, professionally qualified, preferably with a master's degree in construction and/or contract management, and preferably with 15 years of experience and

minimum 10 years of experience in road works contract administration, including FIDIC contract administration. He/she will (i) evaluate and settle variations and standard format of claims, and (ii) guide the employer in case of disputes by the contractor on claims settlement.

**38. Deputy Team Leader (for the construction period) (National, 30 person-months)** shall assist the Team Leader on coordination and supervision of road construction works in the field. He/she shall have a bachelor's degree in civil engineering or the equivalent, professionally qualified, preferably with postgraduate diploma in road construction, and with 12 years of experience and minimum 10 years of experience in road construction and/or management.

**39. Resident Engineers (for the construction period) (National, 174 person-months, 5 experts)** shall assist the Team Leader on coordination and supervision of road construction works in the field. The Resident Engineer shall have a bachelor's degree in civil engineering or the equivalent, professionally qualified, and with 10 years of experience and minimum 8 years of experience in road construction supervision and/or management. He/she will conduct day-to-day construction supervision, monitor schedules, prepare monthly certificates, and review and approve shop drawings and as-built drawings. He/she will issue site instructions in consultation with the Team Leader. He/she shall timely inform the Team Leader about issues relating to the quality of works, progress of work, and any other constraints affecting the work.

**40.** One of the Resident Engineers shall remain for the 3-year performance-based maintenance period.

**41. Assistant Resident Engineers (National, 135 person-months, 5 experts)** shall assist the Resident Engineers on day-to-day coordination activities with the contractor. The Assistant Resident Engineer shall have a bachelor's degree in civil engineering or the equivalent, and with 7 years of experience and minimum 5 years of experience in road construction supervision and/or management. He/she will assist Resident Engineers in (i) supervising day-to-day construction, (ii) monitoring schedules, (iii) checking monthly certificates, and (iv) reviewing shop drawings and as-built drawings.

**42. Rural Road Design and Safety Engineers (National, 72 person-months, 3 experts)** shall have a bachelor's degree in civil engineering or the equivalent, and with 5 years of experience and minimum 3 years of experience in road design. He/she will assist the Resident Engineer in (i) reviewing the rural road and pavement design by the CRC contractors, (ii) checking design centerline set-out and making necessary adjustments, and (iii) issuing instructions to the contractors. He/she will also (i) conduct systematic road safety audits of 10% of preliminary design and 10% of detailed design, including preparation of formal road safety audits and safety check reports; (ii) conduct systematic road safety inspections on a randomly selected sample of roads under maintenance, and document issues and countermeasures; (iii) prepare road safety monitoring reports; (iv) provide training and support to the PIU; (v) assist the PIU with road safety complaints and accident investigations; and (vi) assess the effectiveness of road safety audit procedures and recommend improvements as needed.

**43. Structural Engineers (National, 24 person-months, 2 experts)** shall assist the Resident Engineers in ensuring that the design complies with technical and safety standards. The Structural Engineer shall have a bachelor's degree in civil engineering or the equivalent, professionally qualified, and with 6 years of experience and minimum 3 years of experience in bridge and/or structural design and construction supervision. He/she will (i) update designs and cost estimates prepared by the design consultants, (ii) supervise the bridge/structure constructions, and (iii) assist the Resident Engineers in issuing instructions to the contractors.



44. **Materials Engineers (National, 120 person-months, 5 experts)** shall have (i) a bachelor's degree in civil engineering or the equivalent, with 5 years of overall experience and 3 years of experience as materials engineer; or (ii) bachelor's degree in engineering or the equivalent, with 8 years of overall experience and 3 years of experience as materials engineer; or (iii) National Diploma in Technology (NDT), with 10 years of overall experience and 5 years of experience as materials engineer; or (iv) National Certificate in Technology (NCT)/Materials Engineer recognized by government institutions, with 15 years of overall experience and minimum 8 years of experience as materials engineer. He/she will (i) undertake day-to-day supervision of compliance with material specifications and testing; (ii) supervise the contractors' work; and (iii) certify the construction in accordance with contract conditions, including acceptance standards of materials, approval of source supply, and material testing methods. He/she will periodically review the contractors' quality assurance system.

45. **Quantity Surveyors (for the construction period) (National, 174 person-months, 5 experts)** shall have (i) a bachelor's degree in civil engineering or bachelor's degree in quantity surveying, with 5 years of experience; or (ii) NDT in civil engineering, with 8 years of experience in quantity surveying and minimum 2 years of experience in road projects. He/she will (i) check and recommend the payment certificates; (ii) maintain measurement records; (iii) review and update the estimates as required; and (iv) assist the Resident Engineers in checking quantity, variations, and justification.

46. One of the Quantity Surveyors shall remain for the 3-year performance-based maintenance period.

47. **Contract & Claims Engineer (National, 27 person-months)** shall have a bachelor's degree in civil engineering or the equivalent, with 10 years of experience and minimum 8 years of experience in road contract administration, including FIDIC contract administration, and minimum 3 years of experience as a contract engineer. He/she will (i) evaluate and settle variations and standard format of claims; (ii) advise the Chief Resident Engineer and Resident Engineers on potential claims; (iii) assist the contract specialist in evaluating claims and variations; (iv) assist the Chief Resident Engineer and Resident Engineers in responding to the contractors on contractual matters; (v) guide the employer in case of disputes by the contractor on claims settlement; and (vi) assist the employer in establishing a dispute resolution board.

48. **Environmental Specialist (National, 24 person-months)** shall have a bachelor's degree in environmental science or the equivalent, and with 6 years of experience and minimum 3 years of experience in preparing, implementing, and monitoring environmental management schemes associated with infrastructure projects. He/she will (i) assist in reviewing the environmental checklists and contract package-specific environmental management action plans (EMAP) for all project roads and ensure that they have been prepared in accordance with the requirements of the EARF for all tranches and the recommendations and guidelines of the Central Environment Authority of Sri Lanka; (ii) during the preparation of the subsequent tranche, ensure all nominated roads comply with the selection criteria provided in the EARF and prepare due diligence reports on 20% of randomly selected sample of roads for all ongoing project tranches; (iii) check compliance of (a) the initial environmental examination (IEE) and standard environment management plan prepared by the survey and preliminary engineering (SAPE) team with the requirements of the EARF, and (b) the site-specific EMAP with the requirements of the EARF and the respective province-level IEE; (iv) provide technical advice to the contractor and conduct on-the-job training as necessary; (v) prepare monitoring reports on an annual basis based on monitoring checklists completed for each project road during preconstruction, construction, and post-construction or operation stages; and (vi) during the preparation of the subsequent tranche,

prepare due diligence reports, and train the environment and social officers of the PIU on environmental monitoring and reporting.

49. **Social/Gender/Resettlement Specialist (National, 24 person-months)** shall have a bachelor's degree in social science or the equivalent, and with 6 years of experience and minimum 3 years of experience in preparing, implementing, and monitoring social development schemes associated with infrastructure projects. He/she will (i) ensure compliance of all preliminary designs of rural roads and national road projects prepared by the SAPE consultant in accordance with the resettlement framework for all tranches; (ii) check and ensure the detail designs prepared by civil works contractors have incorporated feasible features based on the outcome from transect walks; (iii) during the preparation of the subsequent tranche, prepare due diligence reports on 20% of randomly selected sample of roads for all ongoing project tranches; (iv) monitor and evaluate implementation of the community participation process prescribed in the resettlement framework and recommend improvements to the participatory process to ensure the broader participation of the rural population in project roads formulation; (v) for rural roads which require land donation, monitor the land donation process and conduct field visits on a monthly basis until land donation is finalized; (vi) during the construction phase, conduct monitoring of all project roads and prepare monitoring reports on a biannual basis for all project tranches; and (vii) during the maintenance phase, conduct monitoring of all project roads and prepare monitoring reports on an annual basis for all project tranches. He/she will also (i) provide training and support to the PIU on implementing the gender action plan (GAP) activities at the field level, (ii) lead the implementation of specific gender-mainstreaming activities as detailed in the GAP, and (iii) monitor and report the overall implementation of relevant activities included in the GAP for all tranches on a semi-annual basis.

50. **Planning Engineer (Non-key)** shall have a bachelor's degree in civil engineering, and with 3 years of experience.

51. **Construction Engineers (Non-key)** shall have a bachelor's degree in civil engineering or the equivalent, and preferably with 3 years of experience and minimum 2 years of experience in road construction. He/she will assist the Chief Resident Engineer, Resident Engineers, and Assistant Resident Engineers on day-to-day works.

52. **Junior Engineers (Non-key)** shall have a bachelor's degree in civil engineering or the equivalent, and preferably with 2 years of experience. He/she will be assigned to coordinate the utility related activities among the stakeholders and assist the Construction Engineers on construction supervision.

53. **Land Surveyor (Non-key)** shall have a bachelor's degree in surveying science, and with 2 years of experience.

54. **Technical Officers (Non-key)** shall have (i) NDT in civil engineering or the equivalent, with 3 years of experience; or (ii) NCT in civil engineering, with 6 years of experience and minimum 2 years of experience in road construction supervision. He/she will (i) ensure construction works are carried out according to the drawings and specifications, (ii) take measurements of daily work done, and (iii) coordinate and liaise with the Land Surveyor and Materials Engineer in checking and testing.

## 5. Output and Reporting Requirements

55. The PIC for Northern Province will prepare reports, including monthly reports, on the project progress in a format and level of detail agreed with the IA and ADB. The consultants will

maintain records documenting (i) information supplied by the field teams, (ii) decisions made at meetings, (iii) progress on civil works, (iv) certified achievements and milestones, (v) financial records, and (vi) any deviations from or changes to the contract plans. The consultant will assist the project management unit/PIU in preparing (i) quarterly progress reports; (ii) safeguard compliance reports, including sections on environment, social, and gender; (iii) a project completion report; and (iv) monitoring and evaluation reports as required under the contract. The consultants will also undertake surveys, design reviews and workshops, and submit relevant reports.

56. Following are other reporting requirements:

- (i) Monitor record keeping and instruct the contractor to keep further contemporary records, including statutory requirements concerning the contractor's reporting of dangerous occurrences or accidents to government or public authorities.
- (ii) Report and update the works implementation schedule, highlighting any foreseen delays and timely proposing corrective measures.
- (iii) Maintain up-to-date financial records and other records for review, if and when needed by the IA and ADB.

57. The PIC for Northern Province will submit reports in hard copy and soft copy as follows (Table F.5):

**Table F.5: Reporting Requirements**

<b>Deliverables</b>	<b>Deadline</b>	<b>Copies</b>
Inception Report <sup>a</sup>	End of month 1	5
Monthly Progress Report on Conventional Road Contract (CRC) Packages <sup>b</sup>	Within a week of the end of the month	5
Project Performance and Monitoring Survey (PPMS) Report	End of month 6 (from start of the consultancy contract), midterm (end of construction period), and end of the project (end of performance-based maintenance)	5
Social Safeguard Monitoring Report (as per the agreed format by ADB and the RDA)	Semi-annual	5
Environmental Report (as per the agreed format by ADB and the RDA)	Annual	5
Project Completion Report (as per the agreed format by ADB and the RDA)	By 1 month prior to project completion	7
Draft Periodic Financing Request (PFR) for iRoad 2 (up to 10 PFRs)	Upon the RDA's request	5
Special Reports (as requested by the RDA)	Upon the RDA's request	5
Environment and Social Safeguards Compliance Due Diligence Reports (as per the agreed format by ADB and the RDA)	Before the fact-finding mission for subsequent tranches	5
Report of Context Sensitive Design (for each CRC package)	After finalizing the design	5

ADB = Asian Development Bank, RDA = Road Development Authority.

Note: All above reports must be submitted in soft copy format as well.

<sup>a</sup> Inception Report: Initial findings and the work program for the balance of the assignment.

- <sup>b</sup> Monthly Progress Report: Brief details of the works carried out during the previous month, the problems encountered or anticipated, and financial and physical progress to date along with the S-curve. The format must follow that given in ADB's Project Administration Manual.

Source: Asian Development Bank.

## **6. Facilities Provided by the Client**

58. The PIC for Northern Province shall maintain a Team Leader's office in Kilinochchi. The client will provide the following:

- (i) Visa supporting letters and registrations for the host country
- (ii) Furnished air-conditioned office spaces
- (iii) Relevant project data and reports
- (iv) Access to data, records, and other information required to perform the assigned tasks

59. The following will be provided under the civil works contracts:

- (i) Office spaces with support facilities (including utilities, furnishings, and fittings) in the construction site
- (ii) Shared housing accommodation for the PIC's national staff: Resident Engineers, Assistant Resident Engineers, and others
- (iii) Vehicles for site supervision:  
International – Team Leader, FIDIC Contract Specialist  
National – Resident Engineers, Assistant Resident Engineers, and others

## **7. Facilities to be Provided by the PIC**

60. The PIC for Northern Province will be responsible for the following:

- (i) Accommodation for international and national consultants not listed under para. 53
- (ii) Telephone facilities for domestic use only and various equipment required to carry out the assignment
- (iii) Office stationery and supplies
- (iv) Any other items not provided by the RDA or civil works contracts

## **B. Terms of Reference for Institutional Capacity Development on Environmental and Social Safeguards**

### **1. Target Group**

- (i) Provincial Council staff of Provincial Road Development Authority (PRDA)/Provincial Road Development Department (PRDD): director, deputy directors, engineers, technical officers, development officers, planning officers
- (ii) Road Development Authority staff: provincial director, chief engineers, executive engineers, engineers, technical officers

### **2. Background**

61. Experience was gained during the implementation of the ADB-supported Southern Transport Development Project, which assisted the RDA in establishing the Environment and Social Division (ESD) under Technical Assistance 4736. The ESD became the RDA's safeguard

implementing and monitoring arm and now functions as a separate division called the Environment and Social Development Division (ESDD).

62. As a program that is directly involved with rural environment (including social environment), it is important for iRoad 2 to develop the capacity especially of provincial authorities and local government staff on environmental and social safeguards.

### **3. Scope**

63. This TOR is designed to guide and develop institutional capacity on environmental and social safeguards. Activities under capacity development shall include but not be limited to the following activities:

- (i) Setting terms of reference for environmental and social assessments (including initial environmental examination reports, environmental impact assessment reports, and resettlement plans)
- (ii) Preparation of environmental and social categorization checklists
- (iii) Reviewing and constructive commenting of environmental and social reports, including environmental assessment reports and social assessment reports
- (iv) Field monitoring of environmental and social safeguards compliance
- (v) Preparation of monitoring reports with respect to environmental and social safeguards monitoring
- (vi) Preparation of gender action plans and field monitoring of the implementation of such plans
- (vii) Effective communication and information dissemination on project aspects related to environmental and social safeguards
- (viii) Awareness creation and knowledge accumulation on environmental and social (best) practices

## **C. Terms of Reference for Road Safety Training Program for Schoolchildren**

### **1. Target Group: Schoolchildren and teachers**

### **2. Background**

64. The rehabilitated roads with high-speed vehicles and high-volume traffic can cause serious safety concerns to the community. Schoolchildren are most vulnerable and need awareness on road safety.

65. As part of the CDP implementation process, this training program has been organized with the aims of creating awareness among schoolchildren and teachers on road safety and disseminating information on road safety to the community through these two groups.

