

Facility Administration Manual

Project Number: 40540-016

Loan Number: L_____

September 2017

People's Republic of Bangladesh: South Asia
Subregional Economic Cooperation Dhaka–
Northwest Corridor Road Project, Phase 2

ABBREVIATIONS

ADB	–	Asian Development Bank
COL	–	concessional OCR loan
EA	–	executing agency
EIA	–	environment impact assessment
EMP	–	environmental management plan
EMoP	–	environmental monitoring plan
FAM	–	Facility Administration Manual
GDP	–	gross domestic product
GOB	–	Government of Bangladesh
GRM	–	grievance redress mechanism
ICB	–	international competitive bidding
IEE	–	initial environmental examination
INGO	–	implementation NGO
km	–	kilometer
MFF	–	multitranchise financing facility
MRTB	–	Ministry of Road Transport and Bridges
NCB	–	national competitive bidding
NGO	–	nongovernment organization
OCR	–	ordinary capital resources
PBM	–	performance-based maintenance
PIC	–	project implementation consultants
PIU	–	project implementation unit
QCBS	–	quality- and cost-based selection
RHD	–	Roads and Highways Department
ROU	–	road operation unit
RTHD	–	Road Transport and Highways Division
RRP	–	report and recommendation of the President to the Board
RRTC	–	Road Research and Training Center
SASEC	–	South Asia Subregional Economic Cooperation
SMVT	–	slow-moving vehicular traffic
SOE	–	statement of expenditures
SPS	–	Safeguard Policy Statement
STPPF	–	Subregional Transport Project Preparatory Facility
TA	–	technical assistance
Tk	–	taka
TOR	–	terms of reference

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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 People's Republic of Bangladesh and 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 Roads and Highways Department (RHD) is 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 of the People's Republic of Bangladesh and ADB. ADB staff is responsible for supporting implementation including compliance by the Roads and Highways Department 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 recommendation of the President (RRP), changes in implementation arrangements are subject to agreement and approval pursuant to relevant government and ADB administrative procedures (including the Facility Administration Instructions), and upon such approval, they will be subsequently incorporated in the FAM.

I. PROJECT DESCRIPTION

1. Bangladesh reached lower middle-income status in July 2015. With its young and rapidly growing population, Bangladesh has the potential to become a major exporter of labor-intensive products. Its location between South and Southeast Asia provides the country good prospects of becoming a regional trading hub. But the country's transport infrastructure is inadequate, which raises costs, reduces competitiveness, and impedes intra-regional trade. As such, Bangladesh's successive 5-year development plans embed regional cooperation and integration, which the Asian Development Bank (ADB) supports through its projects in Bangladesh.¹

2. Among the subregional corridors, the Government of the People's Republic of Bangladesh considers as one of the top priorities the Dhaka–Northwest international trade corridor on Highways 4 and 8 of the South Asian Association for Regional Cooperation (SAARC). The corridor is the second busiest artery in Bangladesh after the Dhaka–Chittagong road. Due to the large financing and implementation resources entailed, the government plans to improve the corridor in three phases: (i) Joydeypur–Elenga section and the Burimari Land Port, (ii) Elenga–Hatikumrul–Rangpur section, and (iii) Rangpur–Burimari section.

3. **Impact and outcome.** The project will improve the road connectivity and efficiency of the Dhaka–Northwest international trade corridor.² The impacts will be that (i) an efficient and modern road transport system in Bangladesh is achieved, and (ii) subregional connectivity and trade are improved. The outcome will be that the road connectivity of the Dhaka–Northwest international trade corridor is improved.

4. **Outputs.** The proposed project will deliver three outputs: (i) phase 2 of the Dhaka–Northwest international trade corridor (Elenga–Hatikumrul–Rangpur section) is upgraded; (ii) the RHD's institutional capacity in road operation and management is enhanced; and (iii) stronger road safety and gender-responsive features, and cost overrun for phase 1 of the Dhaka–Northwest international trade corridor (Joydeypur–Chandra–Tangail–Elenga section) are financed and completed.

¹ ADB. 2016. *Country Partnership Strategy: Bangladesh, 2016–2020*. Manila.

² The project is included in Asian Development Bank (ADB). 2016. *Country Operations Business Plan: Bangladesh, 2017–2019*. Manila. The project's title was changed to reflect its location and nature. The Government of Bangladesh refers to the project as "SASEC Road Connectivity Project-II: Improvement of Elenga-Hatikamrul-Rangpur Road to a 4-Lane Highway". No project preparatory TA and/or project design advance is required.

II. IMPLEMENTATION PLANS

A. Project Readiness Activities

Table 1: Project Readiness Activities

Schedule	Loan Processing	Project Implementation			
		Land Acquisition and Resettlement	Project Implementation Consultants	Procurement	
2017	Mar	Concept paper clearance	NGO mobilized	Finalize TOR Advertisement for EOI	GPN
	Apr	Loan fact-finding mission			
	May	Aide memoire confirmation Management review meeting			
	Jun	Loan negotiations	Land acquisition initiated	Shortlisting Finalize RFP Issue RFP	Standard bidding document approval
	Jul			Tech evaluation	Call for tenders
	Sep	ADB Board approval		Overall ranking	Bid submission
	Oct			Contract negotiation	Evaluation of technical bids ADB concurrence
	Nov				
	Dec	Loan signing	Land acquisition completed		Evaluation of financial bids ADB concurrence
	2018	Jan	Loan effectiveness		Mobilize the consultants

ADB = Asian Development Bank, EOI = expression of interest, GPN = general procurement notice, NGO = nongovernment organization, RFP = request for proposal, TOR = terms of reference.

Source: Asian Development Bank estimates.

B. Overall Project Implementation Plan

Table 2: Project Implementation Plan

Activity	MFF Availability Period	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027														
		Advance Actions				Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10												
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
A	Phase 1: Joydepur-Chandra-Tangail-Elenga Section																										
1	Procurement of civil works																										
2	Implementation of civil works																										
3	Performance-based maintenance																										
B	Phase 2: Elenga-Hatikamural-Rangpur Section																										
1	Establishment of Project Implementation Unit																										
2	Procurement of civil works																										
3	Implementation of civil works																										
4	Performance-based maintenance																										
C	Project Management and Institutional Strengthening																										
1	Project management																										
2	Selection of consultants																										
3	Institutional strengthening																										

Legend
■ Construction
■ Defects and Liability
■ Performance-based maintenance

MFF = Multitranches Financing Facility
 Source: Roads and Highways Department.

III. PROJECT MANAGEMENT ARRANGEMENTS

A. Project Implementation Organizations: Roles and Responsibilities

5. The executing agency of the SASEC Dhaka–Northwest Corridor Road Project, Phase 2 will be the Roads and Highways Department (RHD) of the Government of the People’s Republic of Bangladesh. The RHD will establish a project implementation unit (PIU) headed by a project director and field offices as required. One project account will be maintained for the program. Advance contracting and retroactive financing will be considered. Consultants will be engaged to assist the PIU in project management, contract administration, and capacity development programs.

Table 3: Project Implementation Organizations – Roles and Responsibilities

Project Implementation Organizations	Management Roles and Responsibilities
Executing agency (Roads improvement and institutional development)	<p>Roads and Highways Department</p> <ul style="list-style-type: none"> • carry out day-to-day project management • implement institutional development • undertake consultant recruitment and management • prepare withdrawal applications • prepare project progress reports • maintain project accounts and complete loan financial records • establish the project implementation committee to support and recommend expert opinion on critical implementation issues
Coordinating agency	<p>Road Transport and Highways Division Ministry of Road Transport and Bridges</p> <ul style="list-style-type: none"> • oversee overall coordination of project implementation as Standing Member of the SASEC Transport Working Group • supervise interagency coordination • chair the steering committee to oversee project implementation and RHD institutional development
ADB	<p>Asian Development Bank</p> <ul style="list-style-type: none"> • monitor and review overall implementation of the project in consultation with the EAs, including the project implementation schedule; actions required in terms of poverty reduction, environmental impacts, and resettlement plans, if applicable; timeliness of budgetary allocations and counterpart funding; project expenditures; progress of procurement and disbursement; statement of expenditures when applicable; compliance with particular loan covenants; and the likelihood of attaining the project’s immediate development objectives

ADB = Asian Development Bank, EA = executing agency, RHD = Roads and Highways Department, SASEC = South Asia Subregional Economic Cooperation.

Source: Asian Development Bank.

B. Key Persons Involved in Implementation

Executing Agency

Roads and Highways Department

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Coordinating Agency

Ministry of Road Transport and
Bridges (Standing Member of the
SASEC Transport Working Group)

M A N Siddique
Secretary, Road Transport and Highways Division
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secretary@rthd.gov.bd

Asian Development Bank

Transport and Communications
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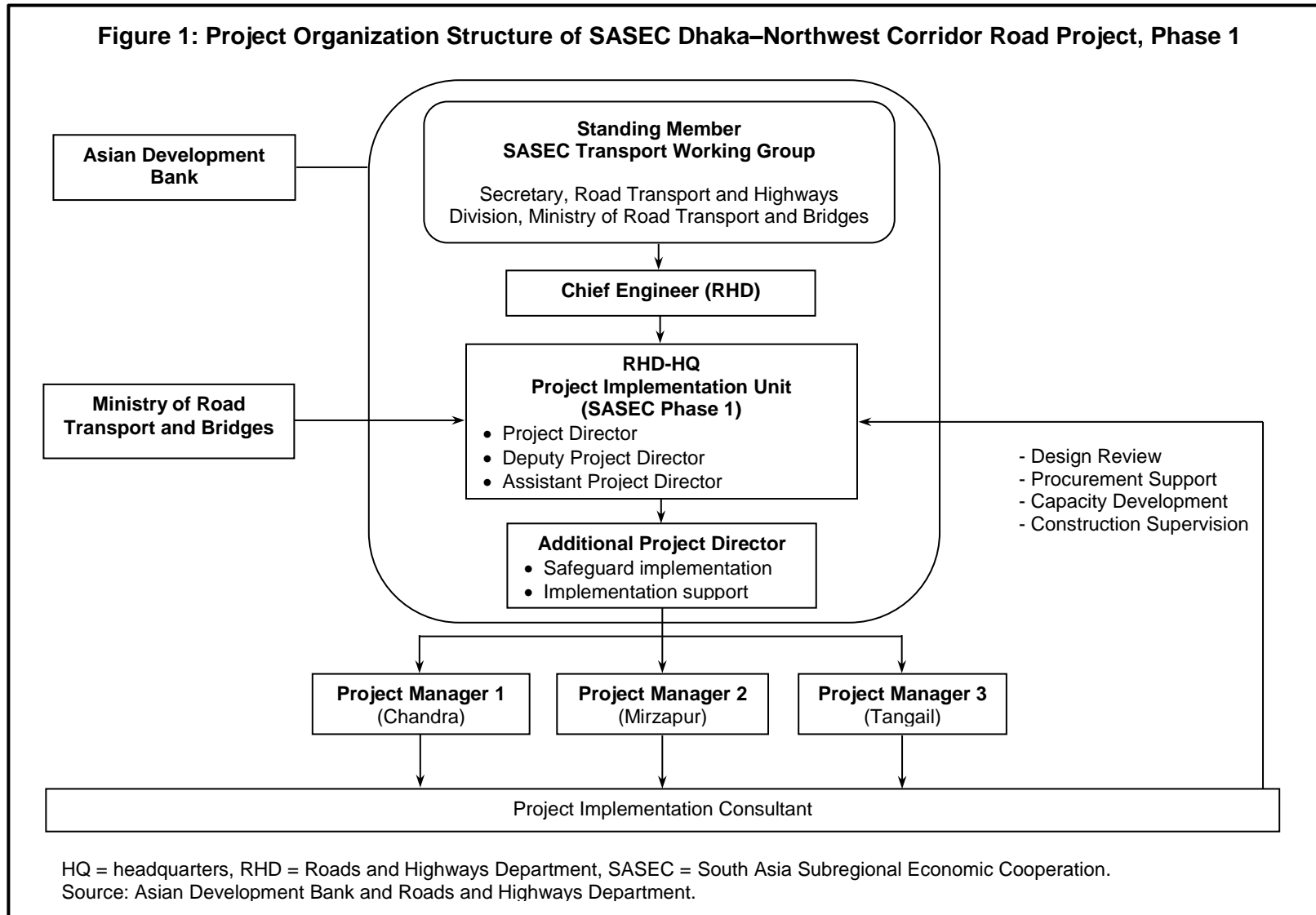
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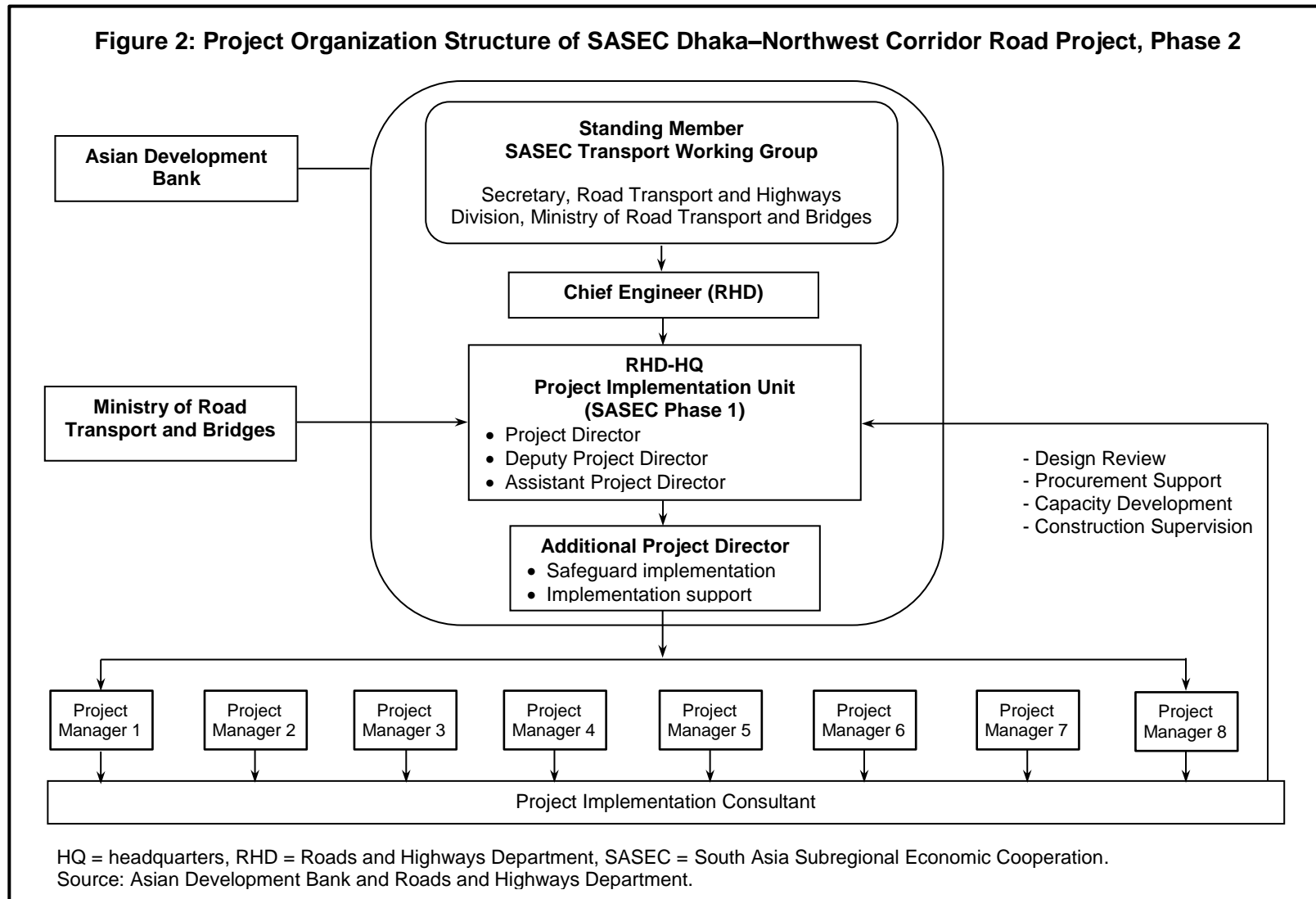
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C. Project Organization Structure