### **3. Scope**

66. This TOR is developed to give awareness on road safety for schoolchildren. Activities under this program shall include but not be limited to the following activities:

- (i) Aspects of road crossing, pedestrian safety, safe cycling, accident statistics, new laws related to these topics
- (ii) Demonstrations based on the book *Pedestrian Safety* on the following topics: safe cycling, safe bus travelling, crossing railway tracks safely, and pedestrian safety

- (iii) Outdoor demonstrations for schoolchildren on how to crossroads safely using the zebra pedestrian crossing. Zebra crossing model is to be used.

## **D. Terms of Reference for the Training Program on Rural Road Design**

### **1. Target Group**

- (i) Provincial council staff of PRDA/PRDD: director, deputy directors, engineers, technical officers
- (ii) Road Development Authority staff: provincial director, chief engineers, executive engineers, engineers, technical officers

### **2. Background**

67. The concept and approach of rural road design are very different from the national road design. A lot of factors need to be considered and, generally, the carriageway should be designed within the right-of-way as the roads are narrow. In particular, several social and economic factors need to be considered during the design phase and it is always useful to conduct Context Sensitivity Design as carried out in the iRoad program.

68. Hence, it is very important to educate the officers of the road agency regarding the rural road design concepts, approach, and methodology.

### **3. Scope**

69. This TOR is developed to give the outline of rural road design. Activities under this program shall include but not be limited to the following activities:

- (i) Importance of Context Sensitivity Design
- (ii) Public consultation
- (iii) Codes of design
- (iv) Restriction in design

## **D. Terms of Reference for the Training Program on Performance-based Maintenance of Rehabilitated Roads**

### **1. Target Group**

- (i) Provincial Council staff of PRDA/PRDD: director, deputy directors, engineers, technical officers
- (ii) Road Development Authority staff: provincial director, chief engineers, executive engineers, engineers, technical officers

### **2. Background**

70. The rehabilitation/improvement works include strengthening of existing pavements and widening, resurfacing with asphalt concrete or surface treatment, reconstruction of damaged structures, improvements to drainage, etc.

71. It is vital to adopt a strategy for the maintenance of project roads to sustain the benefits derived from the project. Past experience shows the negligence of maintenance after completion

for various reasons, leading to deterioration of roads even within the designed life span despite a huge initial investment on rehabilitation works. ADB and road authorities have looked at this aspect in a pragmatic perspective, paving the way for the performance-based maintenance (PBM) of project roads for 3 to 5 years by the respective rehabilitation work contractors. This is a two-pronged approach: (i) to allow the contractors to maintain the asset developed by them, and (ii) to also become responsible for their own rehabilitation works for a 5-year period. PBM is the global trend now being practiced in many developed countries that has proved to be the most efficient and cost-effective method of management and maintenance of road assets.

72. In this context, it is vital that the road agencies should be aware of the concept, approach, implementation, and other activities related to PBM.

### **3. Scope**

73. This TOR is developed to provide the outline of PBM. Activities under this program shall include but not be limited to the following activities:

- (i) Contractual aspects of PBM
- (ii) Employer's/contractor's role in PBM
- (iii) How to measure the service levels during PBM
- (iv) How to make payment for PBM
- (v) Lessons learned in previous PBM projects

## TERMS OF REFERENCE FOR UVA PROVINCE

### A. Project Implementation

#### 1. Background

1. The Road Development Authority (RDA), with the funding assistance of the Asian Development Bank (ADB), is implementing the Integrated Road Investment Program–Phase 1 in Sri Lanka to enhance the connectivity of rural socioeconomic centers. About 3,130 kilometers (km) of rural roads are being rehabilitated and maintained through this program in Central, North Central, North Western, Sabaragamuwa, and Southern provinces and Kalutara district in Western Province.

2. In this context, the Democratic Socialist Republic of Sri Lanka has applied for a multitranche financing facility (MFF) from ADB for the Second Integrated Road Investment Program (iRoad 2) to enhance the scope for the remaining areas of Eastern, Northern, Uva, and Western provinces and to improve the access routes between rural areas and socioeconomic centers. The program includes the rehabilitation and improvement of approximately 3,650 km of roads in four separate geographical areas through conventional road contracts (CRC) covering rural access roads and national roads, including post-construction performance-based maintenance. Part of the funds from the MFF shall be used to engage an international consultancy firm as project implementation consultant (PIC) to assist the RDA in project implementation, including construction supervision, supervision of post-construction maintenance work, contract management, and other implementation activities in the CRC component. This outline provides the terms of reference (TOR) for PIC services for the CRC in Uva Province.

3. The executing agency (EA) of the iRoad 2 program is the Ministry of Higher Education and Highways (MOHWEH) and the implementing agency (IA) is the RDA. Project implementation consultants are to be engaged. The overall proposed PIC organizational arrangement is in Appendix G.

4. The general roles and responsibilities of the various parties for iRoad 2 are as follows (Table G.1):

**Table G.1: Project Participants and Roles**

<b>iRoad 2 Participant</b>	<b>General Roles and Responsibilities</b>
PIU	<ul style="list-style-type: none"> <li>• Project and safeguards management</li> <li>• Approval of all variations of contracts for consulting services and civil works</li> </ul>
Advisory Consultants Individual Consultants	<ul style="list-style-type: none"> <li>• Assisting the PIU in areas requiring special expertise, e.g., contract management, procurement, information technology, institutional strengthening, capacity development, and road safety</li> </ul>
SAPE Team	<ul style="list-style-type: none"> <li>• Feasibility study, safeguards documents, and level-2 designs</li> <li>• Community consultation along project roads</li> </ul>
PIC (CRC)	<ul style="list-style-type: none"> <li>• Reviewing and confirming the design and scope of works when the contractors apply the level-2 designs to the roads under CRC packages</li> <li>• Construction supervision of CRC packages</li> <li>• Supervision of post-construction maintenance work in CRC packages</li> <li>• Monitoring safeguard activities</li> <li>• Providing on-the-job training to the PIU, EA, IA, and provincial and local road agencies in project management and contract administration</li> </ul>



iRoad 2 Participant	General Roles and Responsibilities
Contractors	<ul style="list-style-type: none"> <li>Detailed design based on the level-2 design for the CRC, or the conceptual design for the road management contract packages</li> <li>Delivering the physical works as required in the CRC, or the level of services as required in the road management contract</li> <li>For the road management contract packages, the work includes various asset management tasks</li> <li>Implementing safeguard requirements in the contract</li> </ul>

CRC = conventional road contracts, EA = executing agency, IA = implementing agency, iRoad 2 = Second Integrated Road Investment Program, PIC = project implementation consultant, PIU = project implementation unit, SAPE = survey and preliminary engineering.

Source: Asian Development Bank.

5. Among the scope of consulting services, the main task of the PIC is to assist the RDA in supervising and/or implementing the civil works in the CRC component of the iRoad 2 program.

6. In the CRC component, conventional measure and value contracts, requiring detailed contract supervision, will be used for road rehabilitation. Initial construction is to be completed in the first 2 years, followed by a 3-year performance-based maintenance period. The roads under the contract packages will be isolated length.

7. The tentative number of contract packages of civil works to be monitored and supervised by the PIC in Uva Province are indicated below (Table G.2).

**Table G.2: Tentative Number of Civil Works Contract Packages**

Name of District	Tentative Number of Contract Packages
Badulla	7
Monaragala	7

Source: Asian Development Bank.

8. Approximately 1,050 km of rural and national roads will be rehabilitated in Uva Province. Contract package size would be SLRs2,100 million.

9. The PIC for Uva Province will assist the project implementation unit (PIU) in the implementation of the contracts, including site supervision of construction activities, monitoring maintenance performance, and other due diligence as defined in further detail in the next paragraphs.

10. The indicative timeline for implementation of the physical works is as follows (Table G.3):

**Table G.3: Implementation Timeline**

Item	Conventional Road Contract Packages
Physical works commence	Tentatively in first quarter of 2018
Duration of rehabilitation works	2 years
End of performance-based maintenance period	3 or 5 years from end of rehabilitation works

Source: Asian Development Bank.

11. **The team leader of the PIC will act as the engineer in the contracts.** The consultant will also be required to discharge other responsibilities outlined in the TOR.

12. The PIC for Uva Province shall use the most up-to-date software and technology for administration of the construction contracts. The PIC shall ensure that all electronic files in relation

to the deliverables of this TOR are in a format compatible with those used by the EA. The EA uses the Microsoft Office suite of software, ArcGIS for geographic information system applications, and AutoCad for drawings. Further clarification on any aspect of this requirement can be obtained from the PIU. All files are to be provided in soft copy and hard copies of reports are also required as defined below. Subject to request by the PIU, some reports should also be provided in PDF format.

## **2. Project Administration in Uva Province**

13. Civil works under the CRC packages will be carried out based on the International Federation of Consulting Engineers (FIDIC) Construction Contract MDB Harmonised Edition (June 2010).

14. The PIC for Uva Province will (i) undertake contract administration based on the FIDIC contract; (ii) undertake safeguards compliance to ensure that all safeguards (social, environmental, and for indigenous peoples) are complied with under the project; (iii) carry out the project performance and monitoring survey 3 times—at the start of the consultancy contract, at midterm (end of the construction period), and at the end of the project (end of performance-based maintenance period); (iv) prepare and implement a capacity development program, including training, workshops, and seminars on project management and contract administration for the staff of MOHWEH, the RDA, and provincial and local road agencies; (v) prepare monthly reports on project progress and other issues; and (vi) prepare a project completion report when the project is substantially completed, incorporating comments from the PIU, the IA, the EA, and ADB.

15. The PIC for Uva Province will administer the construction contracts and ensure that the contractual clauses for both quality and specifications of works are complied with, and the works are constructed in accordance with the provisions of the construction contracts.

16. The PIC for Uva Province, while supervising construction works, will make all necessary arrangements for the implementation of quality assurance and quality control plans following industry standards and best practices. In consultation with the PIU and EA, the PIC for Uva Province will make all engineering decisions required for the successful and timely completion of the construction contracts, and will have all the powers defined as those of the engineer under the FIDIC.

17. If necessary, the PIC for Uva Province will liaise with other co-financiers under the project to keep them briefed about the project.

## **3. Detailed Scope of PIC Consulting Services for Uva Province**

18. Contract administration is in accordance with the FIDIC Conditions of Contract MDB Harmonised Edition (June 2010):

- (i) Administer the contractors' work in accordance with the FIDIC conditions of contract.
- (ii) Supervise the contractors' work and certify the works in accordance with contract conditions. Ensure that the construction methods proposed by the contractor for carrying out the works are satisfactory.
- (iii) Arrange site meetings with contractors at regular intervals to discuss progress and quality of works, and resolve any related problems.

- (iv) Verify geometric designs, including embankments, designs of structure, and the pavement design of project roads by design consultants. If necessary, make necessary amendments as and when required.
- (v) Review and approve contractors' working drawings, method statements, programs, and any other documents.
- (vi) Develop quality assurance system and inspection and testing plan.
- (vii) Inspect contractors' construction equipment, results of material and soil tests, and safety of the work, property, and personnel. Inspect and test all materials and works to ensure compliance with specifications, and give immediate notice to the contractor to undertake remedies in the event that such materials and works fail to comply with the specifications.
- (viii) Recommend to the IA the rates for any unscheduled items of work that may arise.
- (ix) Certify work volume and process interim and final payments of the contractors.
- (x) Establish efficient procedures for verifying contractor performance and control reports, quality survey records, requests for variations or change orders, requests for time extensions, and contractor's claims and invoices.
- (xi) Ensure project financial management procedures are in place and are strictly followed, specifically relating to payments, financial accounting, financial reporting, and record keeping.
- (xii) Check as-built drawings prepared by the contractors. Keep and record a complete set of as-built drawings in paper and electronic formats for safekeeping in the employer's repository.
- (xiii) Ensure that road safety design requirements are implemented in accordance with the contract documents and specifications.
- (xiv) Monitor contractor's conformity with traffic control and road safety action plans during construction.
- (xv) Assist the IA in the provisional and final handover of works by the contractors.

19. The bill of quantities for civil works contracts in the project has been prepared based on preliminary designs. During the civil works contract implementation, the respective civil works contractors will carry out detailed designs and prepare accordingly the cost to completion of civil works contracts. The PIC for Uva Province has to review and approve all designs for construction

20. All the necessary designs and the cost to completion for the civil works contract must be prepared by the contractor, and reviewed and approved by the PIC for Uva Province within 4 months from the start date of the civil works contract. The same design including cost to completion shall be reviewed and revised, if necessary, every 3 months. A detailed timeline for this exercise must be agreed between the PIC for Uva Province and the contractor for the design work at the beginning of the civil works contract.

21. Findings of the transect walk during the survey and preliminary engineering stage have to be incorporated in the detailed design based on the concept of the Context Sensitive Design approach.

22. Based on the details submitted by civil works contractors, the PIC for Uva Province should evaluate the cost to completion of each civil works contract every 3 months and advise the project director accordingly.

23. The quality assurance system will be adopted for all civil works contracts in the projects. The PIC for Uva Province should review and approve of the quality assurance system and the

inspection and testing plan. The consultants should also monitor the implementation of quality assurance systems in civil works contracts.

24. Most of the project roads are located in rural areas and scattered. When reviewing contractors' method statements and programs, the consultant should review whether the contractors execute the work with minimum inconvenience to the public.

25. Any contractors' proposals for adopting new methods or technology in construction to overcome material scarcity should be reviewed and the RDA and the contractor advised accordingly.

26. Following are measures for safeguard compliance monitoring:

- (i) Ensure that the project complies with requirements stipulated in the environmental assessment review framework (EARF), resettlement framework, and indigenous peoples planning framework (IPPF) that were developed for the project based on ADB's Safeguard Policy Statement (2009) and the conditions and guidelines stipulated by the Central Environmental Authority of Sri Lanka.
- (ii) Assist and guide the IA in ensuring compliance with environmental and social safeguards.
- (iii) Assist and guide the IA and contractors in complying with requirements stipulated in the gender action plan.
- (iv) Assist and guide the IA on the land donation process (as per the resettlement framework) and, if required, collect baseline data to prepare a land acquisition and resettlement plan (for national roads where land acquisition is permitted) and carry out other impact assessments in accordance with the resettlement framework, EARF, ADB's Safeguard Policy Statement (2009), and the relevant laws and regulations of the host country.
- (v) Update the resettlement plans when necessary and help the employer in seeking necessary approvals of the government and ADB.
- (vi) If land acquisition and resettlement are necessary, assist the IA in preparing and supervising the implementation of the land acquisition and resettlement plan.
- (vii) Assist the IA in establishing a grievance redress mechanism and in its proper functioning and management.
- (viii) Monitor the implementation of the gender action plan and ensure activities are carried out as planned and relevant baseline and monitoring data are collected.
- (ix) Carry out the following duties related to environmental safeguards:
  - (a) ensure that all the environmental mitigation measures as outlined in the initial environmental examination report (IEER) for required implementation are incorporated in the contract documents;
  - (b) ensure that the contractor prepares site-specific environmental management action plans (SSEMAP) and secures its approval before commencement of construction work;
  - (c) supervise and monitor the implementation of the SSEMAP;
  - (d) in the event of any unexpected environmental impacts, coordinate with the contractor and employer to ensure that necessary mitigation measures are implemented;
  - (e) provide technical advice to the contractors;
  - (f) prepare periodic monitoring reports monthly (as part of the monthly progress report) and annually and submit to the IA; and
  - (g) facilitate grievance redress in the case of environment related issues.
- (x) Carry out the following duties related to social safeguards:

- (a) ensure the establishment of grievance redress committees as per the guidelines in the resettlement framework and facilitate grievance redress in the case of social related issues;
    - (b) ensure the IA follows due process on land donation in the case of rural roads; and
    - (c) prepare periodic monitoring reports monthly (as part of the monthly progress report) and semi-annually and submit these to the IA.
  - (xi) Monitor contractors' compliance with and performance of required actions, such as awareness and education of workers, regarding health and sexually transmitted diseases (including HIV/AIDS), human trafficking, and core labor standards in accordance with the contract documents.
27. Following are measures related to the project performance and monitoring survey:
- (i) Establish the project performance and monitoring system within the first 6 months of the consultancy contract.
  - (ii) Develop performance indicators based on the design and monitoring framework provided by the IA in close cooperation with the employer and, if necessary, coordinate with the relevant local authorities.
  - (iii) Collect baseline data based on the indicators agreed upon in the project's design and monitoring framework at the start of the project, and measure the indicators over time during the assignment period. Undertake project performance monitoring and evaluation in accordance with the project framework and ADB's Project Performance Management System Handbook. Design a simple MS Excel or similar system for recording the baseline and periodic data.
  - (iv) Assess the indicators at midterm (end of construction period) and after completion of construction (end of performance-based maintenance).
  - (v) Assess the socioeconomic impacts of the project on potential beneficiaries through selective household surveys and participatory research methods.
  - (vi) Assess the environmental sustainability of the project.
  - (vii) Conduct training in operational social research methods and building employer's capacity on performing management and impact assessments.
  - (viii) Establish a system for monitoring socioeconomic indicators in the selected habitation served by the investment program roads as compared to the unconnected habitations, such as (i) poverty rates, (ii) number of maternal and infant deaths, (iii) number of total deliveries versus safe deliveries, (iv) immunization rates, (v) unemployment rates, (vi) agricultural production of perishable goods, (vii) income and expenditure of rural households, and (viii) district cash turnover of agricultural produce in local markets served by investment program roads, etc.
28. The PIC for Uva Province shall arrange workshops on project performance and training programs for the IA staff. It will also facilitate overseas training of IA staff in gaining the latest technology and experience in rural road pavement designs, contract management, and environmental and social safeguards based on the terms of reference cited in Appendix C.
29. Following are measures related to the project completion report:
- (i) Prepare a project completion report in accordance with the procedures of ADB as spelled out in relevant project administration instructions of ADB. The format can be obtained from the employer or ADB's relevant project officer.
  - (ii) Assist the employer in seeking comments from ADB and co-financiers, if required, and finalize these for submission by the employer to ADB.

30. If so required by the IA, the PIC will provide any of the following as additional services: (i) prepare reports, including technical appraisals, additional contract documentation, and/or reviews and comments on the contractor's proposals as may be required for the successful completion of the project; and (ii) provide any other specialists services as may be required from time to time.

31. The IA will authorize any additional service, other than minor extras that do not materially affect the scope of the design review, procurement, and supervision work, at the rates established in the construction supervision contract, or at the rates mutually agreed upon when the services require the use of specialists not listed in the contract.

32. In the event of including additional roads for improvements, for the preparation of designs, estimates, social and environmental reports, and any other reports, the RDA will engage the consultant through a contract variation.

#### 4. Consultancy Inputs and Qualifications of Staffs

33. The consulting services will be carried out by international firm/s in association with national consultants to be selected by the IA in accordance with ADB's Guidelines on the Use of Consultants (2010, as amended from time to time). A total of 36 person-months of international consultant inputs and 699 person-months of key national consultant inputs will be required.

34. Consulting services are expected to take about 60 months (actual duration of service shall be in line with the civil works schedule). All experts, international and national, must be proficient in both written and spoken English. The key positions are given in Table G.4 below.

**Table G.4: Key Consultancy Positions**

Position	No.	Inputs	Total
		(person-month)	
International Key Experts			
Team Leader/Chief Resident Engineer	1	30	30
FIDIC Contract & Claims Specialist	1	6	6
Subtotal	2		36
National Key Experts			
For the Construction Period			
Deputy Team Leader	1	30	30
Resident Engineers	4	27	108
Rural Road Design and Safety Engineers	3	24	72
Structural Engineer	2	12	24
Materials Engineer	4	24	96
Quantity Surveyor	4	27	108
Environmental Specialist	1	24	24
Social/Gender/Resettlement Specialist	1	24	24
Contracts and Claims Engineer	1	27	27
Assistant Resident Engineer	4	27	108
For the Maintenance Period			
Resident Engineer (Maintenance)	1	39	39
Quantity Surveyor (Maintenance)	1	39	39
Subtotal	27		699
Non-key Experts			
For the Construction Period			
Planning Engineer	1	27	27

Position	No.	Inputs	Total
		(person-month)	
Construction Engineers	18	27	486
Junior Engineers	3	24	72
Land Surveyors	4	24	96
Technical Officers (Construction)	32	24	768
<b>For the Maintenance Period</b>			
Technical Officers (Maintenance)	14	36	504
<b>Subtotal</b>	<b>72</b>		<b>1,953</b>
<b>TOTAL</b>	<b>101</b>		<b>2,688</b>
FIDIC = International Federation of Consulting Engineers. Notes: 1. Curriculum vitae (CV) of the Planning Engineer, Construction Engineers, Land Surveyor, and Technical Officers are not required for inclusion in the proposal and will not be evaluated. However, CVs must be submitted to the client for approval prior to mobilization. 2. The estimated person-months are indicative, and the actual will vary based on actual duration of works and will be paid on actual time-basis. As common basis for financial proposal, the consultant must use the staff person-months indicated above. 3. FIDIC Contract & Claims Specialist (International) will be mobilized on as-needed basis. His/her CV is required for inclusion in the technical proposal and will be evaluated. 4. Membership numbers of professional qualified bodies should be stated in the CV.			

Source: Asian Development Bank.

35. The PIC for Uva Province is required to propose assignment of experts in accordance with the scope and expected deliverables. The qualifications and responsibilities of key positions are described as follows. Regional and country experience of the international staff is preferable.

36. **Team Leader and/or Chief Resident Engineer (International, 30 person-months)** shall be responsible for the overall tasks as defined here under the scope. He/she shall preferably have a bachelor's degree in civil engineering, professionally qualified, and have a master's degree in road engineering and/or contracts management. He/she shall have preferably 15 years of experience and minimum 10 years of experience in road construction. He/she shall be familiar with various international standards for design and construction (FIDIC), including stages of works and methods of construction such as temporary works, construction plans, schedules, construction method, assignments of equipment and personnel, testing and trials, and drawings. The Team Leader will (i) maintain records and advise the PIU on the day-to-day coordination and supervision of the project and its components, including the preparation of regular progress reports; (ii) coordinate and review updated designs and cost estimates as required by the contract; (iii) coordinate and supervise the work of field teams in certifying construction in accordance with contract conditions; (iv) coordinate and liaise with the employer; attend meetings arranged by the employer; update the employer regularly on progress of work, delays, and variations; and recommend remedial measures; (v) submit to the employer and obtain approval on variations, extension of time, and other specific items defined in the Particular Conditions of Contract; and (vii) chair the site progress review meeting. He/she will ensure compliance with the safeguard aspects under the project. He/she will also ensure that specifications under the contract are being met, and quality is maintained.

37. **FIDIC Contract & Claims Specialist (International, 6 person-months)** shall have a bachelor's degree in civil engineering, professionally qualified, preferably have a master's degree in construction and/or contract management, and preferably with 15 years of experience and minimum 10 years of experience in road works contract administration, including FIDIC contract administration. He/she will (i) evaluate and settle variations and standard format of claims, and (ii) guide the employer in case of disputes by the contractor on claims settlement.

38. **Deputy Team Leader (for the construction period) (National, 30 person-months)** shall have a bachelor's degree in civil engineering or the equivalent, professionally qualified, preferably with postgraduate diploma in road construction, and with 12 years of experience and minimum 10 years of experience in road construction/management. He/she will assist the Team Leader on coordination and supervision of road construction works in the field.

39. **Resident Engineers (for the construction period) (National, 147 person-months, 4 experts)** shall assist the Team Leader on coordination and supervision of road construction works in the field. The Resident Engineer shall have a bachelor's degree in civil engineering or the equivalent, professionally qualified, and with 10 years of experience and minimum 8 years of experience in road construction supervision and/or management. He/she will (i) conduct day-to-day construction supervision, (ii) monitor schedules, (iii) prepare monthly certificates, and (iv) review and approve shop drawings and as-built drawings. He/she will issue site instructions in consultation with the Team Leader. He/she will timely inform the Team Leader about issues relating to the quality of works, progress of work, and any other constraints affecting the work.

40. One of the Resident Engineers shall remain for the 3-year performance-based maintenance period.

41. **Assistant Resident Engineers (National, 108 person-months, 4 experts)** shall assist the Resident Engineers on day-to-day coordination activities with the contractor. The Assistant Resident Engineer shall have a bachelor's degree in civil engineering or the equivalent, and with 7 years of experience and minimum 5 years of experience in road construction supervision and/or management. He/she will assist Resident Engineers in (i) supervising day-to-day construction, (ii) monitoring schedules, (iii) checking monthly certificates, and (iv) reviewing shop drawings and as-built drawings.

42. **Rural Road Design and Safety Engineers (National, 72 person-months, 3 experts)** shall have a bachelor's degree in civil engineering or the equivalent, and with 5 years of experience and minimum 3 years of experience in road design. He/she will assist the Resident Engineer in (i) reviewing the rural road and pavement design by the CRC contractors, (ii) checking design centerline set-out and making necessary adjustments, and (iii) issuing instructions to the contractors. He/she will also (i) conduct systematic road safety audits of 10% of preliminary design and 10% of detailed design, including preparation of formal road safety audits and safety check reports; (ii) conduct systematic road safety inspections on a randomly selected sample of roads under maintenance, and document issues and countermeasures; (iii) prepare road safety monitoring reports; (iv) provide training and support to the PIU; (v) assist the PIU with road safety complaints and accident investigations; and (vi) assess the effectiveness of road safety audit procedures and recommend improvements as needed.

43. **Structural Engineers (National, 24 person-months, 2 experts)** shall assist the Resident Engineers in ensuring that the design complies with technical and safety standards. The Structural Engineer shall have a bachelor's degree in civil engineering or the equivalent, professionally qualified, and with 6 years of experience and minimum 3 years of experience in bridge and/or structural design and construction supervision. He/she will (i) update designs and cost estimates prepared by the design consultants, (ii) supervise the bridge and/or structure constructions, and (iii) assist the Resident Engineers in issuing instructions to the contractors.

44. **Materials Engineers (National, 96 person-months, 4 experts)** shall have (i) a bachelor's degree in civil engineering or the equivalent, with 5 years of overall experience and 3



years of experience as materials engineer; or (ii) a bachelor's degree in engineering or the equivalent, with 8 years of overall experience and 3 years of experience as materials engineer; or (iii) National Diploma in Technology (NDT), with 10 years of overall experience and 5 years of experience as materials engineer; or (iv) National Certificate in Technology (NCT) and/or Materials Engineer recognized by government institutions, with 15 years of overall experience and minimum 8 years of experience as materials engineer. He/she will (i) undertake day-to-day supervision of compliance with material specifications and testing; (ii) supervise the contractors work; and (iii) certify the construction in accordance with contract conditions, including acceptance standards of materials, approval of source supply, and material testing methods. He/she will periodically review the contractors' quality assurance system.

45. **Quantity Surveyors (for the construction period) (National, 147 person-months, 4 experts)** shall have a bachelor's degree in civil engineering; or (ii) bachelor's degree in quantity surveying, with 5 years of experience; or (iii) NDT in civil engineering, with 8 years of experience in quantity surveying and minimum 2 years of experience in road projects. He/she will (i) check and recommend the payment certificates; (ii) maintain measurement records; (iii) review and update the estimates as required; and (iv) assist the Resident Engineers in checking the quantity, variations, and justification.

46. One of the Quantity Surveyors shall remain for the 3-year performance-based maintenance period.

47. **Contract & Claims Engineer (National, 27 person-months)** shall have a bachelor's degree in civil engineering or the equivalent, with 10 years of experience and minimum 8 years of experience in road contract administration, including FIDIC contract administration, and minimum 3 years of experience as a contract engineer. He/she will (i) evaluate and settle variations and standard format of claims; (ii) advise the Chief Resident Engineer and Resident Engineers on potential claims; (iii) assist the contract specialist in evaluating claims and variations; (iv) assist the Chief Resident Engineer and Resident Engineers in responding to the contractors on contractual matters; (v) guide the employer in case of disputes by the contractor on claims settlement; and (vi) assist the employer in establishing a dispute resolution board.

48. **Environmental Specialist (National, 24 person-months)** shall have a bachelor's degree in environmental science or the equivalent, and with 6 years of experience and with minimum 3 years of experience in preparing, implementing, and monitoring environmental management schemes associated with infrastructure projects. He/she will (i) assist in reviewing the environmental checklists and contract package-specific environmental management action plans (EMAP) for all project roads and ensure they have been prepared in accordance with the requirements of the EARF for all tranches and the recommendations and guidelines of the Central Environment Authority of Sri Lanka; (ii) during the preparation of the subsequent tranche, ensure all nominated roads comply with the selection criteria provided in the EARF and prepare due diligence reports on 20% of randomly selected sample of roads for all ongoing project tranches; (iii) check compliance of (a) the initial environmental examination (IEE) and standard environmental management plan (EMP) prepared by the survey and preliminary engineering (SAPE) team with the requirements of the EARF, and (b) the site-specific EMAP with the requirements of the EARF and the respective province-level IEE; (iv) provide technical advice to the contractor and conduct on-the-job training as necessary; (v) prepare monitoring reports on an annual basis based on monitoring checklists completed for each project road during preconstruction, construction, and post-construction or operation stages; and (vi) during the preparation of the subsequent tranche, prepare due diligence reports, and train the environment and social officers of the PIU on environmental monitoring and reporting.

49. **Social/Gender/Resettlement Specialist (National, 24 person-months)** shall have a bachelor's degree in social science or the equivalent, and with 6 years of experience and minimum 3 years of experience in preparing, implementing, and monitoring social development schemes associated with infrastructure projects. He/she will (i) ensure compliance of all preliminary designs of rural roads and national road projects prepared by the SAPE consultant in accordance with the resettlement framework for all tranches; (ii) check and ensure that the detail design prepared by civil works contractors have incorporated feasible features based on the outcome from transect walks; (iii) during the preparation of the subsequent tranche, prepare due diligence reports on 20% of randomly selected sample of roads for all ongoing project tranches; (iv) monitor and evaluate the implementation of the community participation process prescribed in the resettlement framework and recommend improvements to the participatory process to ensure broader participation of the rural population in project roads formulation; (v) for rural roads which require land donation, monitor the land donation process and conduct field visits on a monthly basis until land donation is finalized; (vi) during the construction phase, conduct monitoring of all project roads and prepare monitoring reports on a biannual basis for all project tranches; and (vii) during the maintenance phase, conduct monitoring of all project roads and prepare monitoring reports on an annual basis for all project tranches. He/she will also (i) provide training and support to the PIU on implementing the gender action plan (GAP) activities at the field level, (ii) lead the implementation of specific gender-mainstreaming activities as detailed in the GAP, and (iii) monitor and report the overall implementation of relevant activities included in the GAP for all tranches on a semi-annual basis.