6. Figure 1 shows the reporting lines in the internal structures of key organizations involved in the implementation of the Phase 1 component of the SASEC Dhaka–Northwest Corridor Road Project.



7. Figure 2 shows the reporting lines in the internal structures of key organizations involved in the implementation of the Phase 2 component of the project.



IV. COSTS AND FINANCING

8. The project is estimated to cost \$1,672.6 million, including taxes and duties, physical and price contingencies, interest, and other charges during implementation (Table 4).

Table 4: Project Investment Plan
(\$ million)

Item	Amount ^a
A. Base Cost^b	
1. Phase 2 road improvement	1,060.7
2. Project management and institutional enhancement	93.4
3. Phase 1 road improvement	155.9
Subtotal (A)	1,310.0
B. Contingencies^c	284.5
C. Financing Charges During Implementation^d	78.1
Total (A+B+C)	1,672.6

^a Includes taxes and duties of \$95.7 million to be financed from Asian Development Bank (ADB) loan resources, and \$50.8 million from government resources.

^b In 2017 prices.

^c Physical contingencies computed at 10% for civil works. Price contingencies computed at about 1.5% on foreign exchange costs and about 6.0% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

^d Includes interest and commitment charges. Interest during construction for regular ADB loans from ordinary capital resources has been computed at the 5-year forward London interbank offered rate (LIBOR) plus a spread of 0.5%. Commitment charges for an ADB loan are 0.15% per year to be charged on the undisbursed loan amount. Interest during construction for concessional ADB loans from ordinary capital resources has been computed at 2% per year. There is no commitment charge for concessional ADB loans from ordinary capital resources.

Source: Asian Development Bank and Roads and Highways Department estimates.

A. Cost Estimates Preparation and Revisions

9. The cost estimates were prepared by the RHD with the support of a design consultant who carried out the detailed design for the project and prepared the cost estimate based on the bill of quantities for the detailed design. The project cost will be updated during construction based on changing quantities and application of the price escalation clause in the civil works contract by the project implementation consultant. The RHD will update the tranching schedule and the size of each subsequent tranches during project implementation based on the adjusted cost provided by the project implementation consultant.

B. Key Assumption

10. Price contingencies is the key assumption that underpins project cost estimates and the financing plan. Price contingencies based on expected cumulative inflation over the implementation period are shown in Table 5.

Table 5: 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	6.1%	6.3%	6.3%	6.3%	6.3%	6.3%

Source: Asian Development Bank estimates.

11. The project is estimated to cost \$1,672.6 million (Table 2). The government has requested a multitranche financing facility (MFF) of up to \$1,200 million equivalent from ADB's ordinary capital resources (OCR) to help finance part of the project. The MFF will consist of about four

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 and conditions and undertakings set forth in the framework financing agreement.³ The MFF will provide regular and concessional loans from ADB's ordinary capital resources up to the aggregate MFF amount. Any allocation for concessional loans will be subject to (i) the availability of such resources, (ii) Bangladesh's access to such resources pursuant to ADB's Graduation Policy⁴ and the requirements of donors for such resources, and (iii) the availability of such resources to Bangladesh given ADB's policy of performance-based allocation of such resources.⁵ Any change in the amount of concessional loans will be balanced by a corresponding change in the regular loans—total financing provided under the MFF is not to exceed the aggregate MFF amount.

Table 6: Financing Plan

Source	Amount				Total	
	Tranche 1 (\$ million)	Tranche 2 (\$ million)	Tranche 3 (\$ million)	Tranche 4 (\$ million)	Amount (\$ million)	Share of Total (%)
Asian Development Bank						
Ordinary capital resources (concessional loan)	50.0				50.0	3.0
Ordinary capital resources (regular loan)	250.0	300.0	300.0	300.0	1,150.0	68.7
Government	171.4	100.0	100.0	101.2	472.6	28.3
Total	471.4	400.0	400.0	401.2	1,672.6	100.0

Source: Asian Development Bank.

12. The first tranche of the MFF will comprise a regular loan of \$250 million and a concessional loan of \$50 million.⁶ The regular loan will have a 25-year term, including a grace period of 5 years; an annual interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility;⁷ a commitment charge of 0.15% per year, and such other terms and conditions set forth in the draft regular loan agreement. The concessional loan will have a 25-year term, including a grace period of 5 years; an interest rate of 2% per year during the grace period and thereafter; and such other terms and conditions set forth in the concessional loan agreement. The detailed cost estimates of Tranche 1 by expenditure category and detailed cost estimates by financier are in Table 7.

³ Framework Financing Agreement (accessible from the list of linked documents in Appendix 2).

⁴ ADB. 2008. *Review of the 1998 Graduation Policy of the Asian Development Bank*. Manila.

⁵ ADB. 2004. *Review of the Asian Development Bank's Policy on the Performance-Based Allocation of Asian Development Fund Resources*. Manila; ADB. 2008. *Refining the Performance-Based Allocation of Asian Development Fund Resources*. Manila.

⁶ The government has chosen the single-currency option of United States dollars for the concessional loan.

⁷ The interest includes a maturity premium of 10 basis points. This is based on the loan terms in para. 12 and the government's choice of repayment option (straight-line method) and dates.

C. Detailed Cost Estimates by Expenditure Category and Financier

Table 7: Detailed Cost Estimates by Expenditure Category and Financier – Facility
(\$ million)

Item	Base	Taxes	Total	% of Total	Amount		% of Cost Category	
					ADB	GOB	ADB	GOB
A. Phase 1								
1. Works	135.6	20.3	155.9	9.3%	135.6	20.3	87.0%	13.0%
Subtotal (A)	135.6	20.3	155.9	9.3%	135.6	20.3	87.0%	13.0%
B. Phase 2								
1. Land Acquisition and Resettlement	256.6	0.0	256.6	15.3%	0.0	256.6	0.0%	100.0%
2. Utility Shifting	38.0	0.0	38.0	2.3%	0.0	38.0	0.0%	100.0%
3. Works	685.7	80.4	766.1	45.8%	766.1	0.0	100.0%	0.0%
Subtotal (B)	980.3	80.4	1,060.7	63.4%	766.1	294.6	72.2%	27.8%
C. Project Management and Institution Strengthening								
1. Project Implementation Consultants (Phase 1)	4.3	1.2	5.5	0.3%	4.3	1.2	78.7%	21.3%
2. Project Management	6.5	0.0	6.5	0.4%	0.0	6.5	0.0%	100.0%
3. Equipment	2.0	0.4	2.4	0.1%	2.4	0.0	100.0%	0.0%
4. Project Implementation Consultants (Phase 2)	35.9	11.8	47.7	2.9%	47.7	0.0	100.0%	0.0%
5. Implementation NGO	1.1	0.3	1.4	0.1%	0.0	1.4	0.0%	100.0%
6. Road Research and Training Center	11.3	1.3	12.7	0.8%	12.7	0.0	100.0%	0.0%
7. Road Operation Units	15.5	1.8	17.3	1.0%	17.3	0.0	100.0%	0.0%
Subtotal (C)	76.6	16.7	93.4	5.6%	84.3	9.0	90.3%	9.7%
D. Contingencies								
1. Physical Contingency	105.3	9.6	114.9	6.9%	84.6	30.2	73.7%	26.3%
2. Price Contingency	150.1	19.5	169.6	10.1%	51.2	118.5	30.2%	69.8%
Subtotal (D)	255.4	29.1	284.5	17.0%	135.8	148.7	47.7%	52.3%
E. Financing Charges During Implementation								
1. Phase 1	10.0		10.0	0.6%	10.0		100.0%	0.0%
2. Phase 2	68.0		68.0	4.1%	68.0		100.0%	0.0%
Subtotal (E)	78.1		78.1	4.7%	78.1		100.0%	0.0%
Total (A+B+C+D+E)	1,526.0	146.5	1,672.6	100.0%	1,200.0	472.6	71.7%	28.3%

ADB = Asian Development Bank, GOB = Government of Bangladesh, NGO = nongovernment organization.

Source: Asian Development Bank and Roads and Highways Department estimates.

Table 8: Detailed Cost Estimates by Expenditure Category and Financier – Tranche 1
(\$ million)

Item	Base	Taxes	Total	% of Total	Amount			% of Cost Category		
					ADB OCR	ADB COL	GOB	ADB OCR	ADB COL	GOB
A. Phase 1										
1. Works	135.6	20.3	155.9		135.6		20.3	87.0%		13.0%
Subtotal (A)	135.6	20.3	155.9	49.4%	135.6		20.3	87.0%		13.0%
B. Phase 2										
1. Land Acquisition and Resettlement	126.7		126.7				126.7			100.0%
2. Utility Shifting	21.4		21.4	6.8%			21.4			100.0%
3. Works	81.6	9.6	91.2	28.9%	91.2			100.0%		
Subtotal (B)	229.7	9.6	239.3	75.9%	91.2		148.2	38.1%		61.9%
C. Project Management and Institution Strengthening										
1. Project Implementation Consultants (Phase 1)	4.3	1.2	5.5	1.7%	4.3		1.2	78.7%		21.3%
2. Project Management	1.3		1.3	0.4%			1.3			100.0%
3. Equipment	2.0	0.4	2.4	0.7%	2.4			100.0%		
4. Project Implementation Consultants (Phase 2)	35.9	11.8	47.7	15.1%		47.7			100.0%	
5. Implementation NGO	0.4	0.1	0.5	0.2%			0.5			100.0%
6. Road Research and Training Center										
7. Road Operation Units										
Subtotal (C)	43.9	13.4	57.3	18.2%	6.7	47.7	3.0	11.6%	83.1%	5.3%
D. Contingencies										
1. Physical Contingency										
2. Price Contingency										
Subtotal (D)	0.0	0.0	0.0	0.0%	0.0	0.0	0.0			
E. Financing Charges During Implementation										
1. Phase 1	10.0		10.0	3.2%	10.0			100.0%		
2. Phase 2	8.8		8.8	2.8%	6.5	2.3		73.6%	26.4%	
Subtotal (E)	18.8		18.8	6.0%	16.5	2.3		87.7%	12.3%	
Total Project Cost (A+B+C+D+E)	428.2	43.2	471.4	100.0%	250.0	50.0	171.4	53.0%	10.6%	36.4%

ADB = Asian Development Bank, COL = concessionary OCR loan, GOB = Government of Bangladesh, NGO = nongovernment organization, OCR = ordinary capital resources.

Source: Asian Development Bank.

Table 9: Detailed Cost Estimates by Year – Tranche 1
(\$ million)

Item	2018	2019	2020	2021	2022	2023	Total
A. Phase 1							
1. Works	78.0	78.0					155.9
Subtotal (A)	78.0	78.0					155.9
B. Phase 2							
1. Land Acquisition and Resettlement	42.2	42.2	42.2				126.7
2. Utility Shifting	7.1	7.1	7.1				21.4
3. Works	30.4	30.4	30.4				91.2
Subtotal (B)	79.8	79.8	79.8				239.3
C. Project Management and Institution Strengthening							
1. Project Implementation Consultants (Phase 1)	1.8	1.8	1.8				5.5
2. Project Management	0.2	0.2	0.2	0.2	0.2	0.2	1.3
3. Equipment	1.2	1.2					2.4
4. Project Implementation Consultants (Phase 2)	7.0	8.1	8.1	8.1	8.1	8.1	47.7
5. Implementation NGO	0.1	0.1	0.1	0.1	0.1		0.5
6. Road Research and Training Center							
7. Road Operation Units							
Subtotal (C)	10.3	11.5	10.3	8.5	8.5	8.4	57.3
D. Contingencies							
1. Physical Contingency							
2. Price Contingency							
Subtotal (D)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E. Financing Charges During Implementation							
1. Phase 1	2.0	3.0	5.0				10.0
2. Phase 2	2.2	2.4	2.7	0.4	0.5	0.6	8.8
Subtotal (E)	4.2	5.4	7.7	0.4	0.5	0.6	18.8
Total Project Cost (A+B+C+D+E)	172.3	174.6	97.8	8.9	9.0	9.0	471.4

NGO= nongovernment organization.

Source: Asian Development Bank and Roads and Highways Department estimates.

D. Allocation and Withdrawal of Loan Proceeds – Tranche 1

13. Tranche 1 for \$300 million equivalent will comprise two loans: (i) the concessional OCR loan for \$50 million, and (ii) the regular OCR loan for \$250 million.

14. The concessional OCR loan will finance (i) the project management consultants under Phase 2 of the road project, and (ii) the interest charge during construction.

15. The regular OCR loan will finance (i) the additional costs for the civil works and consulting services under Phase 1 of the project, (ii) civil works and equipment under Phase 2, and (iii) the interest charge during construction.

Table 10: OCR Loan – Allocation and Withdrawal of Loan Proceeds

CATEGORY			ADB FINANCING
Number	Item	Total Amount Allocated for ADB Financing (\$)	Basis for Withdrawal from the Loan Account
1	Works and consulting services (Part 3-additional financing to SASEC Road Connectivity Project)	139,900,000	100% of total expenditure claimed
2	Works and equipment (Parts 1 and 2)	93,600,000	100% of total expenditure claimed
3	Interest and commitment charges	16,500,000	100% of amount due
	Total	250,000,000	

ADB = Asian Development Bank.
Source: Asian Development Bank.

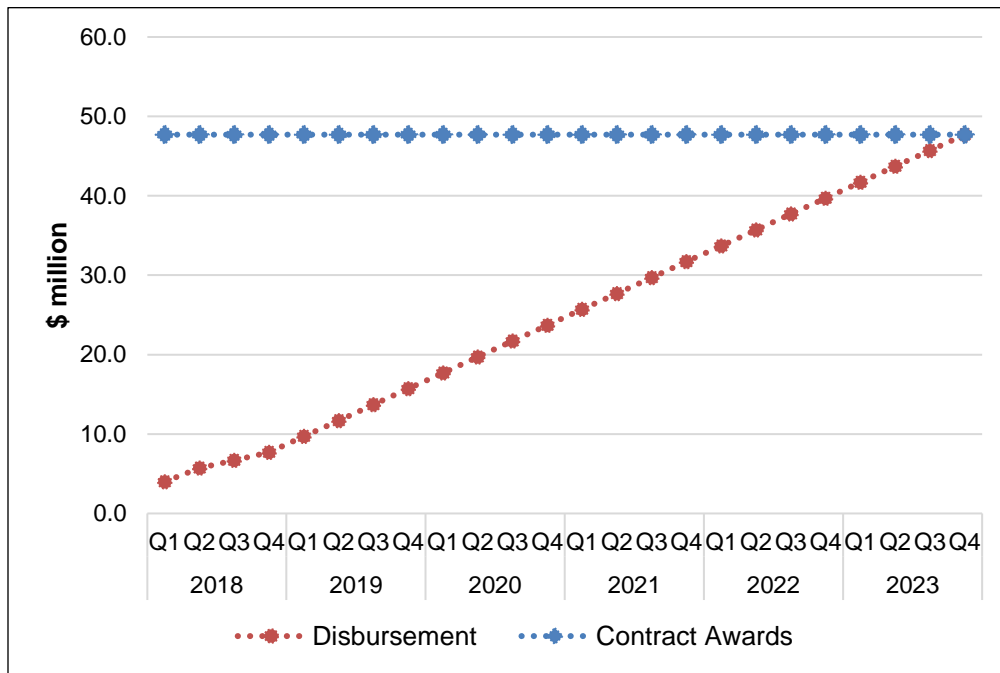
Table 11: Concessional OCR Loan – Allocation and Withdrawal of Loan Proceeds

CATEGORY			ADB FINANCING
Number	Item	Total Amount Allocated for ADB Financing (\$)	Basis for Withdrawal from the Loan Account
1	Consulting services	47,700,000	100% of total expenditure claimed
2	Interest charge	2,300,000	100% of amount due
	Total	50,000,000	

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

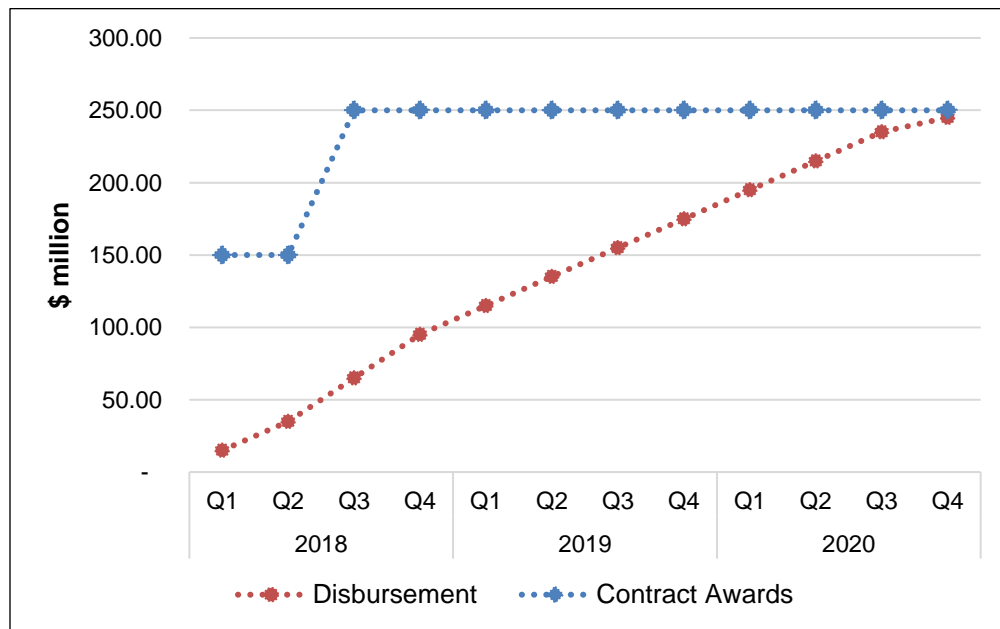
E. Contract and Disbursement S-Curve

Figure 3: Contract Award and Disbursement of Concessional OCR Loan, Tranche 1



BAN = Bangladesh, C-OCR = concessional ordinary capital resources, CA = contract award, Q = quarter, SASEC = South Asia Subregional Economic Cooperation.
 Source: Roads and Highways Department.

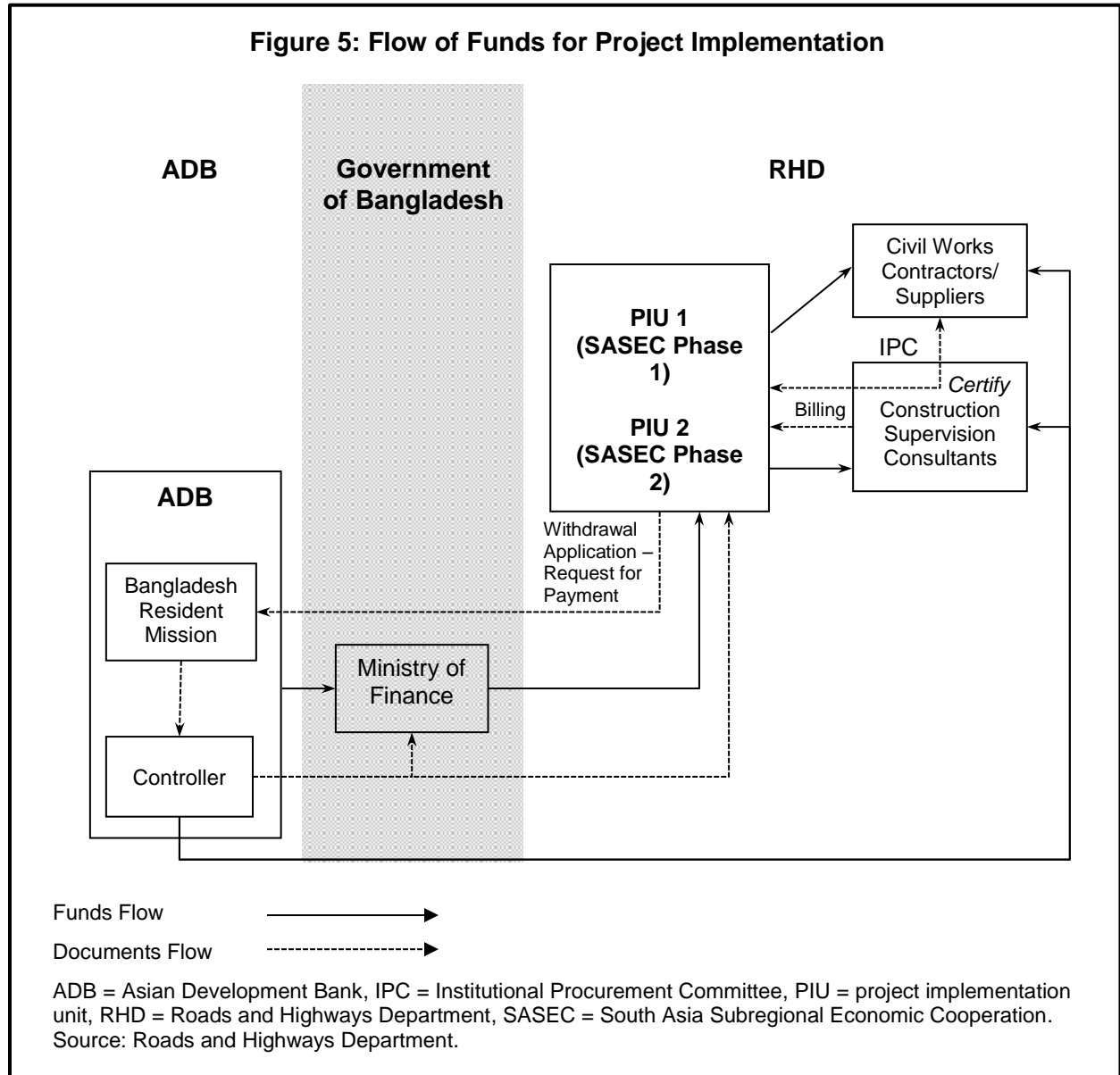
Figure 4: Contract Award and Disbursement of OCR Loan, Tranche 1



BAN = Bangladesh, CA = contract award, OCR = ordinary capital resources, Q = quarter, SASEC = South Asia Subregional Economic Cooperation.
 Source: Roads and Highways Department.

F. Fund Flow Diagram

16. The following diagram shows how the funds will flow from ADB and the Government of the People's Republic of Bangladesh to implement project activities.



V. FINANCIAL MANAGEMENT

A. Financial Management Assessment

17. The financial management assessment (FMA) was conducted during April 2017 in accordance with ADB's Guidelines for the Financial Management and Analysis of Projects and Financial Due Diligence (A Methodology Note and Technical Guidance Notes). The FMA considered the capacity of the RHD, including fund-flow arrangements, governance, staffing, budgeting, accounting and financial reporting systems, internal control procedures, financial information systems, and internal and external auditing arrangements. The risk is rated moderate.

18. The RHD has satisfactory financial management capability to (i) record the required financial transactions, (ii) provide regular and reliable financial statements, (iii) provide reliable monitoring reports, and (iv) safeguard the financial assets. In addition, the RHD has proven its capacity to handle the proposed project because of its experience in executing the previous ADB-assisted Phase 1 of the road project. The required policies and procedures are in place in the RHD as the project implementer. Project-level audit of the ADB-funded project is done by the Foreign Aided Project Audit Directorate (FAPAD) of the Government of the People's Republic of Bangladesh. The RHD has been meeting the ADB's financial management requirements as the executing agency and implementing agency, with some mitigative measures suggested. A summary of the findings is given in Table 12.

Table 12: Summary of the Financial Management Assessment

Particulars	Conclusions
A. Executing and Implementing Agency	The Roads and Highways Department (RHD) of the Road Transport and Highways Division (RTHD) under the Ministry of Road Transport and Bridges (MRTB) of the Government of the People's Republic of Bangladesh is the executing agency and implementing agency of the SASEC Dhaka–Northwest Corridor Road Project, Phase 2. The RHD is accountable to the RTHD of the MRTB of the government.
B. Fund Flow Arrangements	Direct payment procedure is recommended as the main disbursement method for the project. The RHD has enough capacity and capability to work under the proposed fund-flow arrangements acceptable to the Asian Development Bank (ADB).
C. Staffing	A project implementation unit (PIU) headed by a project director is in place for Phase 1 of the road connectivity project and a new PIU has been established for Phase 2. Dedicated staff for finance and accounting are on permanent basis with the PIU of the Phase 1 project. The Phase 2 project needs to be filled with sufficient staff while training in ADB policies, procedures, and disbursement processes will need to be provided to new recruits for the finance and accounts staff.
D. Accounting Policies and Procedures	Project finances were managed based on the existing Bangladesh Accounting Standard, the International Public Sector Accounting Standards, and the International Accounting Standards on modified cash basis. Regulations and controls are now adequately in place in relation to the preparation and approval of transactions. Detailed chart of accounts is also in place. Cost allocations are done based on chart of account.
E. External Audit	Audit of the project financial statements should be done in accordance with the International Accounting Standards on auditing and by an independent auditor acceptable to ADB. The Foreign Aided Project Audit Directorate (FAPAD) of the Comptroller and Auditor General of Bangladesh conducts the audit of accounts of all foreign-aided projects. In the Phase 1 project, the certificate issued by the FAPAD is considered acceptable to ADB. A similar arrangement is acceptable to ADB for the proposed Phase 2 project. FAPAD has completed the audit of the Phase 1 project for 2015–2016 and has submitted the report in time.