50. **Planning Engineer (Non-key)** shall have a bachelor's degree in civil engineering, and with 3 years of experience.

51. **Construction Engineers (Non-key)** shall have a bachelor's degree in civil engineering or the equivalent, and preferably with 3 years of experience and minimum 2 years of experience in road construction. He/she will assist the Chief Resident Engineer, Resident Engineers, and Assistant Resident Engineers on day-to-day works.

52. **Junior Engineers (Non-key)** shall have a bachelor's degree in civil engineering or the equivalent, and preferably with 2 years of experience. He/she will be assigned to coordinate the utility related activities among the stakeholders and assist the Construction Engineers in construction supervision.

53. **Land Surveyor (Non-key)** shall have a bachelor's degree in surveying science, and with 2 years of experience.

54. **Technical Officers (Non-key)** shall have (i) NDT in civil engineering or the equivalent, with 3 years of experience; or (ii) NCT in civil engineering, with 6 years of experience and minimum 2 years of experience in road construction supervision. He/she will (i) ensure construction works are carried out according to the drawings and specifications, (ii) take measurements of daily work done, and (iii) coordinate and liaise with the Land Surveyor and Materials Engineer in checking and testing.

## 5. Output and Reporting Requirements

55. The PIC for Uva Province will prepare reports, including monthly reports, on the project progress in a format and level of detail agreed with the IA and ADB. The consultants will maintain records documenting (i) information supplied by the field teams, (ii) decisions made at meetings,

(iii) progress on civil works, (iv) certified achievements and milestones, (v) financial records, and (vi) any deviations from or changes to the contract plans. The consultants will assist the project management unit and/or PIU in preparing (i) quarterly progress reports; (ii) safeguard compliance reports, including sections on environment, social, and gender; (iii) a project completion report; and (iv) monitoring and evaluation reports as required under the contract. The consultants will also undertake surveys, design reviews and workshops, and submit relevant reports.

56. Following are other reporting requirements:

- (i) Monitor record keeping and instruct the contractor to keep further contemporary records, including statutory requirements concerning the contractor's reporting of dangerous occurrences or accidents to government or public authorities.
- (ii) Report and update the works implementation schedule, highlighting any foreseen delays and timely proposing corrective measures.
- (iii) Maintain up-to-date financial records and other records for review, if and when needed by the IA and ADB.

57. The PIC for Uva Province will submit reports in hard copy and soft copy as follows (Table G.5):

**Table G.5: Reporting Requirements**

<b>Deliverables</b>	<b>Deadline</b>	<b>Copies</b>
Inception Report <sup>a</sup>	End of month 1	5
Monthly Progress Report on Conventional Road Contract (CRC) Packages <sup>b</sup>	Within a week of the end of the month	5
Project Performance and Monitoring Survey (PPMS) Report	End of month 6 (from the start of the consultancy contract), midterm (end of construction period) and end of the project (end of performance-based maintenance)	5
Social Safeguard Monitoring Report (as per the agreed format by ADB and the RDA)	Semi-annual	5
Environmental Report (as per the agreed format by ADB and the RDA)	Annual	5
Project Completion Report (as per the agreed format by ADB and the RDA)	By one month prior to project completion	7
Draft Periodic Financing Request (PFR) for iRoad 2 (up to 10 PFRs)	Upon the RDA's request	5
Special Reports (as requested by the RDA)	Upon the RDA's request	5
Environment and Social Safeguards Compliance Due Diligence Reports (as per the agreed format by ADB and the RDA)	Before the fact-finding mission for subsequent tranches	5
Report of Context Sensitive Design (for each CRC package)	After finalizing the design	5

ADB = Asian Development Bank, RDA = Road Development Authority.

Note: All above reports must be submitted in soft copy format as well.

<sup>a</sup> Inception Report: Initial findings and the work program for the balance of the assignment.

<sup>b</sup> Monthly Progress Report: Brief details of the works carried out during the previous month, the problems encountered or anticipated, and financial and physical progress to date along with the S-curve. The format must follow that given in ADB's Project Administration Manual.

Source: Asian Development Bank.

## **6. Facilities Provided by the Client**

58. The PIC for Uva Province shall maintain a Team Leader's Office in Badulla. The client will provide the following:

- (i) Visa supporting letters and registrations for the host country
- (ii) Furnished air-conditioned office spaces
- (iii) Relevant project data and reports
- (iv) Access to data, records, and other information required to perform the assigned tasks

59. The following will be provided under the civil works contracts:

- (i) Office spaces with support facilities (including utilities, furnishings, and fittings) in the construction site
- (ii) Shared housing accommodation for the PIC's national staff: Resident Engineers, Assistant Resident Engineers, and others
- (iii) Vehicles for site supervision:  
International – Team Leader, FIDIC Contract Specialist  
National – Resident Engineers, Assistant Resident Engineers, and others

## **7. Facilities to be Provided by the PIC**

60. The PIC for Uva Province will be responsible for the following:

- (i) Accommodation for international and national consultants not listed under para. 53
- (ii) Telephone facilities for domestic use only and various equipment required to carry out the assignment
- (iii) Office stationery and supplies
- (iv) Any other items not provided by the RDA or civil works contracts

## **B. Terms of Reference for Institutional Capacity Development on Environmental and Social Safeguards**

### **1. Target Group**

- (i) Provincial Council staff of Provincial Road Development Authority (PRDA)/ Provincial Road Development Department (PRDD): director, deputy directors, engineers, technical officers, development officers, planning officers
- (ii) Road Development Authority staff: provincial director, chief engineers, executive engineers, engineers, technical officers

### **2. Background**

61. Experience was gained during the implementation of the ADB-supported Transport Development Project, which assisted the RDA in establishing the Environment and Social Division (ESD) under Technical Assistance 4736. The ESD became the RDA's safeguard implementing and monitoring arm and now functions as a separate division called the Environment and Social Development Division (ESDD).

62. As a program that is directly involved with rural environment (including social environment), it is important for iRoad 2 to develop the capacity especially of provincial authorities and local government staff on environmental and social safeguards.

### 3. Scope

63. This TOR is designed to guide and develop institutional capacity on environmental and social safeguards. Activities under the capacity development shall include but not be limited to the following activities:

- (i) Setting terms of reference for environmental and social assessments (including initial environmental examination reports, environmental impact assessment reports, and resettlement plans)
- (ii) Preparation of environmental and social categorization checklists
- (iii) Reviewing and constructive commenting of environmental and social reports, including environmental assessment reports and social assessment reports
- (iv) Field monitoring of environmental and social safeguards compliance
- (v) Preparation of monitoring reports with respect to environmental and social safeguards monitoring
- (vi) Preparation of gender action plans and field monitoring of the implementation of such plans
- (vii) Effective communication and information dissemination on project aspects related to environmental and social safeguards
- (viii) Awareness creation and knowledge accumulation on environmental and social (best) practices

## C. Terms of Reference for Road Safety Training Program for Schoolchildren

1. **Target Group:** Schoolchildren and teachers

### 2. Background

64. The rehabilitated roads with high-speed vehicles and high-volume traffic can cause serious safety concerns to the community. Schoolchildren are most vulnerable and need awareness on road safety.

65. As a part of the CDP implementation process, this training program has been organized with the aims of creating awareness among schoolchildren and teachers on road safety and disseminating information on road safety to the community through these two groups.

### 3. Scope

66. This TOR is developed to create awareness on road safety for schoolchildren. Activities under this program shall include but not be limited to the following activities:

- (i) Aspects of road crossing, pedestrian safety, safe cycling, accident statistics, and new laws related to these topics
- (ii) Demonstrations based on the book *Pedestrian Safety* on the following topics: safe cycling, safe bus travelling, crossing railway tracks safely, and pedestrian safety
- (iii) Outdoor demonstrations for schoolchildren to demonstrate how to crossroads safely using the zebra pedestrian crossing. Zebra crossing model is to be used.

## C. Terms of Reference for the Training Program on Rural Road Design

1. **Target Group**

- (i) Provincial Council staff of PRDA/PRDD: director, deputy directors, engineers, technical officers
- (ii) Road Development Authority staff: provincial director, chief engineers, executive engineers, engineers, technical officers

## **2. Background**

67. The concept and approach of rural road design are very different from the national road design. A lot of factors need to be considered and, generally, the carriageway should be designed within the right-of-way as the roads are narrow. In particular, several socioeconomic factors need to be considered during the design and it is always useful to conduct Context Sensitivity Design as carried out in the iRoad program.

68. Hence, it is very important to educate the officers of the road agency regarding the rural road design concepts, approach, and methodology.

## **3. Scope**

69. This TOR is developed to provide the outline of rural road design. Activities under this program shall include but not be limited to the following activities:

- (i) Importance of Context Sensitivity Design
- (ii) Public consultation
- (iii) Codes of design
- (iv) Restriction in design

## **D. Terms of Reference for the Training Program on Performance-based Maintenance of Rehabilitated Roads**

### **1. Target Group**

- (i) Provincial Council staff of PRDA/PRDD: director, deputy directors, engineers, technical officers
- (ii) Road Development Authority staff: provincial director, chief engineers, executive engineers, engineers, technical officers

### **2. Background**

70. The rehabilitation/improvement works include strengthening of existing pavements and widening, resurfacing with asphalt concrete or surface treatment, reconstruction of damaged structures, improvements to drainage, etc.

71. It is vital to adopt a strategy for the maintenance of project roads to sustain the benefits derived from the project. Past experience shows the negligence of maintenance after completion for various reasons, leading to deterioration of roads even within the designed life span despite a huge initial investment on rehabilitation works. ADB and road authorities have looked at this aspect in a pragmatic perspective, paving the way for the performance-based maintenance (PBM) of project roads for 3 to 5 years by the respective rehabilitation work contractors. This is a two-pronged approach: (i) to allow the contractors to maintain the asset developed by them, and (ii) to also become responsible for their own rehabilitation works for a 5-year period. PBM is the global trend now being practiced in many developed countries that has proved to be the most efficient and cost-effective method of management and maintenance of road assets.

72. In this context, it is vital that road agencies should be aware of the concept, approach, implementation, and other activities related to PBM.

### **3. Scope**

73. This TOR is developed to provide the outline of PBM. Activities under this program shall include but not be limited to the following activities:

- (i) Contractual aspects of PBM
- (ii) Employer's/contractor's role in PBM
- (iii) How to measure the service levels during PBM
- (iv) How to make payment for PBM
- (v) Lessons learned in previous PBM projects

## TERMS OF REFERENCE FOR WESTERN PROVINCE

### A. Project Implementation

#### 1. Background

1. The Road Development Authority (RDA), with the funding assistance of the Asian Development Bank (ADB), is implementing the Integrated Road Investment Program–Phase 1 in Sri Lanka to enhance the connectivity of rural socioeconomic centers. About 3,130 kilometers (km) of rural roads are being rehabilitated and maintained through this program in Central, North Central, North Western, Sabaragamuwa, and Southern provinces and Kalutara district in Western Province.

2. In this context, the Democratic Socialist Republic of Sri Lanka has applied for a multitranche financing facility (MFF) from ADB for the Second Integrated Road Investment Program (iRoad 2) to enhance the scope for the remaining areas of Eastern, Northern, Uva, and Western provinces and to improve the access routes between rural areas and socioeconomic centers. The program includes the rehabilitation and improvement of approximately 3,650 km of roads in four separate geographical areas through conventional road contracts (CRC) covering provincial roads, rural access roads, and national roads, including post-construction performance-based maintenance. Part of the funds from the MFF shall be used to engage an international consultancy firm as project implementation consultant (PIC) to assist the RDA in project implementation, including construction supervision, supervision of post-construction maintenance work, contract management, and other implementation activities in the CRC component. This outline provides the terms of reference (TOR) for PIC services for the CRC in Western Province.

3. The executing agency (EA) of the iRoad 2 program is the Ministry of Higher Education and Highways (MOHWEH) and the implementing agency (IA) is the RDA. Project implementation consultants are to be engaged. The overall proposed PIC organizational arrangement is in Appendix H.

4. The general roles and responsibilities of the various parties for iRoad 2 are as follows (Table H.1):

**Table H.1: Project Participants and Roles**

<b>iRoad 2 Participants</b>	<b>General Roles and Responsibilities</b>
PIU	<ul style="list-style-type: none"> <li>• Project and safeguards management</li> <li>• Approval of all variations of contracts for consulting services and civil works</li> </ul>
Advisory Consultants Individual Consultants	<ul style="list-style-type: none"> <li>• Assisting the PIU in areas requiring special expertise, e.g., contract management, procurement, information technology, institutional strengthening, capacity development, and road safety</li> </ul>
SAPE Team	<ul style="list-style-type: none"> <li>• Feasibility study, safeguards documents, and level-2 designs</li> <li>• Community consultation along project roads</li> </ul>
PIC (CRC)	<ul style="list-style-type: none"> <li>• Reviewing and confirming the design and scope of works when the contractors apply the level-2 designs to the roads under CRC packages</li> <li>• Construction supervision of CRC packages</li> <li>• Supervision of post-construction maintenance work in CRC packages</li> <li>• Monitoring safeguard activities</li> <li>• Providing on-the-job training to the PIU, EA, IA, and provincial and local road agencies in project management and contract administration</li> </ul>



iRoad 2 Participants	General Roles and Responsibilities
Contractors	<ul style="list-style-type: none"> <li>Detailed design based on the level-2 design for the CRC, or the conceptual design for the road management contract packages</li> <li>Delivering the physical works as required in the CRC, or the level of services as required in the road management contract</li> <li>For the road management contract packages, the work includes various asset management tasks</li> <li>Implementing safeguard requirements in the contract</li> </ul>

CRC = conventional road contracts, EA = executing agency, IA = implementing agency, iRoad 2 = Second Integrated Road Investment Program, PIC = project implementation consultant, PIU = project implementation unit, SAPE = survey and preliminary engineering.

Source: Asian Development Bank.

5. Among other scopes of the consulting services, the main task of the PIC is to assist the RDA in supervising and/or implementing the civil works in the CRC component of the iRoad 2 program.

6. In the CRC component, conventional measure and value contracts, requiring detailed contract supervision, will be used for road rehabilitation. Initial construction is to be completed in the first 2 years, followed by a 3-year performance-based maintenance period. The roads under the contract packages will be isolated length.

7. The tentative number of contract packages of civil works to be monitored and supervised by the PIC in Western Province are indicated below (Table H.2).

**Table H.2: Tentative Number of Civil Works Contract Packages**

Name of District	Tentative Number of Contract Packages
Colombo	3
Gampaha	3
Kalutara	3

Source: Asian Development Bank.

8. Approximately 750 km of rural and provincial roads will be rehabilitated in Western Province. Contract package size would be SLRs2,100 million.

9. The PIC for Western Province will assist the project implementation unit (PIU) in the implementation of the contracts, including site supervision of construction activities, monitoring maintenance performance, and other due diligence as defined in further detail in the next paragraphs.