Particulars	Conclusions
F. Internal Audit	There is no internal audit department in place at the project. Pre-audit is done by the accounts officer before making any payments in the PIU of Phase 1 of the project. A similar arrangement is proposed in the PIU of Phase 2.
G. Reporting and Monitoring	<p>The PIU reports on the project comply with the reporting requirements of the RHD, RTHD, MRTB, the Ministry of Finance, the tax authorities, and other government bodies and follow Bangladesh Financial Reporting Standards. In addition to the annual report, quarterly reports are prepared for ADB. It is suggested to include supplementary financial and disbursement reports along with a quarterly project progress report.</p> <p>Financial Reports:</p> <ol style="list-style-type: none"> 1. Sources and Uses of Fund Statement 2. Uses of Fund by Project Activity <p>Disbursement Reports:</p> <ol style="list-style-type: none"> 3. Loan Disbursement Details
H. Information Systems	<p>The Government of the People's Republic of Bangladesh has a system in place for recording transactions in line with the Integrated Budgeting Accounting System++ and Foreign Aid Management System. Currently, required data are entered by the chief accounts officer of the RTHD and the RHD is planning to implement the system at the PIU level. There is a manual contract management system in place for the project. Automated contract management system will boost efficient monitoring, following the project management system and central monitoring system used by the RTHD.</p>

Source: Asian Development Bank.

19. Actions required to be taken by the RHD for the project are as follows:

- (i) Prepare quarterly reports with financial and disbursement reports as well as variance analysis of physical and financial progress.
- (ii) Employ software systems for accounting and monitoring such as the Integrated Budget and Accounting System, Project Management System, and Central Management System now used by the RTHD of the MRTB to strengthen financial management and internal controls.
- (iii) Require the PIU and the RHD finance staff to attend ADB-sponsored training on financial management procedures and ADB policies and procedures.

20. **Risk analysis.** During the implementation phase, the RHD may face some risks that can generally be divided in two main categories: (i) country level, and (ii) organization/project level. Financial management risks shall need to be considered and updated throughout the life of the project and risk mitigation measures also need to be updated accordingly. The risk assessment and mitigation measures are listed in Table 13.

Table 13: Risk Assessment and Mitigation Measures

Risk	Risk Assessment	Risk Description	Mitigation Measures or Action Plans
Inherent Risks			
1. Country-specific Risks	M	The CPS of Bangladesh, ⁸ final review validation, rated ADB's strategic positioning satisfactory, and the program relevant to the country's needs, as well as effective and likely sustainable. Because of delays in procurement and safeguards implementation, and difficulties in discerning ADB contributions to country outcomes, the program was rated less than efficient and the impact less than satisfactory.	The CPS of Bangladesh, final review validation, rated ADB's strategic positioning satisfactory and the program relevant to the country's needs, as well as effective and likely sustainable. Despite an overall moderate country-level risk, the risk to the ADB-assisted project at the country level is considered low due to the project modality in place and the existence of the RTHD/MRTB oversight of the activities for the project. Close monitoring of activities will reduce country-specific risks in the project.
2. Entity-specific Risks	M	Experience of the RHD as implementing agency for implementing the project	The implementing agency of the proposed project, the RHD, has acquired experience in implementing the ADB-financed Phase 1 of the project. A separate PIU headed by a project director is in place. This will reduce the entity-specific risks in managing the project.
3. Project-specific Risks	L	There are no project-specific risks in this project.	Not applicable.
Overall Inherent Risk	M		
Control Risks			
1. Implementing Entity	M	The RHD is proposed to manage and implement the project.	A PIU has been established to implement the Phase 2 project. The finance and accounts wing is adequately staffed in the Phase 1 project. For the Phase 2 project, the finance and accounts staff has yet to be filled. Staffing must be in place before the project starts.
2. Fund Flow	L	Timely release of counterpart fund to the project	The GOB/RHD shall ensure the timely release of funds including counterpart funds for the project as per the loan covenant. Timely availability of counterpart funds will be ensured by implementing the proposed fund-flow arrangements. No systematic problems related to funds have been reported in the Phase 1 project handled by the RHD. For ADB disbursements, direct payment method for civil works and consulting services is proposed.

⁸ Country Partnership Strategy: <https://www.adb.org/documents/bangladesh-country-partnership-strategy-2016-2020>

Risk	Risk Assessment	Risk Description	Mitigation Measures or Action Plans
3. Staffing	M	Dedicated finance and accounting staff for the RHD	Dedicated finance and accounting staff are now deployed at the PIU of the Phase 1 project on permanent basis. The Phase 2 project needs to be filled with sufficient staff, and newly recruited finance and accounts staff will need training in ADB policies, procedures, and disbursement processes.
4. Accounting Policies and Procedures	L	Updating the accounting policies and procedures	Accounting policies and procedures are updated as and when required.
5. Internal Audit	M	Internal audit function	There is no internal audit department in place in the project. Pre-audit is done by the accounts officer before making any payments in the PIU of the Phase 1 project. A similar arrangement is proposed in the PIU of the Phase 2 project.
6. External Audit	M	Audit of project financial statements should be in accordance with International Standards on Auditing and by the independent auditor acceptable to ADB.	Audit of the project financial statements should be done in accordance with the International Standards on Auditing and by the independent auditor acceptable to ADB. The current arrangement of getting the audit done by the FAPAD of CAG is acceptable to ADB. Audit for the year 2015–2016 of the Phase 1 project was completed in time.
7. Reporting and Monitoring	M	Financial reports and disbursement reports need to form part of the quarterly progress reports	The RHD will be required to report in accordance with the ADB requirements for inherent adequate control mechanisms. Financial reports and disbursement reports need to form part of quarterly progress reports.
8. Information Systems	M	Optimal use of technology in the finance and accounts wing for the preparation of accounts and reporting requirements	There is a system in place in the GOB for recording transactions in the IBAS. Currently, the required data are entered by the chief accounts officer of the RTHD and the RHD is planning to implement the system at the PIU level. There is a manual contract management system in place in the project. Automated contract management system will help efficient monitoring by following the Project Management System and Central Monitoring System used in the RTHD.
Overall Control Risk	M		

H = high, M = medium, L = low.

ADB = Asian Development Bank, CAG = comptroller and auditor general, CPS = country partnership strategy, FAPAD = Foreign Aided Project Audit Directorate, GOB = Government of Bangladesh, IBAS = Integrated Budgeting and Accounting System, MRTB = Ministry of Road Transport and Bridges, PIU = project implementation unit, RHD = Roads and Highways Department, RTHD = Road Transport and Highways Division.

Source: Asian Development Bank.

B. Disbursement

1. Disbursement Arrangements for ADB Funds

21. The loan proceeds will be disbursed in accordance with ADB's Loan Disbursement Handbook (2017, as amended from time to time). Online training for project staff on disbursement policies and procedures is available.⁹ Project staff are encouraged to avail of this training to help ensure efficient disbursement and fiduciary control. The project is funded by ADB on direct payment to civil works contracts and consulting services, or reimbursement basis as appropriate. The statement of expenditures (SOE) procedure will be used to reimburse eligible expenditures for payments less than \$100,000. SOE records will be maintained and made readily available for review by ADB's disbursement and review mission or upon ADB's request for submission of supporting documents on a sampling basis, and for independent audit.

22. Pursuant to ADB's Safeguard Policy Statement (2009) (SPS), ADB funds may not be applied to the activities described in the ADB Prohibited Investment Activities List set forth in Appendix 5 of the SPS. The RHD should ensure that the investments are in compliance with applicable national laws and regulations and that it will apply the prohibited investment activities list to all subprojects financed by ADB.

23. Before the submission of the first withdrawal application (WA), 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 WA is stipulated in the Loan Disbursement Handbook (2017, as amended from time to time). Individual payments below such amount should be paid (i) by the executing agency and subsequently claimed to ADB through reimbursement. The borrower should ensure sufficient category and contract balances before requesting disbursements.

24. The RHD will be responsible for (i) preparing disbursement projections, (ii) requesting budgetary allocations for counterpart funds, (iii) collecting supporting documents, and (iv) preparing and sending withdrawal applications to ADB. Before the submission of the first withdrawal application, the RHD shall submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of the borrower together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is set by ADB's Loan Disbursement Handbook. Individual payments below this amount should be paid by the executing agency and/or implementing agency and subsequently claimed from ADB through reimbursement.

2. Disbursement Arrangements for Counterpart Fund

25. All disbursements under government financing will be carried out in accordance with regulations of the Government of the People's Republic of Bangladesh. The RHD will seek the government's funding requirement through budget allocation to the RHD for counterpart fund.

C. Accounting

26. The RHD will maintain, or cause to be maintained, separate books and records by funding source for all expenditures incurred on the project following the Bangladesh Accounting

⁹ Disbursement eLearning: http://wpqr4.adb.org/disbursement_elearning

Standards and the International Accounting Standards. The RHD will prepare project financial statements in accordance with the government's accounting laws and regulations, which are consistent with international accounting principles and practices.

D. Auditing and Public Disclosure

27. The RHD 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 RHD in the English language to ADB within 6 months from the end of the fiscal year.

28. The audit report for the project financial statements will include a management letter 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).

29. 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.

30. The government, the RHD, and the PIU 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.¹⁰ 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.

31. Public disclosure of the audited project financial statements, including the auditor's opinion on the project financial statements, will be guided by ADB's Public Communications Policy 2011.¹¹ 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.¹²

¹⁰ 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 (i) the audit documents are overdue; and (ii) if they are not received within the next 6 months, requests for new contract awards and disbursement 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. ADB will (i) inform the executing agency of ADB's actions; and (ii) 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.

¹¹ Public Communications Policy: <http://www.adb.org/documents/pcp-2011?ref=site/disclosure/publications>

¹² This type of information would generally fall under public communications policy exceptions to disclosure. ADB. 2011. *Public Communications Policy*. Manila. paras. 97(iv) and/or 97(v).

VI. PROCUREMENT AND CONSULTING SERVICES

A. Advance Contracting

32. All advance contracting for the project will be undertaken in conformity with ADB's Procurement Guidelines¹³ (April 2015, as amended from time to time) and ADB's Guidelines on the Use of Consultants¹⁴ (2013, as amended from time to time). The issuance of invitations to bid under advance contracting will be subject to ADB approval. The Government of the People's Republic of Bangladesh and the RHD have been advised that approval of advance contracting does not commit ADB to finance the project.

33. Advance action will be utilized for procurement of goods, works, and consulting services. The steps to be concluded in advance are (i) recruitment of consultants, and (ii) tender process of works including preparation of the bidding documents for civil works and call for tender.

B. Procurement of Goods, Works, and Consulting Services

34. All procurement of goods and works will be undertaken in accordance with ADB's Procurement Guidelines.

35. International competitive bidding (ICB) procedures will be used for civil works contracts estimated to cost more than \$15 million. The national competitive bidding (NCB) method will be used for goods contracts between \$100,000 and \$1,999,999. Shopping will be used for procurement of works and goods estimated to cost less than \$100,000.

36. The procedures to be followed for NCB shall be those set forth for the National Open Tendering Method in the government's Public Procurement Rules, 2008 (as updated and issued pursuant to the Bangladesh Public Procurement Act, 2006) with the clarifications and modifications described in the procurement plan required for compliance with the provisions of ADB's Procurement Guidelines.

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

38. Procurement activities will be the responsibility of the project directors who will be supported by the project implementation unit and the project implementation consultants. ADB will engage an international consultant during procurement for probity, and closely monitor all procurement and implementation activities. Contracts for civil works and goods will comprise about 11 ICB packages. Contract packages for equipment under RHD institutional development will be based on required technical features and timing of procurement. Packages will be finalized during implementation by the project implementation consultants. If necessary, the contracts will be divided into contracts for civil works and supply of goods.

39. All consultants financed by ADB will be recruited per ADB's Guidelines on the Use of Consultants.¹⁵

¹³ Available at <http://www.adb.org/Documents/Guidelines/Procurement/Guidelines-Procurement.pdf>

¹⁴ Available at <http://www.adb.org/Documents/Guidelines/Consulting/Guidelines-Consultants.pdf>

¹⁵ Checklists for actions required to contract consultants by method available in the e-Handbook on Project Implementation at <http://www.adb.org/documents/handbooks/project-implementation/>

40. An estimated 3,384 person-months (887 international, 2,497 national) of consulting services are required to (i) facilitate project management and implementation for the RHD, and (ii) enhance the operational efficiency of the RHD. Consulting firms will be engaged using the quality- and cost-based selection method with a quality-cost ratio of 90:10. A higher quality ratio is adopted because the task involves a certain level of innovativeness to coordinate with the RHD, and to mobilize and manage several teams at the same time.

41. The size of civil works contracts for road improvement will be packaged at a larger scale sufficient to attract qualified national and international contractors. ADB's standard bidding documents with post-qualification under the two-envelope system will be adopted. The works contracts have been modified to incorporate long-term performance-based maintenance for up to 6 years. The project implementation period includes preconstruction activities, the construction period, and the defect liability period. The RHD will supervise the remaining years of performance-based maintenance.

42. The government will publish information relating to the project, including business opportunities, information on procurement of goods, works, and consulting services, and project implementation and administration of funds, on the RHD and Ministry of Commerce websites. To further enhance good governance during procurement, (i) the RHD will involve in their procurement processes a procurement advisor to be engaged by ADB; (ii) ADB will closely monitor procurement activities on a regular basis; and (iii) the consultant under the technical assistance (TA) grant associated with the project will undertake a procurement review of the project.

C. Procurement Plan

43. The procurement plan, prepared in accordance with the country-specific template, is in Appendix B, which describes all procurements of goods and works to be undertaken for the project.

44. The contracts awarded under Phase 1 of the SASEC Dhaka-Northwest Corridor Road Project (Loan 2949) will be completed with variations for enhanced road safety and gender responsive features. The contracts of project implementation consultants will be extended as necessary to complete the construction supervision.

D. Consultant's Terms of Reference

45. The consultant's terms of reference are provided in Appendix C.

VII. SAFEGUARDS

A. Environment

46. The SASEC Dhaka–Northwest Corridor Road Project has been categorized as environment category B as per the ADB Safeguards Policy Statement (SPS) 2009. An initial environmental examination (IEE) report, including an environmental management plan (EMP) for the Elenga–Hatikumrul–Rangpur Road, has been prepared. The other two components of the investment project—(i) enhancement of the institutional capacity of the Roads and Highways Department in road operation and management, (ii) and financing of the cost overrun of the project (Phase 1: Joydevpur–Chandra–Tangail–Elenga)—did not require the preparation of environmental assessment reports as there are no physical works involved in the first component. For the second component, an IEE report was already prepared during the processing of the Phase 1 project (Loan 2949). Following are the key agencies for the project and their responsibilities for implementing environment safeguards under the program.

47. **Roads and Highways Department (RHD).** As the executing agency for the project, the RHD will be responsible for ensuring compliance with all the environmental components of the Framework Financing Agreement and the Environmental Assessment and Review Framework.

48. **Environment and Social Circle (ESC), RHD.** The ESC is responsible for managing environment and social safeguards, including safeguards-related capacity building for all RHD projects. The ESC is headed by a superintending engineer who is supported by an executive engineer, subdivision engineer, assistant engineer, and sub-assistant engineer. The ESC will provide support to the PIU as needed for reviewing environmental assessment reports and environmental monitoring reports, conducting project site inspections, and addressing environmental issues that cannot be managed by the PIU.

49. **Project implementation unit (PIU), RHD.** The additional project directors (APD) under the PIU will serve as the environmental focal person at the project headquarter level. At the site level, an assistant engineer supporting the project manager will serve as the environmental focal person. The APDs and the assistant engineer environmental focal persons must have adequate experience in implementing environment safeguards and undergo further training on project-specific requirements during the early stages of project implementation. The PIU will organize an initial coordination cum training workshop to be facilitated by the PIC and/or ADB to clarify the key requirements and the roles and responsibilities of each party. The PIU will be responsible for ensuring proper implementation of environment safeguards in their respective projects, including implementation of the EMP and the environmental monitoring plan (EMoP), timely reporting, and timely resolution of complaints and grievances. The APD will ensure the overall proper implementation of environment safeguards, preparation of monitoring reports based on site inspections and reports prepared by the PIC, and timely submission of annual environmental monitoring reports to ADB for disclosure on the ADB website. The site-level day-to-day monitoring of EMP and EMoP implementation will be carried out by the assistant engineer.

50. **Project implementation consultant (PIC).** The PIC will supervise works of the civil works contractor and will have a team of international and national environment experts to ensure proper implementation of environment safeguards. The PIC will review and approve updated EMPs and all subplans (camp layout plan, spoil disposal plan, borrow area management plan, etc.) that are submitted by the contractor. Regular site-level monitoring, provision of technical advice, and on-the-job training will be provided to the contractor to enable the smooth implementation of the EMP. Monthly progress reports on EMP and EMoP implementation submitted by the contractor will be

reviewed and approved. Based on the monthly progress reports and site inspections, the PIC will prepare quarterly monitoring reports for approval by the PIU. The quarterly reports will be further compiled into annual monitoring reports for review and approval by the PIU. Necessary technical support will be provided to the PIU environmental focal person at the site level as well as at the department level.

51. **Contractor.** The contractor will recruit environment, health, and safety experts that will be based at the construction site. The contractor is legally mandated to implement the EMP and EMoP and to obtain all environment-related permits and clearances required for construction. The EMP will be updated when necessary and subplans (camp layout plan, spoil disposal plan, borrow area management plan, etc.) will be prepared as instructed by the PIC for review and approval by the PIC. Monthly monitoring reports on the implementation of the EMP and EMoP will be prepared for submission and approval by the PIC.

B. Social: Involuntary Resettlement

52. **Involuntary resettlement and indigenous peoples' safeguards.**¹⁶ Given the significant resettlement impacts, Tranche 1 is categorized as A for involuntary resettlement. The project is categorized as C for indigenous peoples' safeguards as the alignment does not affect tribal lands and the survey confirms no indigenous person is affected. The same categorization is expected for the subsequent tranches given that this is a time-sliced approach MFF and all activities have been appraised up front.

53. Three resettlement plans—one for the Elenga to Hamtikamrul section, another for the Hamtikamrul to Rangpur section, and another one for the Hamtikamrul interchange—have been prepared and are disclosed on the ADB website.¹⁷ A resettlement framework¹⁸ and indigenous people's framework¹⁹ have also been prepared and disclosed to comply with MFF requirements. The due diligence report of the resettlement plan implementation of Phase 1 of the project has also been prepared, showing overall compliance with ADB's SPS.²⁰ The implementation of the resettlement plans is estimated at Tk20,011,454,835 (\$256.56 million). The budget has already been approved by the Government of the People's Republic of Bangladesh. The following section describes the key implementation arrangements.

54. Should additional works be financed in subsequent tranches, resettlement and indigenous peoples' impacts must be assessed and managed as per the resettlement framework and the indigenous people's planning framework.

55. **Role of RHD and PIU in resettlement process.** The RHD will be responsible for the overall implementation of resettlement activities. These activities will be overseen by the three additional project directors of the PIU. The PIU and RHD officials will benefit from capacity-building measures at project inception. These will be provided by the PIC resettlement specialists (see following discussion), ADB safeguards, and social development specialists.

56. **Resettlement implementation NGO.** The PIU will implement the resettlement plan with the support of an implementation NGO (INGO), which will be conducting the day-to-day land acquisition and resettlement activities, entitlement disclosure and consultations with affected

¹⁶ Tribes, minor races, ethnic sects, and communities, as per Bangladesh Constitution.

¹⁷ Resettlement Plans (linked document to the RRP).

¹⁸ Resettlement Framework (linked document to the RRP).

¹⁹ Indigenous Peoples Planning Framework (linked document to the RRP).

²⁰ Due Diligence Report (linked document to the RRP).

persons, internal monitoring, as well as act as the secretary in the grievance redress committee. The INGO will establish an office at the project site and will have around 10 professional staff and 18 support and field staff. The recruitment of the INGO has been completed and its staff have been mobilized in May 2017.

57. **Project implementation consultant.** One intermittent international resettlement expert (12 months) and two national resettlement experts (48 months) will be part of the PIC team to guide the implementation of the resettlement plan. Their role will be to help the PIU/INGO in setting up indicators and a baseline, advise the PIU on corrective actions, be a member of the grievance redress committee, and support the RHD with the preparation of the semi-annual resettlement monitoring reports and completion report to be submitted to ADB.

58. **External monitor.** ADB will recruit an external monitor (national expert with field staff, NGO or firm) as part of the capacity development technical assistance attached to the MFF to conduct a field-based assessment of the implementation of the resettlement plan on a semi-annual basis. Its role will be to reconcile data provided by the PIU/INGO with field and records verification, provide capacity-building workshops to the RHD and the INGO on specific topics where weaknesses have been identified, and assess the progress of land acquisition and resettlement activities. Finally, the role of the external monitor will be to assess compliance with the SPS and to propose corrective or remedial actions.

VIII. GENDER AND SOCIAL DIMENSIONS

59. **Gender.** Tranche 1 is categorized as effective gender mainstreaming. The social due diligence identified project-related gender and social risks in addition to resettlement impacts. They are outlined below and detailed in the Summary Poverty Reduction and Social Strategy.

60. The project includes a gender action plan with the following proactive gender-mainstreaming features: (i) the integration of gender responsive and safety design features (i.e., slow-moving lanes, footpaths, and pedestrian foot-over bridges); (ii) road safety awareness campaigns for communities along the road corridor with specific gender targets. Audience: pedestrians (target: 50% women), drivers, parents, schoolchildren (target: 50% schoolgirls), professional drivers; (iii) awareness-raising campaign on public preventative sexually transmitted diseases (STD) and human trafficking with specific gender targets (target: 50% women); (iv) proactive measures to support the rehabilitation of affected women; (v) targeting at least 15% of road maintenance workers to be women; (vi) targeting at least 40% of tree plantation program workers to be women; and (vii) preparing a time-use study for the Phase 1 project (SASEC Road Connectivity Project) to assess the project's impact on women's mobility and safety using the road (Table 14).

Table 14: Gender Action Plan

Activity	Performance Targets/Indicators	Responsibility	Timeframe
Output 1. Dhaka–Northwest international trade corridor (Phase 2: Elenga–Hatikumrul–Rangpur) upgraded			
1.1 Integrate gender responsive and safety friendly features in road design	<ul style="list-style-type: none"> • 380 km of SMVT lanes built (inclusive of both sides) • 25 foot-over bridges built • 7.5 km of footpaths built (inclusive of both sides) • 39 underpasses built²¹ • At least 15% of labor in road construction are women²² 	RHD Contractor PIC	2021
1.2 Conduct public STD and HIV/AIDS prevention and human trafficking awareness-raising sessions for communities and laborers	<ul style="list-style-type: none"> • At least 500 community members (target: 50% women) from <i>upazilas</i> (subdistricts) along the road corridor alignment participated in HIV/AIDS and human-trafficking awareness sessions • At least 20 human trafficking awareness signs set up in strategic places along the corridor • All civil works laborers received training on STD and HIV/AIDS prevention 	RHD PIC INGO	2018–2019
1.3 Ensure that project-affected women receive fair compensation and benefit from	<ul style="list-style-type: none"> • All affected female-headed households received Tk12,000 additional vulnerability allowances 	RHD PIC INGO	2017–2019

²¹ Underpasses have been identified by women during project design as critical to their enhanced mobility and access to relevant points. In building these underpasses, the RHD will ensure further consultation with women and the identification of devices (e.g., posing of mirrors and other safety measures) to counteract blind corners and ensure safe access to relevant points.

²² The target will be reassessed based on the baseline data collected (see activity 1.4).

Activity	Performance Targets/Indicators	Responsibility	Timeframe
livelihood improvement training	<ul style="list-style-type: none"> All female heads of household eligible to participate in the Livelihood Restoration Program 		
1.4 Assess status of women's involvement in road construction and ensure core labor standards ²³	<ul style="list-style-type: none"> Baseline study of Phase 1 project conducted to assess women's involvement in skilled and unskilled labor in road construction and road maintenance Bidding documents and contracts contained provisions on core labor standards, with emphasis on gender-related aspects Female workers provided with information on core labor standards and how to report incidents of non-compliance 	RHD PIC	2018–2021
Output 2: Institutional Capacity of RHD in road O&M enhanced			
2. Institutional capacity of RHD in road O&M enhanced	<ul style="list-style-type: none"> Three road operation units for road safety, maintenance, and overloading control along the corridor included toilet facilities for women and men (2016 baseline: 0) 		
Output 3: Road safety and gender-responsive features enhanced and completed (cost overrun of Dhaka–Northwest international trade Phase 1)			
3.1 Integrate gender responsive and safety friendly features in road design	<ul style="list-style-type: none"> Underpasses (6) and footpaths (30 km) built (inclusive of both sides) 		
3.2 Facilitate women's access to work opportunities provided by the project	<ul style="list-style-type: none"> Payroll with names, sex, work done, working period, and wages received made available for inspection by PIU At least 15% of labor in maintenance are women²⁴ At least 40% of tree plantation laborers (Phase 1 project) are women 	RHD PIC Contractor	2019–2021
3.3 Conduct rail crossing safety awareness campaigns for communities along Phase 1 and Phase 2 road corridors (audience: pedestrians, drivers, parents, schoolchildren, professional drivers)	<ul style="list-style-type: none"> At least 5,000 residents (target: 50% women) from communities along the alignment participated in road safety awareness sessions 75% of students (target: 50% schoolgirls) of at least 200 kindergarten, primary and secondary schools in the upazilas along the road corridor participated in road safety awareness sessions At least 150 professional drivers sensitized to road safety 	RHD PIC INGO	2019–2021

²³ These include equal wages for work of equal value, prohibition of child labor, no bonded labor; no work discrimination regardless of gender, race, and ethnicity; and freedom of association and collective bargaining.

²⁴ The target will be reassessed based on the baseline data collected (see activity 1.4).

Activity	Performance Targets/Indicators	Responsibility	Timeframe
3.4 Conduct an impact evaluation of gender responsiveness of Phase 1 (SASEC)	<ul style="list-style-type: none"> • Before-project baseline and after-project survey completed • Time-use study (Phase 1 corridor) completed assessing the project's impact on women's mobility in (i) women's use of the roads/border crossing/walkways and SMVLs, (ii) women's travel time and time poverty, and (iii) women's satisfaction with the project benefits • Baseline for a time-use study (Phase 2 corridor) collected • Qualitative data collected via interviews and FGDs for the PCR • Workshop (1) on impact evaluation to share lessons learned with the RHD and ADB officials conducted 	PIC	2019

FGD = focus group discussions, HIV= Human Immunodeficiency Virus, O&M = operations and maintenance, PCR = project completion report, PIC = project implementation consultant, PIU = project implementation unit, RHD = Roads and Highway Department, SASEC = South Asia Subregional Economic Cooperation, STD = sexually transmitted diseases, SMVL = slow-moving vehicle lane, SMVT=Slow Moving Vehicle Traffic, Tk = taka.