10. The indicative timeline for implementation of the physical works is as follows (Table H.3):

**Table H.3: Implementation Timeline**

Item	Conventional Road Contract Packages
Physical works commence	Tentatively in first quarter of 2018
Duration of rehabilitation works	2 years
End of performance-based maintenance period	3 or 5 years from end of rehabilitation works

Source: Asian Development Bank.

11. **The team leader of the PIC will act as the engineer in the contracts.** The consultant will also be required to discharge other responsibilities outlined in the TOR.

12. The PIC for Western Province shall use the most up-to-date software and technology for administration of the construction contracts. The consultant shall ensure that all electronic files in relation to the deliverables of this TOR are in a format compatible with those used by the EA. The EA uses the Microsoft Office suite of software, ArcGIS for geographic information system applications, and AutoCad for drawings. Further clarification on any aspect of this requirement can be obtained from the PIU. All files are to be provided in soft copy and hard copies of reports are also required as defined below. Subject to request by the PIU, some reports should also be provided in PDF format.

## **2. Project Administration in Western Province**

13. Civil works under the CRC packages will be carried out based on the International Federation of Consulting Engineers (FIDIC) Construction Contract MDB Harmonised Edition (June 2010).

14. The PIC for Western Province will (i) undertake contract administration based on the FIDIC contract; (ii) undertake safeguards compliance to ensure that all safeguards (social, environmental, and for indigenous peoples) are complied with under the project; (iii) carry out the project performance and monitoring survey 3 times—at the start of the consultancy contract, at midterm (end of the construction period), and at the end of the project (end of performance-based maintenance period); (iv) prepare and implement a capacity development program, including training, workshops, and seminars on project management and contract administration for the staff of MOHWEH, RDA, and provincial and local road agencies; (v) prepare monthly reports on project progress and other issues; (vi) prepare a project completion report when the project is substantially completed, incorporating comments from the PIU, the IA, the EA, and ADB.

15. The PIC for Western Province will administer the construction contracts and ensure that the contractual clauses for both quality and specifications of works are complied with, and the works are constructed in accordance with the provisions of the construction contracts.

16. The PIC for Western Province, while supervising construction works, will make all necessary arrangements for the implementation of quality assurance and quality control plans following industry standards and best practices. In consultation with the PIU and EA, the PIC for Western Province will make all engineering decisions required for the successful and timely completion of the construction contracts, and will have all the powers defined as those of the engineer under the FIDIC.

17. If necessary, the PIC for Western Province will liaise with other co-financiers under the project to keep them briefed about the project.

## **3. Detailed Scope of PIC Consulting Services for Western Province**

18. Contract administration is in accordance with the FIDIC Conditions of Contract MDB Harmonised Edition (June 2010):

- (i) Administer the contractors' work in accordance with the FIDIC conditions of contract.
- (ii) Supervise the contractors' work and certify the works in accordance with contract conditions. Ensure the construction methods proposed by the contractor for carrying out the works are satisfactory.

- (iii) Arrange site meetings with contractors at regular intervals to discuss progress and quality of works, and to resolve any related problems.
- (iv) Verify geometric designs, including embankments, designs of structure, and the pavement design of project roads by design consultants. If necessary, make necessary amendments as and when required.
- (v) Review and approve contractors' working drawings, method statements, programs, and any other documents.
- (vi) Develop quality assurance system and inspection and testing plan.
- (vii) Inspect contractors' construction equipment, results of material and soil tests, and safety of the work, property, and personnel. Inspect and test all materials and works to ensure compliance with specifications, and give immediate notice to the contractor to undertake remedies in the event that such materials and works fail to comply with the specifications.
- (viii) Recommend to the IA the rates for any unscheduled items of work that may arise.
- (ix) Certify work volume and process interim and final payments of the contractors.
- (x) Establish efficient procedures for verifying contractor performance and control reports, quality survey records, requests for variations or change orders, requests for time extensions, and contractor's claims and invoices.
- (xi) Ensure project financial management procedures are in place and strictly followed, specifically relating to payments, financial accounting, financial reporting, and record keeping.
- (xii) Check as-built drawings prepared by the contractors. Keep and record a complete set of as-built drawings in paper and electronic formats for safekeeping in the employer's repository.
- (xiii) Ensure road safety design requirements are implemented in accordance with the contract documents and specifications.
- (xiv) Monitor contractor's conformity with traffic control and road safety action plans during construction.
- (xv) Assist the IA in the provisional and final handover of works by the contractors.

19. The bill of quantities for civil works contracts in the project has been prepared based on preliminary designs. During the civil works contract implementation, the respective civil works contractor will carry out detailed designs and accordingly prepare accordingly the cost to completion of civil works contracts. The PIC for Western Province has to review and approve all designs for construction.

20. All the necessary designs and the cost to completion for the civil works contract must be prepared by the contractor and reviewed and approved by the PIC for Western Province within 4 months from the start date of the civil works contract. The same design, including cost to completion, shall, if necessary, be reviewed and revised every 3 months. A detailed timeline for this exercise must be agreed between the PIC for Western Province and the contractor for the design work at the beginning of the civil works contract.

21. Findings of the transect walk during survey and preliminary engineering stage have to be incorporated in the detailed design based on the concept of the Context Sensitive Design approach.

22. Based on the details submitted by civil works contractors, the PIC for Western Province should evaluate the cost to completion of each civil works contract every 3 months and advise the project director accordingly.

23. The quality assurance system will be adopted for all civil works contracts in the projects. The PIC for Western Province should review and approve of the quality assurance system and the inspection and testing plan. The consultant should also monitor the implementation of quality assurance systems in civil works contracts.

24. Most of the project roads are located in rural areas and scattered. When reviewing contractors' method statements and programs, the consultant should review whether the contractors execute the work with minimum inconvenience to the public.

25. Any contractors' proposals for adopting new methods or technology in construction to overcome material scarcity should be reviewed and the RDA and the contractor advised accordingly.

26. Following are measures for safeguard compliance monitoring:

- (i) Ensure the project complies with requirements stipulated in the environmental assessment review framework (EARF), resettlement framework, and indigenous peoples planning framework that were developed for the project based on ADB's Safeguard Policy Statement (2009) and the conditions and guidelines stipulated by the Central Environmental Authority of Sri Lanka.
- (ii) Assist and guide the IA in ensuring compliance with environmental and social safeguards.
- (iii) Assist and guide the IA and contractors to comply with requirements stipulated in the gender action plan.
- (iv) Assist and guide the IA on the land donation process (as per the resettlement framework) and, if required, collect baseline data to prepare a land acquisition and resettlement plan (for national roads where land acquisition is permitted), and carry out other impact assessments in accordance with the resettlement framework, EARF, ADB's Safeguard Policy Statement (2009), and the relevant laws and regulations of the host country.
- (v) Update the resettlement plans when necessary and help the employer in seeking necessary approvals of the government and ADB.
- (vi) If land acquisition and resettlement are necessary, assist the IA in preparing and supervising the implementation of the land acquisition and resettlement plan.
- (vii) Assist the IA in establishing a grievance redress mechanism and in its proper functioning and management.
- (viii) Monitor the implementation of the gender action plan and ensure activities are carried out as planned and relevant baseline and monitoring data are collected.
- (ix) Carry out the following duties related to environmental safeguards:
  - (a) ensure all the environmental mitigation measures as outlined in the initial environmental examination report (IEER) for required implementation are incorporated in the contract documents;
  - (b) ensure the contractor prepares site-specific environmental management action plans (SSEMAP) and secures its approval before commencement of construction work;
  - (c) supervise and monitor the implementation of the SSEMAP;
  - (d) in the event of any unexpected environmental impacts, coordinate with the contractor and employer to ensure that necessary mitigation measures are implemented;
  - (e) provide technical advice to the contractors;
  - (f) prepare periodic monitoring reports monthly (as part of the monthly progress report) and annually and submit these to the IA; and

- (g) facilitate grievance redress in the case of environment related issues.
  - (x) Carry out the following duties related to social safeguards:
    - (a) ensure the establishment of grievance redress committees as per the guidelines in the resettlement framework and facilitate grievance redress in the case of social related issues;
    - (b) ensure the IA follows due process on land donation in the case of rural roads; and
    - (c) prepare periodic monitoring reports monthly (as part of the monthly progress report) and semi-annually and submit these to the IA.
  - (xi) Monitor contractors' compliance with and performance of required actions, such as awareness and education of workers, regarding health and sexually transmitted diseases (including HIV/AIDS), human trafficking, and core labor standards in accordance with the contract documents.
27. Following are measures related to the project performance and monitoring survey:
- (i) Establish the project performance and monitoring system within the first 6 months of the consultancy contract.
  - (ii) Develop performance indicators based on the design and monitoring framework provided by the IA in close cooperation with the employer and, if necessary, coordinate with the relevant local authorities.
  - (iii) Collect baseline data based on the indicators agreed upon in the project's design and monitoring framework at the start of the project, and measure the indicators over time during the assignment period. Undertake project performance monitoring and evaluation in accordance with the project framework and ADB's Project Performance Management System Handbook. Design a simple MS Excel or similar system for recording the baseline and periodic data.
  - (iv) Assess the indicators at midterm (at the end of construction) and after completion of construction (end of performance-based maintenance).
  - (v) Assess the socioeconomic impacts of the project on potential beneficiaries through selective household surveys and participatory research methods.
  - (vi) Assess the environmental sustainability of the project.
  - (vii) Conduct training in operational social research methods and building employer's capacity on performing management and impact assessments.
  - (viii) Establish a system for monitoring socioeconomic indicators in the selected habitation served by the investment program roads as compared to the unconnected habitations, such as (i) poverty rates, (ii) number of maternal and infant deaths, (iii) number of total deliveries versus safe deliveries, (iv) immunization rates, (v) unemployment rates, (vi) agricultural production of perishable goods, (vii) income and expenditure of rural households, and (viii) district cash turnover of agricultural produce in local markets served by investment program roads, etc.
28. The PIC for Western Province shall arrange workshops on project performance and training programs for the IA staff. The PIC will also facilitate overseas training of IA staff in gaining the latest technology and experience in rural road pavement designs, contract management, and environmental and social safeguards based on the terms of reference cited in Appendix C.
29. Following are measures related to the project completion report:
- (i) Prepare a project completion report in accordance with the procedures of ADB as spelled out in relevant project administration instructions of the ADB. The format can be obtained from the employer or ADB's relevant project officer.

- (ii) Assist the employer in seeking comments from ADB and co-financiers, if required, and finalize these for submission by the employer to ADB.

30. If so required by the IA, the PIC will provide any of the following as additional services: (i) prepare reports, including technical appraisals, additional contract documentation, and/or reviews and comments on the contractor's proposals as may be required for the successful completion of the project; and (ii) provide any other specialist services as may be required from time to time.

31. The IA will authorize any additional service, other than minor extras that do not materially affect the scope of the design review, procurement and supervision work, at the rates established in the construction supervision contract, or at the rates mutually agreed upon when the services require the use of specialists not listed in the contract.

32. In the event of including additional roads for improvements, for the preparation of designs, estimates, social and environmental reports, and any other reports, the RDA will engage the consultant through a contract variation.

#### 4. Consultancy Inputs and Qualifications of Staffs

33. The consulting services will be carried out by international firm/s in association with national consultants to be selected by the IA in accordance with ADB's Guidelines on the Use of Consultants (2010, as amended from time to time). A total of 36 person-months of international consultant inputs and 570 person-months of key national consultant inputs will be required.

34. Consulting services are expected to take about 60 months (actual duration of service shall be in line with the civil works schedule). All experts, international and national, must be proficient in both written and spoken English. The key positions are given in Table H.4 below.

**Table H.4: Key Consultancy Positions**

Position	No.	Inputs	Total
		(person-month)	
International Key Experts			
Team Leader/Chief Resident Engineer	1	30	30
FIDIC Contract & Claims Specialist	1	6	6
Subtotal	2		36
National Key Experts			
For the Construction Period			
Deputy Team Leader	1	30	30
Resident Engineers	3	27	81
Rural Road Design and Safety Engineers	2	24	48
Structural Engineer	2	12	24
Materials Engineer	3	24	72
Quantity Surveyor	3	27	81
Environmental Specialist	1	24	24
Social/Gender/Resettlement Specialist	1	24	24
Contracts and Claims Engineer	1	27	27
Assistant Resident Engineer	3	27	81
For the Maintenance Period			
Resident Engineer (Maintenance)	1	39	39

Position	No.	Inputs	Total
		(person-month)	
Quantity Surveyor (Maintenance)	1	39	39
<b>Subtotal</b>	<b>22</b>		<b>570</b>
<b>Non-key Experts</b>			
<b>For the Construction Period</b>			
Planning Engineer	1	27	27
Construction Engineers	13	27	351
Junior Engineers	3	24	72
Land Surveyors	3	24	72
Technical Officers (Construction)	21	24	504
<b>For the Maintenance Period</b>			
Technical Officers (Maintenance)	9	36	324
<b>Subtotal</b>	<b>50</b>		<b>1,350</b>
<b>TOTAL</b>	<b>74</b>		<b>1,956</b>
FIDIC = International Federation of Consulting Engineers. Notes: 1. Curriculum vitae (CV) of the Planning Engineer, Construction Engineers, Land Surveyor, and Technical Officers are not required for inclusion in the proposal and will not be evaluated. However, CVs must be submitted to the client for approval prior to mobilization. 2. The estimated person-months are indicative, and the actual will vary based on actual duration of works and will be paid on actual time basis. As common basis for financial proposal, the consultant must use the staff person-months indicated above. 3. FIDIC Contract & Claims Specialist (International) will be mobilized on as-needed basis. His/her CV is required for inclusion in the technical proposal and will be evaluated. 4. Membership numbers of professional qualified bodies should be stated in the CV.			

Source: Asian Development Bank.

35. The PIC for Western Province is required to propose assignment of experts in accordance with the scope and expected deliverables. The qualifications and responsibilities of key positions are described as follows. Regional and country experience of the international staff is preferable.

36. **Team Leader and/or Chief Resident Engineer (International, 30 person-months)** shall be responsible for the overall tasks as defined here under the scope. He/she shall preferably have a bachelor's degree in civil engineering, professionally qualified, and have a master's degree in road engineering/contracts management. He/she shall have preferably 15 years of experience and minimum 10 years of experience in road construction. He/she shall be familiar with various international standards for design and construction (FIDIC), including stages of works and methods of construction such as temporary works, construction plans, schedules, construction method, assignments of equipment and personnel, testing and trials, and drawings. The Team Leader will (i) maintain records and advise the PIU on the day-to-day coordination and supervision of the project and its components, including the preparation of regular progress reports; (ii) coordinate and review updated designs and cost estimates as required by the contract; (iii) coordinate and supervise the work of field teams in certifying construction in accordance with contract conditions; (iv) coordinate and liaise with the employer; attend meetings arranged by the employer; update the employer regularly on progress of work, delays, and variations; and recommend remedial measures; (v) submit to the employer and obtain approval on variations, extension of time, and other specific items defined in the Particular Conditions of Contract; and (vii) chair the site progress review meeting. He/she will ensure compliance with the safeguard aspects under the project. He/she will also ensure that specifications under the contract are being met, and quality is maintained.