Source: Asian Development Bank.

61. The RHD, the INGO, the PIC, and the contractor will work together to ensure the implementation of the gender mainstreaming and social mitigation measures featured in Table 14. To support these activities, the PIC will include one international senior social development specialist (24 months) and two national social development specialists (36 months). The costs associated with the implementation and monitoring of gender mainstreaming activities are included in the budgets of the civil works and the supervision consultant.

62. **Road safety and HIV/AIDS and human trafficking prevention.** The project will include a road safety awareness campaign targeting the residents along the corridor, schoolchildren, parents, and professional drivers. It will also include an HIV/AIDS and human trafficking prevention program among civil works personnel and corridor residents to promote early diagnosis of the sickness, assist affected individuals, and alert communities on the risks and manifestations of human trafficking. This will be carried out by the resettlement plan implementing NGO, which also counts on the assistance of social development and gender experts, expertise outsourced by the contractor, and the PIC social development experts.

63. **Labor.** The project construction and road maintenance phases are expected to generate employment opportunities for local communities. Men and women will be paid equally for equal work. There will be provisions in the bidding and contractual documents for the contractors to ensure that all civil works comply with core labor standards.²⁵ Compliance will be monitored by the PIC and ADB's project officer and safeguards staff.

²⁵ No child labor; no bonded labor; no work discrimination regardless of gender, race, and ethnicity; and freedom of association and collective bargaining.

IX. PERFORMANCE MONITORING, EVALUATION, REPORTING, AND COMMUNICATION

A. Project Design and Monitoring Framework

64. The design and monitoring framework (DMF) of the SASEC Dhaka–Northwest Corridor Road Project, Phase 2 is in Appendix 1 of the Report and Recommendation of the President (RRP).

B. Monitoring

65. **Project performance monitoring.** The achievement of the project performance targets will be assessed following the DMF. The RHD, assisted by respective consultants, will establish a project performance management system. Indicators to be monitored include (i) traffic volume (project road and cross-border); (ii) travel time along the project roads; (iii) accident rates; (iv) number of participants and sessions for awareness of social aspects; (v) road conditions; and (vi) employee efficiency, i.e., completed length of roads and bridges. These indicators will be monitored before and after construction, both on the project and on some control roads. In addition, every year during the project period, the RHD will monitor the project budget and actual expenditures. Achievement of the institutional and capacity development activities will also be monitored. For civil works, progress will be monitored and reported monthly by the PIC. The project beneficiaries' satisfaction will be surveyed during and after project implementation. Disaggregated baseline data for output and outcome indicators gathered during project processing will be updated and reported through the quarterly progress reports from the RHD and after each ADB review mission. These quarterly reports will provide information necessary to update ADB's project performance reporting system.²⁶

66. **Compliance monitoring.** Compliance with covenants will be monitored through ADB's (i) project administration missions, including project inception to discuss and confirm the timetable for compliance with the loan covenants; (ii) project review missions to review the government's compliance with particular loan covenants and, where there is any noncompliance or delay, discuss proposed remedial measures with the government; and (iii) midterm review mission, if necessary, to review covenants and assess whether they are still relevant or need to be changed or waived due to changing circumstances. The PIC and the TA consultant will provide periodic progress reports that will also provide the status of compliance.

67. **Involuntary resettlement monitoring.** The RHD will submit semi-annual Social Monitoring Reports to ADB detailing the progress of resettlement activities. These reports will be disclosed on the respective websites of the executing agency and ADB. ADB will assess the progress of resettlement activities during review missions. All other reports to be submitted to ADB are detailed in Table 15.

68. **Gender and social dimensions monitoring.** The gender mainstreaming and awareness campaign activities will be monitored by the RHD with the support of the PIC's social development specialists. ADB will assess the progress of these activities during review missions. Their progress will be included in the semi-annual Social Monitoring Reports along with information on land acquisition and resettlement activities prepared by the RHD with the support of the PIC. Quarterly table-format reports on the gender action plan will also be prepared.

²⁶ ADB's project performance reporting system is available at <http://www.adb.org/Documents/Slideshows/PPMS/default.asp?p=evaltool>

69. **Environment safeguards monitoring.** The PIC will conduct site-level monitoring of EMP implementation on a monthly basis and submit quarterly monitoring reports to the PIU. The PIC will compile the quarterly reports into annual environmental monitoring reports for review and approval by the RHD and for further submission to ADB for disclosure on the ADB website.

C. Evaluation

70. The project inception mission will be fielded soon after the legal agreements for the 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 RHD will monitor project implementation in accordance with the schedule and time-bound milestones and will keep ADB informed of any significant deviations that may result in the milestones not being met. Within 6 months of physical completion of the project, the RHD will submit a project completion report to ADB.²⁷

D. Reporting

71. The Government of the People's Republic of Bangladesh will provide ADB with (i) quarterly progress reports in a format consistent with ADB's project performance reporting system, including implementation of maintenance activities such as reduction of maintenance backlog; (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; and (iii) a project completion report within 6 months of the physical completion of the project. In addition, the RHD should submit the reports listed in Table 15.

Table 15: Project Monitoring and Evaluation Reports

Type of Report	Content	Frequency	Responsibility
Updated Affected Persons' List	Updated list of affected persons after the joint verification survey	Once	INGO/RHD/PIC
Addendum(s)	As required	As required: (i) for sections of project where design is not final (ii) for unforeseen activities with resettlement impacts	INGO/RHD/PIC
Social Monitoring Report	Progress on land acquisition and resettlement activities and implementation of the gender action plan, indicators and baseline, variations in original plan	Semi-annually	RHD/PIC
Third Party Monitoring Report	Progress on land acquisition and resettlement activities, affected persons' satisfaction with process, compliance with ADB's SPS, recommended corrective actions	Semi-annually	External Monitor

²⁷ Project completion report format is available at <http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar>

Type of Report	Content	Frequency	Responsibility
Resettlement Completion Report	Overall narrative of the land acquisition and resettlement process, outputs and outcomes of indicators from baseline, key variations/changes, lessons learned	Once	RHD/PIC
Resettlement Evaluation Report	Overall assessment of the land acquisition and resettlement process, compliance with ADB's SPS, indicators achievement when compared to baseline, lessons learned	Once	External Monitor
Environmental Monitoring Report	Progress on civil works, implementation of the EMP and EMoP, and findings from monitoring activities	Annually	RHD
Quarterly Progress Report	Format consistent with ADB's project performance reporting system, including implementation of maintenance activities such as reduction to maintenance backlog. Short table-format progress report on the gender action plan will also be included.	Quarterly	RHD
Consolidated Annual Report	To include (i) progress achieved by output as measured through the indicator's performance targets, (ii) key implementation issues and solutions, (iii) updated procurement plan, and (iv) updated implementation plan for the next 12 months	Annual	RHD
Audited Financial Statement	Project financial reports prepared and audited in accordance with recognized good practice	Annual	RHD
Project Completion Report	Concise description and assessment of the project from identification to completion. To be submitted within 6 months of physical completion of the project.	Once	RHD

ADB = Asian Development Bank, EMP = environmental management plan, EMoP = environmental monitoring plan, INGO = implementing nongovernment organization, PIC = project implementation consultant, RHD = Roads and Highways Department, SPS = Safeguard Policy Statement.

Source: Asian Development Bank.

E. Stakeholder Communication Strategy

72. Various information will be provided to the public regarding the project, including scope, general progress status, beneficiaries, invitation for bids, and consultant recruitment notices. A website and communication platform will be developed for the project. It will contain information about the project design, its environmental and social impacts, the progress of civil works, and the implementation of the resettlement plan, environmental management plan, and gender action plan.

73. The information will be made available and updated through the official websites of the RHD. ADB provides the following communication strategy (Table 16).

Table 16: Documents for Disclosure

Project Documents	Means of Communication	Responsible Party	Frequency/Timing	Audience(s)
Project data sheet (PDS)	Asian Development Bank's (ADB) website	ADB	Initial PDS no later than 30 calendar days from concept approval, quarterly afterwards	General public
Design and monitoring framework (DMF)	ADB's website	ADB	Draft DMF after fact-finding mission	Project-affected people
Environmental assessment and review framework (EARF)	ADB's website	ADB	Before MRM; re-disclose as updated	ADB's website
Initial environmental examination	ADB's website	ADB	Before MRM; re-disclose as updated	
Resettlement planning documents, if any	ADB's website	ADB	Post fact-finding mission	General public, project-affected people in particular
Indigenous peoples planning documents, if any	ADB's website	ADB	Post fact-finding mission	General public, project-affected people in particular
Report and recommendation of the President	ADB's website	ADB	Within 2 weeks of Board approval of the loan	General public
Legal agreements	ADB's website	ADB	No later than 14 days from Board approval of the project	General public
Initial poverty and social assessment	ADB's website	ADB	Within 2 weeks of completion	General public, project-affected people in particular
Documents produced under technical assistance	ADB's website	ADB	Within 2 weeks of completion	General public
Project administration memorandum	ADB's website	ADB	After loan negotiations	General public
Social monitoring reports	ADB's website	ADB	Semi-annually	General public, project-affected people in particular
Environmental monitoring reports	ADB's website	ADB	Annually	General public
Major change in scope	ADB's website	ADB	Within 2 weeks of approval of the change	General public

Source: Asian Development Bank.

74. Once mobilized, the resettlement plan INGO will conduct an information and dissemination campaign to inform the affected persons about the land acquisition and resettlement timeline, entitlements, and contact information to submit grievances. This will be done through the distribution of simple one-page leaflets along the road corridor, the posting of signs with contact number for information about the resettlement process in strategic locations, loudspeaker mobile campaigns, and stakeholder consultation meetings. Moreover, the resettlement plan and entitlement matrix will be made available locally in *upazila* (subdistrict) and RHD offices. During implementation, the RHD, the INGO, and the PIC will conduct regular consultations with affected persons to ensure concerns (social and environmental) are addressed. The INGO will have offices on site and field staff to support these ongoing activities.

X. ANTICORRUPTION POLICY

75. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy of ADB relating to the project. 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/entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activities and may not be awarded any contracts under the project.

76. To support these efforts, relevant provisions are included in the loan and project agreements and the bidding documents for the project. The RHD has established the technical audit committee chaired by the chief engineer. Internal control, including technical audit, will be supported and strengthened under the capacity development component loan.

77. The government will publish pertinent information relating to the project on RHD websites, including business opportunities associated with the project and information in relation to procurement of goods, works, and consulting services.

XI. ACCOUNTABILITY MECHANISM

78. 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 a good faith effort 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.²⁸

79. The RHD will establish a grievance redress mechanism (GRM) to voice and resolve social and environmental concerns linked to the project and to ensure greater accountability of the project authorities toward all affected persons. The GRM should be in place no later than 3 months following the recruitment of the INGO or no later than 6 months after the loan effectiveness, whichever is earlier. This mechanism is not intended to bypass the government's own legal process, but is intended to provide a time-bound and transparent mechanism that is readily accessible to all segments of the affected people. The INGO and the RHD will try as much as possible to address grievances locally before these are submitted to the GRM. All costs involved in resolving the complaints (meetings, consultations, communication and reporting/information dissemination) will be borne by the project. The GRM committee structure is described in Table 17.

Table 17: Grievance Redress Mechanism Committee Structure

Level	Members of the Grievance Redress Committee at Different Levels
Project level	Representative of chief engineer, RHD (convenor) Additional project director, SASEC Phase 2 project (member) PIC resettlement specialist
Community level at Union Parishad/ Municipality	Project manager, SASEC Phase 2 project (convenor) Deputy project manager, SASEC Phase 2 project (member) Representative of the resettlement plan INGO (member secretary) Representative of concerned area (e.g., mayor, authorized councilor, union parishad chairman or authorized union parishad member) (member) Representative of the affected people: member woman representative of affected people in case of women aggrieved persons (member)

INGO = implementing nongovernment organization, PIC = project implementation consultant, PIU = project implementation unit, RHD = Roads and Highways Department, SASEC = South Asia Subregional Economic Cooperation.

Source: Roads and Highways Department.

80. For environment safeguard-related grievances, there will be only one grievance redress committee at the community level. Representatives of the Department of Environment and the Forest Department will also be members of the grievance redress committee.

81. The RHD will widely publicize the existence of this mechanism to ensure that stakeholders are aware that a venue is available to address concerns or grievances relating to fraud, corruption, abuse, and any other aspects of project implementation.

²⁸ For further information, see <http://www.adb.org/Accountability-Mechanism/default.asp>.

XII. RECORD OF CHANGES TO THE FACILITY ADMINISTRATION MANUAL

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

SUMMARY OF DESIGN APPROACH AND TECHNICAL STANDARDS

A. Introduction

1. The South Asia Subregional Economic Cooperation Dhaka–Northwest Corridor Road Project, Phase 2 will improve the 190-kilometer (km) national highway corridor from Elenga to Rangpur road into a four-lane highway with a separate lane for slow-moving vehicles on both sides of the road. The improvements include major road safety features such as flyovers, overpass for through traffic, four-way junction, pedestrian crossing, railway overpass, and various safety measures at black spots. The project will also improve the operational efficiency of the Roads and Highways Department (RHD) by supporting the RHD's Road Research and Training Center and introducing the road operation unit to ensure road safety and overloading control along the northwest corridor.

2. The road sections to be improved were constructed with 50–60 millimeter (mm) dense bituminous wearing course surfacing with 130–160 mm bituminous base coarse over unstable crushed stone base, which have deteriorated (65% good and 35% poor or cracked, as of 2016) and do not satisfy international standards in alignment, cross section, and pavement structure. The suggested improvements are full reconstruction following the current alignment, including widening and correcting substandard curves and construction of flyovers to avoid densely inhabited market places.

3. As required by the terms of reference for the Asian Development Bank-financed Subregional Transport Project Preparatory Facility, a project preparatory technical assistance loan, the consultant conducted the feasibility study and prepared a detailed design for the project road in line with international standards and procedures but largely followed the RHD geometric design standards and guidelines for bridge design for cross section parameters of roads and structural configurations²⁹. The principal standards adopted are the RHD Geometric Design Standards Manual (revised) 2005, the Bangladesh Road Transport Authority (BRTA) Traffic Signs Manual 2004, and the American Association of State Highway and Transportation Officials (AASHTO) Geometric Design of Highways and Streets 2004.

4. Traffic counts were taken during the study, considering normal traffic growth rates, generated traffic including corridor traffic in the South Asian Association for Regional Cooperation area, and projections developed for the 30-year project evaluation period to determine physical capacity requirements in terms of number and width of lanes for motorized and non-motorized traffic and intersection layouts. Design speed of 80 km per hour was adopted for the horizontal and vertical alignments design.

5. In the feasibility and detailed design study, cross sections were developed from traffic projections for motorized and non-motorized traffic and the terrain. The cross section consists of carriageway width of 7.3 meters with a verge (soft shoulder) of 1.0 meter for each lane in accordance with the RHD's geometric design standard. The width for slow-moving vehicular traffic (SMVT) lane is 3.6–4.0 meters with a verge of 1.0 meter and with horizontal separation of 3.0 meters from the main carriageway. The normal cross fall of the carriageway is 3% with a steeper cross fall of 5% across the verge. This is in accordance with the recommendations of the

²⁹ ADB. 2010. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the People's Republic of Bangladesh for Subregional Transport Project Preparatory Facility*. Manila (Loan 2688-BAN); ADB. 2015. *Report and Recommendation of the President to the Board of Directors: Proposed Loan for Additional Financing to the People's Republic of Bangladesh for Subregional Transport Project Preparatory Facility*. Manila (Loan 3295-BAN).

Overseas Road Note No. 6 (Transport Research Laboratory) for the heavy rainfall encountered in the project area.

B. Pavement

6. The pavement design for this project will be based on road condition survey, traffic analysis, axle-load surveys and projections (for structural capacity), geotechnical and pavement investigation, weather impact, subgrade strength assessment and investigation into the sources of construction materials, in accordance with accepted international standards and procedures for a 20-year life, with provision for overlays (40 mm asphalt concrete) during or at the end of 10 years to cover the serviceability loss and extend the life to 20 years while maintaining international roughness index at the recommended level. The pavement structure will consist typically of sand subgrade (300 mm); an improved subgrade (300 mm), a granular sub-base of brick aggregate (250 mm), a base of stone aggregate (200 mm type I, 150 mm type II), and asphaltic concrete surfacing (bituminous base course 80 mm, binder course 60 mm, and wearing course 50 mm). Roughness values for the completed pavements, expressed in international roughness index terms, should be 0–3.9. The design procedures of the AASHTO empirical design method and further checking using a mechanistic design method (CIRCLY) were followed to conform with the pavement thickness. However, it is recommended to consider (i) the importance of utilizing recycled materials, (ii) provision of effective drainage, (iii) stabilized base and sub-base, and (iv) use of rubberized or modified bituminous binders.

C. Flyovers, Bridges and Drainage Structures

7. The structure design in accordance with AASHTO Load and Resistance Factor Design standards, AASHTO HS20-44 live loading, will be adopted and a recurrence period of 20 years will be considered for drainage structures. Improvements of structures include (i) replacement of bridges/culvert decks, and widening of structures per new road section; (ii) reconstruction of structures that must be replaced because of structural and hydrological inadequacy; and (iii) construction of new structures on realigned sections. An adequate retaining wall will be considered to avoid land acquisition and to keep at-grade traffic flow mostly in the approaches of structures (flyovers, rail over bridges, bridges, etc.). It is recommended to adopt technical due diligence for climate-resilient design aspects as necessary during project implementation, such as adequate freeboard and cross drainage structure, i.e., equalizer and adequate slope protective works.

PROCUREMENT PLAN

Basic Data

Project Name: South Asia Subregional Economic Cooperation Dhaka-Northwest Corridor Road Project, Phase 2	
Project Number: 40540-016	Approval Number:
Country: Bangladesh	Executing Agency: Roads and Highways Department
Project Procurement Classification: Category B	Implementing Agency: N/A
Project Procurement Risk: Moderate	
Project Financing Amount: US\$ 1,672,600,000 ADB Financing: US\$ 1,200,000,000 Cofinancing (ADB Administered): Non-ADB Financing: US\$ 472,600,000	Project Closing Date: 31 August 2027
Date of First Procurement Plan: 20 June 2016	Date of this Procurement Plan: 20 June 2016

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

1. Procurement and Consulting Methods and Thresholds

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
National Competitive Bidding for Goods	Between US\$ 100,000 and US\$ 1,999,999	
Shopping for Goods	Up to US\$ 99,999	
International Competitive Bidding for Works	US\$ 15,000,000 and Above	

Consulting Services	
Method	Comments
Quality- and Cost-Based Selection for Consulting Firm	90:10
Individual Consultants Selection for Individual Consultant	

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

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
GP-01	Supply of New Vehicles (Jeep)	1,400,000.00	NCB	Prior	1S1E	Q2 / 2017	Prequalification of Bidders: N Domestic Preference Applicable: N Advance Contracting: Y Bidding Document: Goods

MP-1	<p>Elenga Intersection to East Roundabout of Jamuna Bridge</p> <p>Lot 1: WP-05 Elenga Intersection to East Roundabout of Bangabandhu Bridge (13.6 KM)</p> <p>Lot 2: WP-06 West roundabout of Bangabandhu Bridge to Hatikumrul (19.8 KM)</p>	<p>164,410,000.00</p> <p>80,160,000.00</p> <p>84,250,000.00</p>	ICB	Prior	1S2E	Q2 / 2017	<p>Prequalification of Bidders: N</p> <p>Domestic Preference Applicable: N</p> <p>Advance Contracting: Y</p> <p>Bidding Document: Large Works</p>
MP-2	<p>Mirzapur bazar to Banani roundabout</p> <p>Lot 1: WP-07 Hatikumrul to Mirzapur Bazar (28.3 KM)</p> <p>Lot 2: WP-08 Mirzapur bazaar to Banani roundabout (22.5 km)</p> <p>Lot 3: WP-09 Banani roundabout to Makamtala (25.3 km)</p>	<p>259,540,000.00</p> <p>106,790,000.00</p> <p>66,300,000.00</p> <p>86,450,000.00</p>	ICB	Prior	1S2E	Q2 / 2017	<p>Prequalification of Bidders: N</p> <p>Domestic Preference Applicable: N</p> <p>Advance Contracting: Y</p> <p>Bidding Document: Large Works</p>
MP-3	<p>Mokamtala to Polashbari UZ HQ</p> <p>Lot 1: WP-10 Mokamtala to Polashbari UZ HQ (29.9 km)</p> <p>Lot 2: WP-11 Polashbari UZ HQ to Borodarga bus stand (27.2 km)</p> <p>Lot 3: WP-12 Borodarga bus stand to Rangpur Parkermore (23.8 km)</p>	<p>256,100,000.00</p> <p>112,080,000.00</p> <p>75,730,000.00</p> <p>68,290,000.00</p>	ICB	Prior	1S2E	Q2 / 2017	<p>Prequalification of Bidders: N</p> <p>Domestic Preference Applicable: N</p> <p>Advance Contracting: Y</p> <p>Bidding Document: Large Works</p>

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

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
001	Project Implementation Consultants	47,680,000.00	QCBS	Prior	Q3 / 2017	FTP	Assignment: International Quality-Cost Ratio: 90:10 Advance Contracting: Y Comments: all information is tentative

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

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
GP-02	Supply of new vehicles (Pickup)	550,000.00	1	NCB	Prior	1S1E	Q3 / 2017	Prequalification of Bidders: N Domestic Preference Applicable: N Advanced Contracting: Y Bidding Document: Goods
GP-03	Supply of new vehicles (mini-bus)	33,000.00	1	SHOPPING	Prior		Q3 / 2017	Advanced Contracting: Y
GP-04	Supply of new vehicles (motorcycles)	70,000.00	1	SHOPPING	Prior		Q3 / 2017	Advanced Contracting: Y
GP-05	Office Equipment (PD office)	19,800.00	1	SHOPPING	Prior		Q3 / 2017	Advanced Contracting: Y
GP-06	Office Equipment (PM-1 to PM-8)	89,300.00	1	SHOPPING	Prior		Q3 / 2017	Advanced Contracting: Y
GP-07	Computers and other accessories (PD office)	28,400.00	1	SHOPPING	Prior		Q3 / 2017	Advanced Contracting: Y

GP-08/09	Computers and other accessories (PM-1 to PM-8)	58,900.00	1	SHOPPING	Prior		Q3 / 2017	Advanced Contracting: Y
GP-10	Office Furniture (PD office)	18,600.00	1	SHOPPING	Prior		Q3 / 2017	Advanced Contracting: Y
GP-11/12	Office Furniture (PM-1 to PM-8)	84,600.00	1	SHOPPING	Prior		Q3 / 2017	Advanced Contracting: Y
GP-13	Telephone Equipment	3,600.00	1	SHOPPING	Prior		Q3 / 2017	Advanced Contracting: Y

Consulting Services								
Package Number	General Description	Estimated Value	Number of Contracts	Recruitment Method	Review (Prior/Post)	Advertisement Date (quarter/year)	Type of Proposal	Comments
None								

B. Indicative List of Packages Required Under the Project

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
WP-13	Hatikumrul Interchange Improvement	31,690,000.00	1	ICB	Prior	1S2E	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Large Works
WP-14	Institutional Development of RHD	12,670,000.00	1	ICB	Prior	1S2E	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Large Works
WP-15	Establishment of Road Operations Units	17,330,000.00	1	ICB	Prior	1S2E	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Large Works

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

C. Non-ADB Financing

The following table lists goods, works and consulting services contracts over the life of the project, financed by Non-ADB sources.

Goods and Works				
General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Procurement Method	Comments
None				

Consulting Services				
General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Recruitment Method	Comments
NGO Services	1,380,000.00	1	QCBS	GoB Fund; Contract award, Q4 2016

D. List of Awarded, Ongoing, and Completed Contracts

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 (\$ million)	Awarded Contract Value (\$ million)	Procurement Method	Advertisement Date (Quarter/Year)	Date of ADB Approval of Contract Award	Comments
SASEC-RC P/ICB/W-01-03	Improvement of Joydevpur–Chandra–Tangail–Elenga Road (N4) to a 4-Lane Highway						
WP-01	Vogra Bazaar intersection to Kaliakoir bypass intersection (18.9 km)	66,100,000.00	89.57	ICB	Q3/2014	Q2/2015	Procured under Loan 2949-BAN
WP-02	Kaliakoir bypass to Dullamari road (18.00 km)	52,800,000.00	81.94	ICB	Q3/2014	Q2/2015	Procured under Loan 2949-BAN
WP-03	Dullamari road to Tangail (22.40 km)	51,500,000.00	82.48	ICB	Q3/2014	Q2/2015	Procured under Loan 2949-BAN

Consulting Services							
Package Number	General Description	Estimated Value (\$ million)	Awarded Contract Value (\$ million)	Procurement Method	Advertisement Date (Quarter/Year)	Date of ADB Approval of Contract Award	Comments
PIC	Project Implementation Consultants	13,000,000.00	12.74	QCBS	Q3/2012	4 December 2013	Recruited under Loan 2949-BAN

2. Completed Contracts

Goods and Works							
Package Number	General Description	Estimated Value (\$ million)	Awarded Contract Value (\$ million)	Procurement Method	Advertisement Date	Date of ADB Approval of Contract Award	Comments
NONE							

Consulting Services							
Package Number	General Description	Estimated Value (\$ million)	Awarded Contract Value (\$ million)	Procurement Method	Advertisement Date	Date of ADB Approval of Contract Award	Comments
NONE							

E. National Competitive Bidding

A. Regulation and Reference Documents

1. The procedures to be followed for national competitive bidding shall be those set forth for the National Open Tendering Method in *The Public Procurement Rules, 2008* (as updated and pursuant to *The Public Procurement Act, 2006* issued by the Government of Bangladesh) with the clarifications and modifications described in the following paragraphs required for compliance with the provisions of the Procurement Guidelines.

B. Procurement Procedures

1. Eligibility

2. The eligibility of bidders shall be as defined under section I of the Procurement Guidelines; accordingly, no bidder or potential bidder should be declared ineligible for reasons other than those provided in section I of the Guidelines, **as amended from time to time.**

2. Advertising

3. 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.

3. Location of Bid Submission

4. Submission of bids to 'primary' and 'secondary' locations, or 'multiple droppings' of bids, shall not be required or allowed. Advertisements and bidding documents shall specify only one location for delivery of bids.

4. Bid Price as Percentage of Estimate

5. Bids shall not be invited on the basis of percentage above or below the estimated cost, and contract award shall be based on the lowest evaluated bid price of responsive bid from eligible and qualified bidder.

5. Lottery

6. A lottery system shall not be used to determine a successful bidder, including for the purpose of resolving deadlocks.

6. Rejection of All Bids and Rebidding

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

C. Bidding Documents

7. Anti-Corruption

8. Definitions of corrupt, fraudulent, collusive and coercive practices shall reflect the latest ADB Board-approved Anti-Corruption Policy definitions of these terms and related additional provisions (such as conflict of interest, etc.).

8. Qualification Requirements

9. Qualification criteria and specific requirements must be explicitly stated in the bidding documents and applied consistently during bid evaluation.