37. **FIDIC Contract & Claims Specialist (International, 6 person-months)** shall have a bachelor's degree in civil engineering, professionally qualified, preferably with a master's degree in construction/contract management, and preferably with 15 years of experience and minimum 10 years of experience in road works contract administration, including FIDIC contract administration. He/she will (i) evaluate and settle variations and standard format of claims, and (ii) guide the employer in case of disputes by the contractor on claims settlement.
38. **Deputy Team Leader (for the construction period) (National, 30 person-months)** shall assist the Team Leader on coordination and supervision of road construction works in the field. He/she shall have a bachelor's degree in civil engineering or the equivalent, professionally qualified, preferably with postgraduate diploma in road construction, and with 12 years of experience and minimum 10 years of experience in road construction/management.
39. **Resident Engineers (for the construction period) (National, 120 person-months, 3 experts)** shall assist the Team Leader on coordination and supervision of road construction works in the field. The Resident Engineer shall have a bachelor's degree in civil engineering or the equivalent, professionally qualified, and with 10 years of experience and minimum 8 years of experience in road construction supervision/management. He/she will (i) conduct day-to-day construction supervision, (ii) monitor schedules, (iii) prepare monthly certificates, and (iv) review and approve shop drawings and as-built drawings. He/she will issue site instructions in consultation with the Team Leader. He/she will timely inform the Team Leader about issues relating to the quality of works, progress of work, and any other constraints affecting the work.
40. One of the Resident Engineers shall remain for the 3-year performance-based maintenance period.
41. **Assistant Resident Engineers (National, 81 person-months, 3 experts)** shall assist the Resident Engineers on day-to-day coordination activities with the contractor. The Assistant Resident Engineer shall have a bachelor's degree in civil engineering or the equivalent, and with 7 years of experience and minimum 5 years of experience in road construction supervision and/or management. He/she will assist Resident Engineers in (i) supervising day-to-day construction, (ii) monitoring schedules, (iii) checking monthly certificates, and (iv) reviewing shop drawings and as-built drawings.
42. **Rural Road Design and Safety Engineers (National, 48 person-months, 2 experts)** shall have a bachelor's degree in civil engineering or the equivalent, and with 5 years of experience and minimum 3 years of experience in road design. He/she will assist the Resident Engineers in (i) reviewing the rural road and pavement design by the CRC contractors, (ii) checking design centerline set-out and making necessary adjustments, and (iii) issuing instructions to the contractors. He/she will also (i) conduct systematic road safety audits of 10% of preliminary design and 10% of detailed design, including preparation of formal road safety audits and safety check reports; (ii) conduct systematic road safety inspections on a randomly selected sample of roads under maintenance, and document issues and countermeasures; (iii) prepare road safety monitoring reports; (iv) provide training and support to the PIU; (v) assist the PIU with road safety complaints and accident investigations; and (vi) assess the effectiveness of road safety audit procedures and recommend improvements as needed.
43. **Structural Engineers (National, 24 person-months, 2 experts)** shall assist the Resident Engineers in ensuring that the design complies with technical and safety standards. The Structural Engineer shall have a bachelor's degree in civil engineering or the equivalent, professionally qualified, and with 6 years of experience and minimum 3 years of experience in bridge and/or



structural design and construction supervision. He/she will (i) update designs and cost estimates prepared by the design consultants, (ii) supervise the bridge and/or structure constructions, and (iii) assist the Resident Engineers in issuing instructions to the contractors.

44. **Materials Engineers (National, 72 person-months, 3 experts)** shall have (i) a bachelor's degree in civil engineering or the equivalent, with 5 years of overall experience and 3 years of experience as materials engineer; or (ii) a bachelor's degree in engineering or the equivalent, with 8 years of overall experience and 3 years of experience as materials engineer; or (iii) National Diploma in Technology (NDT), with 10 years of overall experience and 5 years of experience as materials engineer; or (iv) National Certificate in Technology (NCT)/Materials Engineer recognized by government institutions, with 15 years of overall experience and minimum 8 years of experience as materials engineer. He/she will (i) undertake day-to-day supervision of compliance with material specifications and testing; (ii) supervise the contractors' work; and (iii) certify the construction in accordance with contract conditions, including acceptance standards of materials, approval of source supply, and material testing methods. He/she will periodically review the contractors' quality assurance system.

45. **Quantity Surveyors (for the construction period) (National, 120 person-months, 3 experts)** shall have (i) a bachelor's degree in civil engineering or bachelor's degree in quantity surveying, with 5 years of experience; or (ii) NDT in civil engineering, with 8 years of experience in quantity surveying and minimum 2 years of experience in road projects. He/she will (i) check and recommend the payment certificates; (ii) maintain measurement records; (iii) review and update the estimates as required; and (iv) assist the Resident Engineers in checking the quantity, variations, and justification.

46. One of the Quantity Surveyors shall remain for the 3-year performance-based maintenance period.

47. **Contract & Claims Engineer (National, 27 person-months)** shall have a bachelor's degree in civil engineering or the equivalent, with 10 years of experience and minimum 8 years of experience in road contract administration, including FIDIC contract administration, and minimum 3 years of experience as a contract engineer. He/she will (i) evaluate and settle variations and standard format of claims; (ii) advise the Chief Resident Engineer and Resident Engineers on potential claims; (iii) assist the contract specialist in evaluating claims and variations; (iv) assist the Chief Resident Engineer and Resident Engineers in responding to the contractors on contractual matters; (v) guide the employer in case of disputes by the contractor on claims settlement; and (vi) assist the employer in establishing a dispute resolution board.

48. **Environmental Specialist (National, 24 person-months)** shall have a bachelor's degree in environmental science or the equivalent, and with 6 years of experience and minimum 3 years of experience in preparing, implementing, and monitoring environment management schemes associated with infrastructure projects. He/she will (i) assist in reviewing the environmental checklists and contract package-specific environmental management action plans (EMAP) for all project roads and ensure that they have been prepared in accordance with the requirements of the EARF for all tranches and the recommendations and guidelines of the Central Environment Authority of Sri Lanka; (ii) during preparation of the subsequent tranche, ensure all nominated roads comply with the selection criteria provided in the EARF and prepare due diligence reports on 20% of randomly selected sample of roads for all ongoing project tranches; (iii) check compliance of (a) the initial environmental examination (IEE) and standard environmental management plan prepared by the survey and preliminary engineering (SAPE) team with the requirements of the EARF, and (b) the site-specific EMAP with the requirements of the EARF and

the respective province-level IEE; (iv) provide technical advice to the contractor and conduct on-the-job training as necessary; (v) prepare monitoring reports on an annual basis based on monitoring checklists completed for each project road during preconstruction, construction, and post-construction, or operation stages; and (vi) during the preparation of the subsequent tranche, prepare due diligence reports, and train the environment and social officers of the PIU on environmental monitoring and reporting.

49. **Social/Gender/Resettlement Specialist (National, 24 person-months)** shall have a bachelor's degree in social science or the equivalent, and with 6 years of experience and minimum 3 years of experience in preparing, implementing, and monitoring social development schemes associated with infrastructure projects. He/she will (i) ensure compliance of all preliminary designs of rural roads and national roads projects prepared by the SAPE consultant in accordance with the resettlement framework for all tranches; (ii) check and ensure that the detail design prepared by civil works contractors have incorporated feasible features based on the outcome from transect walks; (iii) during the preparation of the subsequent tranche, prepare due diligence reports on 20% of randomly selected sample of roads for all ongoing project tranches; (iv) monitor and evaluate the implementation of the community participation process prescribed in the resettlement framework and recommend improvements to the participatory process to ensure broader participation of the rural population in project roads formulation; (v) for rural roads which require land donation, monitor the land donation process and conduct field visits on a monthly basis until land donation is finalized; (vi) during the construction phase, conduct monitoring of all project roads and prepare monitoring reports on a biannual basis for all project tranches; and (vii) during the maintenance phase, conduct monitoring of all project roads and prepare monitoring reports on an annual basis for all project tranches. He/she will also (i) provide training and support to the PIU on implementing the gender action plan (GAP) activities at the field level, (ii) lead the implementation of specific gender-mainstreaming activities as detailed in the GAP, and (iii) monitor and report the overall implementation of relevant activities included in the GAP for all tranches on a semi-annual basis.

50. **Planning Engineer (Non-key)** shall have a bachelor's degree in civil engineering, and with 3 years of experience.

51. **Construction Engineers (Non-key)** shall have a bachelor's degree in civil engineering or the equivalent, and preferably with 3 years of experience and minimum 2 years of experience in road construction. He/she will assist the Chief Resident Engineer, Resident Engineers, and Assistant Resident Engineers on day-to-day works.

52. **Junior Engineers (Non-key)** shall have a bachelor's degree in civil engineering or the equivalent, and preferably with 2 years of experience. He/she will be assigned to coordinate the utility related activities among the stakeholders and assist the Construction Engineers in construction supervision.

53. **Land Surveyor (Non-key)** shall have a bachelor's degree in surveying science, and with 2 years of experience.

54. **Technical Officers (Non-key)** shall have (i) NDT in civil engineering or the equivalent, with 3 years of experience; or (ii) NCT in civil engineering, with 6 years of experience and minimum 2 years of experience in road construction supervision. He/she will (i) ensure the construction works are carried out according to the drawings and specifications, (ii) take measurements of daily work done, and (iii) coordinate and liaise with the Land Surveyor and Materials Engineer in checking and testing.

## 5. Output and Reporting Requirements

55. The PIC for Western Province will prepare reports, including monthly reports, on the project progress in a format and level of detail agreed with the IA and ADB. The consultants will maintain records documenting (i) information supplied by the field teams, (ii) decisions made at meetings, (iii) progress on civil works, (iv) certified achievements and milestones, (v) financial records, and (vi) any deviations from or changes to the contract plans. The consultants will assist the project management unit and/or PIU in preparing (i) quarterly progress reports; (ii) safeguard compliance reports, including sections on environment, social, and gender; (iii) a project completion report; and (iv) monitoring and evaluation reports as required under the contract. The consultants will also undertake surveys, design reviews and workshops, and submit relevant reports.

56. Following are other reporting requirements:

- (i) Monitor record keeping and instruct the contractor to keep further contemporary records, including statutory requirements concerning the contractor's reporting of dangerous occurrences or accidents to government or public authorities.
- (ii) Report and update the works implementation schedule, highlighting any foreseen delays and timely proposing corrective measures.
- (iii) Maintain up-to-date financial records and other records for review, if and when needed by the IA and ADB.

57. The PIC for Western Province will submit reports in hard copy and soft copy as follows (Table H.5):

**Table H.5: Reporting Requirements**

<b>Deliverables</b>	<b>Deadline</b>	<b>Copies</b>
Inception Report <sup>a</sup>	End of month 1	5
Monthly Progress Report on Conventional Road Contract (CRC) Packages <sup>b</sup>	Within a week of the end of the month	5
Project Performance and Monitoring Survey (PPMS) Report	End of month 6 (from start of the consultancy contract), midterm (end of construction period), and end of the project (end of performance-based maintenance)	5
Social Safeguard Monitoring Report (as per the agreed format by ADB and the RDA)	Semi-annual	5
Environmental Report (as per the agreed format by ADB and the RDA)	Annual	5
Project Completion Report (as per the agreed format by ADB and the RDA)	By one month prior to project completion	7
Draft Periodic Financing Request (PFR) for iRoad (up to 10 PFRs)	Upon the RDA's request	5
Special Reports (as requested by the RDA)	Upon the RDA's request	5
Environment and Social Safeguards Compliance Due Diligence Reports (as per the agreed format by ADB and the RDA)	Before the fact-finding mission for subsequent tranches	5

<b>Deliverables</b>	<b>Deadline</b>	<b>Copies</b>
Report of Context Sensitive Design (for each CRC package)	After finalizing the design	5

ADB = Asian Development Bank, RDA = Road Development Authority.

Note: All above reports must be submitted in soft copy format as well.

<sup>a</sup> Inception Report: Initial findings and the work program for the balance of the assignment.

<sup>b</sup> Monthly Progress Report: Brief details of the works carried out during the previous month, the problems encountered or anticipated, and financial and physical progress to date along with the S-curve. The format must follow that given in ADB's Project Administration Manual.

Source: Asian Development Bank.

## **6. Facilities Provided by the Client**

58. The PIC for Western Province shall maintain a Team Leader's Office in Colombo. The client will provide the following:

- (i) Visa supporting letters and registrations for the host country
- (ii) Furnished air-conditioned office spaces
- (iii) Relevant project data and reports
- (iv) Access to data, records, and other information required to perform the assigned tasks

59. The following will be provided under the civil works contracts:

- (i) Office spaces with support facilities (including utilities, furnishings, and fittings) in the construction site
- (ii) Shared housing accommodation for the PIC's national staff: Resident Engineers, Assistant Resident Engineers, and others
- (iii) Vehicles for site supervision:  
International – Team Leader, FIDIC Contract Specialist  
National – Resident Engineers, Assistant Resident Engineers, and others

## **7. Facilities to be provided by the PIC**

60. The PIC for Western Province will be responsible for the following:

- (i) Accommodation for international and national consultants not listed under para. 53
- (ii) Telephone facilities for domestic use only and various equipment required to carry out the assignment
- (iii) Office stationery and supplies
- (iv) Any other items not provided by the RDA or civil works contracts

## **B. Terms of Reference for Institutional Capacity Development on Environmental and Social Safeguards**

### **1. Target Group**

- (i) Provincial Council staff of the Provincial Road Development Authority (PRDA)/ Provincial Road Development Department (PRDD): director, deputy directors, engineers, technical officers, development officers, planning officers
- (ii) Road Development Authority staff: provincial director, chief engineers, executive engineers, engineers, technical officers

### **2. Background**

61. Experience was gained during the implementation of the ADB-supported Southern Transport Development Project, which assisted the RDA in establishing the Environment and Social Division (ESD) under Technical Assistance 4736. The ESD became the RDA's safeguard implementing and monitoring arm and now functions as a separate division called the Environment and Social Development Division (ESDD).

62. As a program that is directly involved with rural environment (including social environment), it is important for iRoad 2 to develop the capacity especially of provincial authorities and local government staff on environmental and social safeguards.

### **3. Scope**

63. This TOR is designed to guide and develop the institutional capacity on environmental and social safeguards. Activities under capacity development shall include but not be limited to the following activities:

- (i) Setting terms of reference for environmental and social assessments (including initial environmental examination reports, environmental impact assessment reports, and resettlement plans)
- (ii) Preparation of environmental and social categorization checklists
- (iii) Reviewing and constructive commenting of environmental and social reports, including environmental assessment reports and social assessment reports
- (iv) Field monitoring of environmental and social safeguards compliance
- (v) Preparation of monitoring reports with respect to environmental and social safeguards monitoring
- (vi) Preparation of gender action plans and field monitoring of the implementation of such plans
- (vii) Effective communication and information dissemination on project aspects related to environmental and social safeguards
- (viii) Awareness creation and knowledge accumulation on environmental and social (best) practices

## **C. Terms of Reference for Road Safety Training Program for Schoolchildren**

**1. Target Group:** Schoolchildren and teachers

### **2. Background**

64. The rehabilitated roads with high-speed vehicles and high-volume traffic can cause serious safety concerns to the community. Schoolchildren are most vulnerable and need awareness on road safety.

65. As part of the CDP implementation process, this training program has been organized with the aims of creating awareness among schoolchildren and teachers on road safety and disseminating information on road safety to the community through these two groups.

### **3. Scope**

66. This TOR is developed to give awareness on road safety for schoolchildren. Activities under this program shall include but not be limited to the following activities:

- (i) Aspects of road crossing, pedestrian safety, safe cycling, accident statistics, new laws related to these topics
- (ii) Demonstrations based on the book *Pedestrian Safety* on the following topics: safe cycling, safe bus travelling, crossing railway tracks safely, and pedestrian safety
- (iii) Outdoor demonstrations for schoolchildren on how to cross roads safely using the zebra pedestrian crossing. Zebra crossing model is to be used.

## **D. Terms of Reference for the Training Program on Rural Road Design**

### **1. Target Group**

- (i) Provincial Council staff of PRDA/PRDD: director, deputy directors, engineers, technical officers
- (ii) Road Development Authority staff: provincial director, chief engineers, executive engineers, engineers, technical officers

### **2. Background**

67. The concept and approach of rural road design are very different from the national road design. A lot of factors need to be considered and, generally, the carriageway should be designed within the right-of-way as the roads are narrow. In particular, several socioeconomic factors need to be considered during the design and it is always useful to conduct a Context Sensitivity Design as carried out in the iRoad program.

68. Hence, it is very important to educate the officers of the road agency regarding the rural road design concepts, approach, and methodology.

### **3. Scope**

69. This TOR is developed to provide the outline of rural road design. Activities under this program shall include but not be limited to the following activities:

- (i) Importance of Context Sensitivity Design
- (ii) Public consultation
- (iii) Codes of design
- (iv) Restriction in design

## **E. Terms of Reference for the Training Program on Performance-based Maintenance of Rehabilitated Roads**

### **1. Target Group**

- (i) Provincial Council staff of PRDA/PRDD: director, deputy directors, engineers, technical officers
- (ii) Road Development Authority staff: provincial director, chief engineers, executive engineers, engineers, technical officers

### **2. Background**

70. The rehabilitation and improvement works include strengthening of existing pavements and widening, resurfacing with asphalt concrete or surface treatment, reconstruction of damaged structures, improvements to drainage, etc.

71. It is vital to adopt a strategy for the maintenance of project roads to sustain the benefits derived from the project. Past experience shows the negligence of maintenance after completion for various reasons, leading to deterioration of roads even within the designed life span despite a huge initial investment on rehabilitation works. ADB and road authorities have looked at this aspect in a pragmatic perspective, paving the way for the performance-based maintenance (PBM) of project roads for 3 to 5 years by the respective rehabilitation work contractors. This is a two-pronged approach: (i) to allow the contractors to maintain the asset developed by them, and (ii) to also become responsible for their own rehabilitation works for a 5-year period. PBM is the global trend now being practiced in many developed countries that has proved to be the most efficient and cost-effective method of management and maintenance of road assets.

72. In this context, it is vital that the road agencies should be aware of the concept, approach, implementation, and other activities related to PBM.

### **3. Scope**

73. This TOR is developed to provide the outline of PBM. Activities under this program shall include but not be limited to the following activities:

- (i) Contractual aspects of PBM
- (ii) Employer's/contractor's role in PBM
- (iii) How to measure the service levels during PBM
- (iv) How to make payment for PBM
- (v) Lessons learned in previous PBM projects

## **ENHANCEMENT OF RESEARCH AND DEVELOPMENT DIVISION**

### **1. Geotechnical Specialist (International, 15 person-months)**

1. The consultant shall preferably have a bachelor's degree in engineering or the equivalent. He/she should have at least 10 years of relevant experience in the geotechnical area. He/she should have internationally accepted technical knowledge of geotechnical engineering. Preference will be for candidates with broader geotechnical field experience other than technical aspects and of working on similar projects financed by international development agencies.

2. The consultant will (i) review the current geotechnical aspects of the materials used in road construction; (ii) conduct necessary capacity development assessment for the research and development (R&D) division; (iii) prepare the necessary list required for capacity development including equipment; (iv) develop a short-term action plan to implement the guidelines particularly in terms of institutional aspects; (v) assist the Road Development Authority (RDA) and local road agencies in implementing the guidelines and action plan; and (vi) design and provide trainings to the RDA and local road agencies.

3. The consultant will submit (i) an inception report within 1 month, (ii) a report on the action plan within 8 months, (iii) quarterly reports, and (iv) a final report within 15 months. The consultant is expected to work closely with another individual consultant.

### **2. Materials Engineer (International, 15 person-months)**

4. The consultant shall preferably have a bachelor's degree in engineering or the equivalent. He/she should have at least 10 years of relevant experience in materials engineering in testing. He/she should have internationally accepted technical knowledge of materials engineering. Preference will be for candidates with broader materials testing experience other than technical aspects and of working on similar projects financed by international development agencies.

5. The consultant will (i) review the current materials testing methods used in the R&D division; (ii) propose improvements to the current testing methods used; (iii) find out necessary laboratory equipment requirements for the enhancement of laboratory function; (iv) develop a short-term action plan to implement the guidelines particularly in terms of institutional aspects; (v) assist the RDA and local road agencies in implementing the guidelines and action plan; and (vi) design and provide trainings to the RDA and local road agencies.

6. The consultant will submit (i) an inception report within 1 month, (ii) a report on the action plan within 8 months, (iii) quarterly reports, and (iv) a final report within 15 months. The consultant is expected to work closely with another individual consultant.

### **3. Geotechnical Specialist (National, 24 person-months)**

7. The consultant shall preferably have a bachelor's degree in engineering or the equivalent. He/she should have at least 5 years of relevant experience in the geotechnical area. He/she should have proven technical knowledge of geotechnical engineering. Preference will be for candidates with broader geotechnical field experience other than technical aspects and of working on similar projects financed by international development agencies.

8. The consultant will (i) review the current geotechnical aspects of the materials used in road construction; (ii) conduct necessary capacity development assessment for the R&D division;



(iii) prepare the necessary list required for capacity development including equipment; (iv) develop a short-term action plan to implement the guidelines particularly in terms of institutional aspects; (v) assist the RDA and local road agencies in implementing the guidelines and action plan; and (vi) design and provide trainings to the RDA and local road agencies. The consultant is expected to work closely with an international expert.

#### **4. Materials Engineer (National, 24 person-months)**

9. The consultant shall preferably have a bachelor's degree in engineering or the equivalent. He/she should have at least 5 years of relevant experience in materials engineering in testing. He/she should have technical knowledge of materials engineering. Preference will be for candidates with broader materials testing experience other than technical aspects and of working on similar projects financed by international development agencies.

10. The consultant will (i) review the current materials testing methods used in the R&D division; (ii) propose improvements to the current testing methods used; (iii) find out necessary laboratory equipment requirements for the enhancement of laboratory function; (iv) develop a short-term action plan to implement the guidelines particularly in terms of institutional aspects; (v) assist the RDA and local road agencies in implementing the guidelines and action plan; and (vi) design and provide trainings to the RDA and local road agencies.

## **MECHANISTIC–EMPIRICAL PAVEMENT DESIGN CONSULTANTS**

### **1. Design Specialist (International, 15 person-months)**

1. The consultant shall preferably have a bachelor's degree in engineering or the equivalent. He/she should have at least 10 years of relevant experience in mechanical–empirical (M-E) design. He/she should have internationally accepted technical knowledge of M-E design. Preference will be for candidates with broader geotechnical field experience other than technical aspects and of working on similar projects financed by international development agencies.

2. The consultant will (i) review the current design approach used in road construction; (ii) conduct necessary design reviews; (iii) carry out necessary investigation and studies on M-E design; (iv) develop a short-term action plan to implement the guidelines particularly in terms of M-E design; (v) assist the RDA and local road agencies in implementing the guidelines and action plan; and (vi) design and provide trainings to the RDA and local road agencies.

3. The consultant will submit (i) an inception report within 1 month, (ii) a report on the action plan within 8 months, (iii) quarterly reports, and (iv) a final report within 15 months. The consultant is expected to work closely with another individual consultant.

### **2. Pavement Design Engineer (International, 15 person-months)**

4. The consultant shall preferably have a bachelor's degree in engineering or the equivalent. He/she should have at least 10 years of relevant experience in pavement design. He/she should have internationally accepted technical knowledge of pavement design. Preference will be for candidates with broader materials testing experience other than technical aspects and of working on similar projects financed by international development agencies.

5. The consultant will (i) review the current pavement design approach, and (ii) assist the M-E design specialist in developing the M-E design proposal, action plan, and capacity development of the RDA staff and local road agencies.

6. The consultant will submit (i) an inception report within 1 month, (ii) a report on the action plan within 8 months, (iii) quarterly reports, and (iv) a final report within 15 months. The consultant is expected to work closely with another individual consultant.

### **3. Design Engineer (National, 24 person-months)**

7. The consultant shall preferably have a bachelor's degree in civil engineering or the equivalent. He/she should have at least 2 years of relevant experience in M-E design. He/she should have proven technical knowledge of M-E design. Preference will be for candidates with broader M-E design experience other than technical aspects and of working on similar projects financed by international development agencies.

8. The consultant will (i) review the current design approach used in road construction, and (ii) conduct necessary investigations and research on M-E design. The consultant is expected to work closely with an international expert.

#### **4. Pavement Design Engineer (National, 24 person-months)**

9. The consultant shall preferably have a bachelor's degree in civil engineering or the equivalent. He/she should have at least 5 years of relevant experience in pavement design. He/she should have technical knowledge of materials engineering. Preference will be for candidates with experience in pavement design other than technical aspects and of working on similar projects financed by international development agencies.

10. The consultant will (i) review the current pavement design approach, and (ii) assist the international pavement design engineer.

## **OUTLINE TERMS OF REFERENCE FOR INDIVIDUAL CONSULTANTS (ADVISORY SERVICE)**

### **A. Background**

1. The Democratic Socialist Republic of Sri Lanka is applying for a multitranche financing facility (MFF) for the Second Integrated Road Investment Program (iRoad 2) from the Asian Development Bank (ADB). The MFF will comprise a series of loans to improve the access routes between rural areas and socioeconomic centers. Part of these funds shall be used for engaging individual consultants with special expertise as advisors to the Ministry of Higher Education and Highways (MOHWEH), the Road Development Authority (RDA), and the iRoad 2 project implementation unit (PIU) to facilitate project implementation and sustainability and to provide practical advice to enhance capacities of road agencies involved in the investment program. There are four main components under the individual consulting services: (i) information management system, (ii) road asset management system, (iii) road safety technical guidelines development, and (iv) institutional support for sustainability. The PIU shall manage and coordinate the individual consultants to maximize efficiency and outputs of services.

### **B. Outline Terms of Reference**

#### **1. Information Management Specialist (National, 36 person-months)**

2. The consultant shall preferably have a bachelor's degree in information technology or the equivalent. He/she should have at least 5 years of relevant experience in information management, preferably in road asset management, and project management.

3. The consultant will (i) review the file system in the PIU and the RDA and the reporting requirements of the PIU to the RDA and ADB; (ii) assist the PIU in managing an information center to be established for the iRoad 2 investment program; (iii) assist the PIU in updating and disclosing relevant information to the public through internet and mobile applications; (iv) recommend measures to improve the efficiency of information management, both in hardware and software; and (v) design and provide trainings to the RDA and provincial and local road agencies through the skill transfer program.

4. The consultant will submit (i) monthly reports and (ii) special reports as requested by the PIU.

#### **2. Road Asset Management Specialist (International, 12 person-months)**

5. The consultant shall preferably have a bachelor degree's in civil engineering or the equivalent. He/she should have at least 15 years of relevant experience in road asset management. He/she should be knowledgeable about internationally accepted road asset management standards covering data collection and management, strategic planning and programming, road maintenance and rehabilitation plan, and performance-based maintenance. Preference will be for candidates with experience in working on similar projects financed by international development agencies.

6. The consultant will (i) review the road asset management system of the RDA; (ii) assess the road asset management practice in provincial and local road agencies involved in the iRoad investment program; (iii) develop an action plan to expand the scope of the RDA's road asset management system to cover the provincial and local road networks, including the hardware and

software requirements; (iv) develop a road asset management business process for the RDA and provincial and local road agencies; (v) assist the RDA and provincial and local road agencies in implementing the action plan and the business process; and (vi) design and provide trainings to the RDA and provincial and local road agencies through the skill transfer program.

7. The consultant will submit (i) an inception report within 1 month, (ii) a report on the action plan and business process within 3 months, (iii) quarterly reports on the implementation of the protocol and policy, and (iv) a final report within 24 months.

## **C. Road Safety Technical Guidelines Development**

### **1. Road Safety Specialist (International, 12 person-months)**

8. The consultant shall preferably have a bachelor's degree in engineering or the equivalent. He/she should have at least 10 years of relevant experience in road safety. He/she should have internationally accepted technical knowledge of road safety. Preference will be for candidates with experience in broader road safety management other than technical aspects and of working on similar projects financed by international development agencies.

9. The consultant will (i) review current road safety standards and practices in rural access roads; (ii) identify important aspects of local contexts with regard to road safety; (iii) prepare road safety technical guidelines; (iv) develop a short-term action plan to implement the guidelines particularly in terms of institutional aspects; (v) assist the RDA and local road agencies in implementing the guidelines and action plan; and (vi) design and provide trainings to the RDA and local road agencies.

10. The consultant will submit (i) an inception report within 1 month, (ii) a report on the road safety technical guidelines within 6 months, (iii) a report on the action plan within 8 months, (iv) quarterly reports, and (v) a final report within 12 months. The consultant is expected to work closely with another individual consultant for road safety.

### **2. Rural Road Specialist (National, 12 person-months)**

11. The consultant shall preferably have a bachelor's degree in engineering or the equivalent. He/she should have at least 10 years of relevant experience in rural road development. He/she should be knowledgeable about local rural road design standards and specifications. Preference will be for candidates with knowledge and experience in road safety aspects of similar projects.

12. The consultant will (i) review current rural road design standards and specifications with respect to road safety; (ii) identify shortfalls of current rural road design standards and specifications; (iii) in close coordination with the PIU, develop new technical standards and specifications for road safety as an attachment of the road safety technical guidelines; and (iv) design and provide trainings to the RDA and local road agencies.

13. The consultant will submit (i) an inception report within 1 month, (ii) a report on the rural road design standards and specifications with regard to safety technical guidelines within 6 months, (iii) quarterly reports, and (iv) a final report within 12 months. The consultant is expected to work closely with another individual consultant for road safety.

## **D. Institutional Support for Sustainability**

### **1. Public Financial Management Specialist (International, 15 person-months)**

14. The consultant shall preferably have a postgraduate degree in public finance, public administration, economics, or the equivalent. He/she should have at least 15 years of relevant experience in public finance management. He/she should be also knowledgeable about institutional reforms and policy development. Preference will be for candidates with experience in working in the transport sector of a government.

15. The consultant will (i) review the current road maintenance budget and budget allocation policy framework for national, provincial, and local authority roads; (ii) identify policy and institutional issues to achieve sustainability of rural roads; (iii) prepare feasible policy options to improve rural road sustainability; (iv) prepare short-term, midterm, and long-term action plans for the implementation of the preferred policy option; and (v) assist MOHWEH and the RDA in obtaining government's decision on the policy. The policy options may include but not be limited to (i) reorganizing the Road Maintenance Trust Fund (RMTF); (ii) expanding the RMTF to cover local road maintenance; (iii) expanding the RDA's responsibility to local road maintenance; and (iv) creating a new funding mechanism in the provincial level.

16. The consultant will submit (i) an inception report within 1 month, (ii) a report on the policy options within 8 months, (iii) a report on the action plan within 12 months, (iv) quarterly reports, and (v) a final report within 15 months. The consultant is expected to work closely with other individual consultants for road sustainability.

### **2. Road Maintenance Specialist (International, 10 person-months)**

17. The consultant shall preferably have a postgraduate degree in engineering or the equivalent. He/she should have at least 15 years of relevant experience in road development and/or maintenance. He/she should be also knowledgeable about financial aspects of road maintenance. Preference will be for candidates with experience in working on a similar project in a government.

18. The consultant will (i) review current rural road conditions; (ii) analyze the short-term as well as long-term budget requirement framework to maintain rural roads; (iii) set a feasible policy target on road maintenance and identify required financial resources; and (iv) assist the MOHW and the RDA in concluding policy alternatives to achieve the target.

19. The consultant will submit (i) an inception report within 1 month, (ii) a report on the analysis of the budget requirement framework within 4 months, (iii) a report on the target and financial resources within 6 months, (iv) quarterly reports, and (v) a final report within 10 months. The consultant is expected to work closely with other individual consultants for road sustainability.

### **3. Public Administration Specialist (National, 12 person-months)**

20. The consultant shall preferably have a Master's degree in public administration, public policy, governance, finance, or the equivalent. A professional qualification in accounting and finance (chartered accountant or equivalent) is preferred. He/she should have at least 10 years of relevant experience in public administration, accounting, and finance. He/she should be also knowledgeable about the government budget system and rules. Preference will be given to candidates with experience in working in the transport sector of the government.

21. The consultant will (i) review the budget allocation and expenditure for maintenance with due attention to the Road Maintenance Trust Fund (RMTF) and the provincial and local authority government; (ii) assess and identify capacity and governance issues, if any, to appropriately handle financial resources; (iii) prepare short-term, midterm, and long-term action plans for the improvement of financial capacity for potential policy options; and (iv) assist the MOHW and the RDA in obtaining government's decision on the policy. The policy options may include but not be limited to (i) reorganizing the RMTF; (ii) expanding the RMTF to cover local road maintenance; (iii) expanding the RDA's responsibility to local road maintenance; (iv) creating a new funding mechanism in the provincial and local authority levels; and (v) develop a comprehensive accounting and financial management manual for the program, including functional flow charts and narrate the financial management function. The manual shall cover all aspects of accounting and financial management of the program, including but not limited to internal control structure, funds receipts and payments, maintenance of accounting records, preparation of periodic financial statements and reports (quarterly, annual) and auditing arrangements, along with necessary templates, particularly templates required for submission to ADB; (vi) provide formal trainings to financial management staff of the program on implementation of the manual; and (vii) provide support to the RDA for addressing audit qualifications on financial statements of the RDA and the program.

22. The consultant will submit (i) an inception report within 1 month, (ii) a report on the assessment of capacity and government within 4 months, (iii) the accounting and financial management manual within 6 months, (iv) a report on the action plan within 7 months, (v) a final report on the policy measures within 12 months, and (vi) quarterly progress reports. The consultant is expected to work closely with other individual consultants for road sustainability.

**GENDER ACTION PLAN PROGRESS UPDATE FORMAT**

**Second Integrated Road Investment Program – Tranche 1**

**Date Prepared:**

**Project Title:** Second Integrated Road Investment Program – Tranche 1

**Country:** Sri Lanka

**Project No.:**

**Loan No.:**

**Type of Project (Loan/TA/JFPR):** Multitranche Financing Facility

**Approval and Timeline/Duration of the Project:**

**Gender Category:**

**Mission Leader:**

**Name of Gender Specialist/Gender Focal Point:**

**Reporting Period:**

**Project Impact:**

**Project Outcome:**



Activities, Indicators, Baseline, Targets, Timeframe, and Responsibility	Progress to Date		Issues and Challenges (Please include reasons why an activity was not fully implemented, or if targets fall short, or reasons for delay, etc.)
	Progress for the Reporting Period (MM/YYYY to MM/YYYY) (This should include information on progress for the current quarter—qualitative and quantitative updates [sex-disaggregated data])	Cumulative Progress (MM/YYYY to MM/YYYY) (This should include information on progress [qualitative and quantitative updates including sex-disaggregated data] from the start of the project to the previous quarter’s progress report.)	
Output 1: Road conditions between the selected rural communities and socioeconomic centers improved			
Activity 1: For 3,495 km of rural roads, conduct community consultations and integrate findings into the final design, addressing issues of (i) road safety and EWCD features, (ii) construction impact and mitigation measures, and (iii) social and environmental impacts and mitigation measures			
Indicators and Targets: One community consultation guidebook is developed to be used by contractors and consultants			
At least 35% female representation in consultations related to the final designs			
Consultation findings are integrated into the final designs			
Activity 1.2: For 340 km of national roads to be improved, integrate safety and EWCD-friendly features into the final designs			
Elderly–women–children–disabled (EWCD) and road safety features integrated into the final designs			
Designs include paved shoulders, pedestrian crossings, and locations of signage			
Activity 1.3: Encourage contractors to employ local women in road construction			
A communication campaign developed and implemented to inform and attract local women (especially from women-headed households)			
Ensure contractors meet core labor standards and work health and safety standards			
Activity 1.4: Ensure contractors employ local women for road maintenance			

Activities, Indicators, Baseline, Targets, Timeframe, and Responsibility	Progress to Date		Issues and Challenges (Please include reasons why an activity was not fully implemented, or if targets fall short, or reasons for delay, etc.)
	Progress for the Reporting Period (MM/YYYY to MM/YYYY) (This should include information on progress for the current quarter—qualitative and quantitative updates [sex-disaggregated data])	Cumulative Progress (MM/YYYY to MM/YYYY) (This should include information on progress [qualitative and quantitative updates including sex-disaggregated data] from the start of the project to the previous quarter's progress report.)	
At least 30% of local women are employed in rural road maintenance (with an estimated 18,000 person-days allocated for women workers)			
Ensure contractors meet core labor standards and work health and safety standards			
100% women employed for maintenance are trained			
<b>Activity 1.5: Conduct road safety awareness campaigns targeting local communities</b>			
At least three awareness campaigns per district using diverse communication approaches (workshops, handouts, awareness for schoolchildren, billboards, street drama, etc.) to reach out to children, youth, and adults, with 50% female participation			
<b>Activity 1.6: Provide awareness training on sexually transmitted diseases, including HIV, and human trafficking for civil works employees and local communities</b>			
At least three community awareness sessions conducted per district with more than 40% female participants			
Awareness training conducted on an annual basis for civil works employees by all contractors			
<b>Output 2: Capacity of road agencies enhanced</b>			
<b>Activity 2.1: Appoint social and gender focal points at contractor, consultant, and employer levels</b>			

Activities, Indicators, Baseline, Targets, Timeframe, and Responsibility	Progress to Date		Issues and Challenges (Please include reasons why an activity was not fully implemented, or if targets fall short, or reasons for delay, etc.)
	Progress for the Reporting Period (MM/YYYY to MM/YYYY) (This should include information on progress for the current quarter—qualitative and quantitative updates [sex-disaggregated data])	Cumulative Progress (MM/YYYY to MM/YYYY) (This should include information on progress [qualitative and quantitative updates including sex-disaggregated data] from the start of the project to the previous quarter's progress report.)	
One gender and social focal staff for each project implementation unit			
One gender and social focal staff for each project implementation consultant			
One gender and social focal staff for each contractor package			
<b>Activity 2.2: Build the capacity of the Road Development Authority (RDA) and provincial road agencies on gender and transportation</b>			
Develop one training manual on gender and transportation to be used for gender capacity building training for transport sector staff			
At least 80% of project staff of the RDA and provincial road agencies working on the iRoad 2 program are trained on gender			
At least one workshop in each province (four total) for project staff of contractors, consultants, and employers conducted to discuss the means of promoting inclusiveness in the transport sector			
<b>Activity 2.3: Develop and promote an online web application for grievance reporting by the local community using local languages</b>			
Translate the web application that was developed into local languages			
Sex-disaggregated data of complainants are available			
Information campaign conducted for raising community awareness on the use of the application			

**Comments/Remarks:**

***Prepared by:*** \_\_\_\_\_

***Approved by:*** \_\_\_\_\_

***Date:*** \_\_\_\_\_

## QUARTERLY MONITORING REPORT TEMPLATE

1. The Government of Sri Lanka has obtained a loan from the Asian Development Bank (ADB) to improve 3,400 kilometers (km) of rural roads and 340 km of national roads under the Second Integrated Road Investment Program (iRoad 2). The program intends to improve connectivity between rural communities and socioeconomic centers to increase transport efficiency on project roads selected in the Eastern, Northern, Uva, and Western provinces in Sri Lanka. The loan is applied through a multitranche financing facility (MFF) of \$900 million with five tranches. Target outputs of the program are (i) improved road conditions of about 3,400 km rural roads and 340 km national roads, and (ii) enhanced capacity of road agencies.

2. The iRoad 2 consists of 53 rural road packages implemented through conventional road contracts (CRC). The single stage-two envelope procedure was adopted for the procurement of civil works contractors. Project roads are grouped into 53 contract packages for the provinces of Eastern (11), Northern (17), Uva (15), and Western (10). Quality- and cost-based selection method (QCBS) was adopted with 90:10 ratio of technical and financial proposal rating for the procurement of project implementation consultants (PIC). Each province is assigned a PIC.

3. Contractors were fully remobilized after the COVID-19 pandemic lockdown in March–May 2020. Details of the project rural roads are in Table M.1 below.

**Table No. M.1: Road Summary Details**

Province	No. of Packages	No. of Roads	Length (km)	Contract Price (LKR million)	Remarks
Eastern	11	406	845.83	31,075	Awarded
Northern	17	343	1,057.77	51,940	Awarded
Uva	15	249	1,044.51	33,290	Awarded
Western	10	314	706.84	24,450	Awarded
<b>Total</b>	<b>53</b>	<b>1,312</b>	<b>3,654.95</b>	<b>140,755</b>	

km = kilometer, LKR = Sri Lanka rupee.

Source: Asian Development Bank.

4. Current progress status of the rural road contract packages is given in Table M.2.

**Table M.2: Progress Status – Rural Road Contract Packages**

Province	Present Status
Eastern Province	Civil works in progress Overall progress: Planned: 31%, Actual: 25%
Northern Province	Civil works in progress Overall progress: Planned: 16%, Actual: 7%
Uva	Civil works in progress Overall progress: Planned: 100%, Actual: 58%
Western Province	Contractors mobilized Preliminary works commenced

Source: Asian Development Bank

5. Current status of procurement of project implementation consultants is given in Table M.3.

**Table M.3: Progress Status – Project Implementation Consultant**

Province	Present Status	Name of the Consultant
Eastern	Consultancy agreement signed Consultant already mobilized	Egis International (France) in joint venture with Greentech Consultants (Pvt.) Ltd. (Sri Lanka)
Northern	Consultancy agreement signed Consultant already mobilized	MG Consultants (Pvt.) Ltd. (Sri Lanka) in joint venture with Engineering Consultants (Pvt.) Ltd. (Sri Lanka)
Uva	Consultancy agreement signed Consultant already mobilized	Pyunghwa Engineering Consultant Ltd. (Korea) in joint venture with Consulting Engineers & Architects Associated (Pvt.) Ltd. (Sri Lanka)
Western	Consultancy agreement signed. Some consultants already mobilized	SMEC International Pty Ltd (Australia) sub-consultant with Resources Development Consultants (Private) Limited (Sri Lanka) and Master Hellie's Engineering Consultants (Pvt.) Ltd. (Sri Lanka)

Source: Asian Development Bank.

6. Prioritized equipment list for procurement of equipment for the enhancement of the Research and Development Division of the Road Development Authority (RDA) was prepared. Approval in principle was obtained from the executing agency of the project, the Ministry of Highways (MOHW). The implementing agency is the RDA. Procurement is to commence shortly. The Pavement Design Engineer (International) has been recruited and started the assignment. Other positions will be recruited accordingly.

7. In compliance with the social and environmental safeguard policies under the contract, the environmental management plan and environmental monitoring plan were issued to the contractors along with the bidding documents. Based on these documents, environmental action plans were submitted by the contractors. The PIC entrusted the construction supervision throughout the project period according to the environmental action plan, which is monitored with the assistance of the Environment and Social Development Division (ESDD) of the RDA. The grievance redress committee mechanism prepared by the ESDD was adopted and grievance redress committees have been formed to address and resolve community concerns raised during project implementation.

8. Disbursements are given in Table M.4.

**Table M.4: Program Disbursements**

Allocations in 2020		Expenditures up to 30 September 2020	
Source	LKR (million)	Item	LKR (million)
Asian Development Bank	22,500	Civil Works	17,268
Government of Sri Lanka	259	Consultancy	680
		Project Management	178
<b>Total</b>	<b>22,759</b>	<b>Total</b>	<b>18,126</b>

LKR = Sri Lanka rupee.

Source: Asian Development Bank.

9. Cumulative disbursements as of 30 September 2020 amounted to LKR31,710 million (\$176.20 million).

**Table M.5: Implementation Status of Financial Management Action Plan**

(Refer to Table 18 of Facility Administration Manual)

S.N.	Issues/Action Plan	Responsibility	Time Frame	Status

**Table M.6: Compliance with Financial Covenants**

(Refer to facility financing agreement and loan agreement for respective tranche)

S.N.	Covenants	Compliance (Y/N)*	Remarks
1			
2			
3			
4			
5			
6			

**Table M.7: Reconciliation with ADB's Loan Financial Information System**

Withdrawal Application Details			Per Project Records/APFS (Amount recorded in the project financial statements as reimbursement, direct payment, etc.)				Per ADB Disbursement Records LFIS/GFIS (Actual Paid)			
Withdrawal Application No.	Disbursement Method (reimbursement, direct payment, etc.)	Time Period Covered in the WA	Date	In Local Currency (as recorded in project records/ financial statements)	Exchange Rate	US Dollar Equivalent (A)	Value Date	In US Dollar (B)	Difference (A–B)	Reason for Difference (i.e., timing forex, pending/ rejected)
1				XX		XX		XX		
2				XX		XX		XX		
3				XX		XX		XX		
etc.										
Total in Fiscal Year To Date				XX		XX		XX		
Total Cumulative To Date				XX		XX		XX		

ADB = Asian Development Bank, APFS = audited project financial statement, GFIS = Grant Financial Information System, LFIS = Loan Financial Information System, WA = withdrawal application.



**Table M.8: Status of Audit Observations**  
 (Separately for Project Financial Statements and Entity Financial Statements)

<b>Recommendation/ Audit Observation</b>	<b>External Audit Recommendation</b>	<b>Date of the Recommendation</b>	<b>Planned Action to Address the Recommendation</b>	<b>Responsibility</b>	<b>Current Status of the Planned Action (Pending//Resolved)</b>	<b>Remarks</b>