9. Rejection of Bids

10. A bid shall not be rejected on the grounds that its bid price is not within a percentage range above or below the contract estimate.

10. ADB Policy Clauses

11. 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.

12. 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.

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

14. No preference of any kind shall be given to domestic bidders for works.

OUTLINE TERMS OF REFERENCE FOR PROJECT IMPLEMENTATION CONSULTANCY SERVICES

A. Background

1. The Government of the People's Republic of Bangladesh intends to apply for a loan from the Asian Development Bank to partly finance the South Asia Subregional Economic Cooperation (SASEC) Dhaka–Northwest Corridor Road Project, Phase 2. The Roads and Highways Department (RHD) of the Ministry of Road Transport and Bridges (MRTB) will implement the project. The scope of civil works includes the improvement of the Elenga–Hatikumrul–Rangpur Road to a four-lane highway with slow-moving vehicular traffic (SMVT) lane on both sides (as shown in Appendix 1). A team of project implementation consultants (PIC) will be engaged to assist RHD.

2. The Road Transport and Highways Division, under the MRTB, is the oversight body and the RHD is the executing agency (the client). The consultant will also coordinate with other concerned government agencies and local authorities, with the assistance of the RHD, for carrying out selected activities of the assignment. The RHD will establish a project implementation unit (PIU) to implement the project.

B. Objective and Scope

3. **Objective.** The main objectives are to (i) ensure high standards of quality assurance in the execution of works and completion of work within the stipulated time limit; (ii) comprehensive supervision of project implementation activities carried out by the contractor(s) to ensure complete compliance with the drawings, technical specifications, and various stipulations in the contract documents; and (iii) assist the RHD in developing a road operation scheme, including the establishment of the Road Research and Training Center (RRTC) at the RHD headquarters and road operation units (ROU) on the corridor of the Dhaka–Elenga–Hatikumrul–Rangpur Road to oversee road maintenance, overloading control, and road safety.

4. The project will include the following packages of civil works:

Civil Works Package Details	Number of Packages	Remarks
Improvement of Elenga–Hatikumrul–Rangpur Road (190.40 km)	8	Civil works for road projects
Improvement of Hatikumrul Interchange	1	
Office building, facilities, and equipment of the Road Research and Training Center	1	Contracts for institutional strengthening/development of the Roads and Highways Department
Office building, facilities, and equipment of road operation units	1	

5. The scope of civil works for road projects normally involves three periods:

1	Construction period	36 months
2	Defect liability period	12 months
3	Performance-based maintenance (PBM) period	Six years after the defect liability period. PBM will start after the defect liability period during which each road package will be under the maintenance of the same contractor who has constructed that road package. The contractor will be liable for performance of the works (criteria will be specified in the tender document/contract document) for 6 years under the contract agreement of work. The performance-based maintenance contract (for 6 years) will be a part of work packages and specified in tender documents and contract agreements.

6. The consulting services involve the following two tasks during the construction and defect liability periods.

7. **Task 1: Construction supervision of road works and inspection of road maintenance.** The consultant will (i) review and make modifications as necessary to the detailed design for the project road already prepared by the technical assistance (TA) consultant of the Subregional Transport Project Preparatory Facility (STPPF)³⁰; (ii) prepare the detailed design for the improvement of the Hatikumrul Interchange; (iii) provide procurement support; (iv) provide construction supervision to civil works; and (v) provide other support upon the RHD's request. In addition to these services, the consultant will undertake maintenance quality checks for all project roads in relation to the technical, contractual, and financial aspects of project implementation. The consultant shall provide to the RHD an assessment report on the quality of the completed maintenance works.

8. **Task 2: Road Research and Training Center (RRTC).** The RHD would like to establish the RRTC under the RHD headquarters with the functions of (i) road asset management, (ii) road safety, (iii) overloading control, (iv) quality control, and (v) research and training. Road operation units along the subregional corridors will practice life-cycle road operations with special emphasis on road asset management, road safety, and overload control. The consultant will (i) assist the RHD in reviewing and finalizing the business models (operation plan and staffing plan) of the RRTC and ROU developed under the project Loan 2949-BAN: South Asia Subregional Economic Cooperation Road Connectivity Project; (ii) prepare design and bidding documents for office buildings, facilities, and equipment, and provide procurement support; (iii) assist the RHD in establishing the RRTC and ROU, and (iv) develop project management tools to assist the ROU in managing the performance-based maintenance contracts.

C. Detailed Tasks of the Assignment

9. The consultants will carry out the following tasks under the project.

Task 1: Construction supervision of road works

a. Review and confirmation of detailed design

- (i) Collect and analyze data for the project area and the detailed design already prepared by the TA consultant of the STPPF in consultation with the RHD.
- (ii) Assess the surrounding area and check the drainage patterns, design provisions, proposed structures, i.e., bridges, culverts, SMVT crossing points, flyover, overpasses, pavement, etc., as already prepared/proposed by the design consultant, and develop a detailed design for proposed structures or modify the existing detailed design, if required, in consultation with the RHD.
- (iii) Conduct field visits to the entire length of the project road to assess/check the locations of utility service lines that are buried or on the surface of the project road and to identify the potential impacts of the project on road safety.
- (iv) Prepare relevant design reports and mapping for utility services with analyses, risk assessments, findings, and safety recommendations acceptable to the client.

³⁰ ADB. 2010. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the People's Republic of Bangladesh for Subregional Transport Project Preparatory Facility*. Manila (Loan 2688-BAN); ADB. 2015. *Report and Recommendation of the President to the Board of Directors: Proposed Loan for Additional Financing to the People's Republic of Bangladesh for Subregional Transport Project Preparatory Facility*. Manila (Loan 3295-BAN).

- (v) Investigate and test the existing subgrade and foundation material strength of pavements and structures.
- (vi) Determine and design the appropriate pavement structure for roadways, bazaar areas, intersection points, storage areas, and parking areas, and, in consultation with the RHD, modify the design of pavements to incorporate the rigid pavement, if required.
- (vii) Prepare completed detailed drawings or modify detailed design drawings and tender documents that are suitable for procurement in accordance with the ADB Procurement Guidelines (2015, as amended for time to time) and ADB Standard Bidding Documents. Specify clauses in construction contracts prohibiting child labor and obligate the contractor to take measures to prevent HIV/AIDS.

b. Preparation of detailed design for the Hatikumrul Interchange

- (i) Assess the existing design provision for the Hatikumrul Interchange already designed by the TA consultant of the STPPF, if needed.
- (ii) Analyze the situation for further upgradation, considering existing and projected future traffic and intersection capacity for uninterrupted traffic flow.
- (iii) Develop or modify the design to the appropriate standard, addressing all the issues.
- (iv) Prepare a detailed design report for the Hatikumrul Interchange, including plan and profile, civil works drawing, structural designs, cost estimate, construction drawings, land acquisition and resettlement plan, initial environmental examination (IEE)/ environment impact assessment (EIA) reports, rate analysis, detailed bill of quantities, and bid documents for execution of civil works in accordance with the ADB Procurement Guidelines with necessary procurement assistance.

c. Procurement support

- (i) Finalize or modify the bidding documents already prepared by the design consultant (TA consultant) with necessary incorporation of changes as per the modified or final detailed design using ADB Procurement Guidelines.
- (ii) Prepare bidding documents of the design task for which they are assigned for the execution of civil works in accordance with ADB Procurement Guidelines.
- (iii) Provide support services, which will involve assisting the RHD to respond to questions from bidders and to issue addenda when required. Services during the bidding period will also include arranging a pre-bid meeting, site visit, and the public opening of bids.
- (iv) Develop project-specific bid evaluation criteria consistent with ADB guidelines and procedures that will be used by the evaluation committee in evaluating the submitted bids. The technical subcommittee reporting to the evaluation committee will consist of an integrated team of technical specialists from the RHD and the consultant.
- (v) Any non-compliance or deviation from the bidding documents, as issued, will be noted, and where appropriate, clarification from bidders will be requested.
- (vi) Upon completion of the bid evaluation, the evaluation committee will issue a Bid Evaluation Report with recommendations for award of the contract(s). The consultant will assist the RHD in finalizing the contract. This assistance will include the verification of performance bonds and guarantees.

d. Construction supervision

- (i) As the engineer, the consultant will administer the construction contracts following the Multilateral Development Bank (MDB) Harmonized Edition, prepared by the International Federation of Consulting Engineers (FIDIC) or MDB FIDIC contract

- conditions, further updated to accommodate the operations and maintenance component.
- (ii) Nominate an engineer's representative who will be a full-time resident in the area.
 - (iii) Make all necessary measurements and control the quality of works, and make all engineering decisions required for the successful and timely implementation of the construction contracts (all civil works packages, including civil works contracts for road works and contracts for institutional strengthening/development of the RHD) and have the powers defined as those of the engineer, with a few exceptions for which the supervision consultant will have to seek prior approval of the employer.
 - (iv) Review and cross-check to ensure the work schedule is compatible with the progress of land acquisition and resettlement, environmental clearance, and other associated safeguard implementation.
 - (v) Ensure that all works comply with the approved engineering designs and technical specifications, agreed schedule and budget, terms and conditions of the contracts, standard engineering practices, and the ADB safeguards policy.
 - (vi) Provide general guidance and issue instructions to contractors.
 - (vii) Make engineering decisions in consultation with the project director and ADB's project management team.
 - (viii) Advise the project director on work progress, quality control, and implementation issues, if any.
 - (ix) Seek clarification about disputed issues, anomalies, errors or risks that could affect the project objectives, and make the appropriate recommendations and/or take the necessary actions to remedy them.
 - (x) Ensure that the construction method proposed by the contractor for carrying out the works is satisfactory.
 - (xi) Inspect the contractor's construction equipment, results of materials and soil tests, safety of the works property and personnel, and schedule of mitigation measures for adverse environmental impacts. Notify contractors to remedy works and materials that fail to comply with specifications.
 - (xii) Review the design of culverts, underpasses, flyovers, bridges, and foot-over bridges and ensure that the methods of construction comply with safety measures.
 - (xiii) Monitor and supervise (a) the progress of contractors' works vis-à-vis contract schedule, and (b) the progress of contractors' works vis-à-vis applicable technical specifications and design.
 - (xiv) Check that "as built" drawings are prepared by the contractors for all works as construction processes.
 - (xv) Ensure that road safety design requirements are implemented following the contract specifications.
 - (xvi) Develop the quality assurance system and quality control plan for provisions of asphalt concrete pavement.
 - (xvii) Establish procedures to verify contractor performance, report progress, and problems on time, including quality control reports, quality survey records, request for variation or change orders, and contractors' claims and invoices.
 - (xviii) Evaluate any proposed changes (e.g., time, scope and cost) by the contractor during the course of the project.
 - (xix) Review and certify work volume and process interim and final payments of the contractors. Ensure timely submission of contractors' interim payment certificates and release of payment.
 - (xx) Ensure project financial management procedures are in place and are strictly followed, specifically relating to payments, financial accounting, requests for time extension, and contractors' claims and invoices.

- (xxi) The supervision consultant will process interim and final payment certificates submitted by the contractors.
- (xxii) If so required by the employer, the supervision consultant will provide any of the following as additional services: (a) prepare reports, including technical appraisals, additional contract documentation, and/or review and comments on the contractor's proposals, as may be required for the successful completion of the project; and (b) provide any other specialist services as may be required from time to time.

e. Performance monitoring and safeguards implementation

- (i) Design and undertake project performance monitoring and evaluation of the project in accordance with ADB's Project Performance Management System Handbook.
- (ii) Review/prepare and update and monitor the implementation of the IEE report, environmental management plans (EMP) (contract specific), and the resettlement plan to fulfill the requirements of the ADB Safeguard Policy Statement (SPS).
- (iii) Monitor, facilitate, and, in some instances, implement other social and gender related activities, including on HIV/AIDS, human trafficking, and road safety awareness, for the communities and laborers along the road corridor.
- (iv) Ensure that the construction methods as proposed by the contractor for carrying out the works are satisfactory, with particular reference to the environmental management plan of the IEE report; requirements of the environmental clearance issued by the Department of Environment; the technical requirements of sound environmental standards on the basis of ADB SPS requirements; inspection of contractor's construction equipment; and the safety of the works, property, personnel, and general public. The schedule of mitigation measures for adverse environmental impacts to be monitored by the consultant will be provided.
- (v) Supervise and monitor the implementation of contract-specific environmental mitigation plan in case of unexpected environmental impacts. Coordinate with the project director and project monitoring consultant to recommend necessary mitigation measures to the Committee of Roads and ADB for implementation.
- (vi) Monitor, report, and provide guidance on the implementation of the resettlement plan to ensure compliance with the ADB policy on involuntary resettlement; prepare updates and addendum to the resettlement plan whenever necessary; participate as required in the grievance redress mechanism.
- (vii) Coordinate with local government agencies or specialized nongovernmental institutions working in HIV/AIDS, anti-trafficking, and road safety awareness campaigns to produce knowledge materials, which will be distributed and posted in high traffic areas in and around the land ports, and conduct awareness campaigns in major settlements along the concerned corridor.
- (viii) Monitor and conduct gender mainstreaming activities associated with the project.
- (ix) Monitor the status of the contractor's compliance with HIV/AIDS provisions, labor laws, international core labor standards (i.e., prohibition of child and forced labor), and the employment of the poor and affected persons, particularly women, in the civil works contracts.
- (x) Conduct road safety audits during and at the completion of construction.
- (xi) Support the RHD in the preparation of the semi-annual social monitoring reports.
- (xii) Prepare and issue the following reports, the format and content of which are to be acceptable to the employer: an inception report, a quality assurance manual, a brief monthly progress report, a detailed quarterly report, a detailed project completion report (including a road safety audit report), and a maintenance manual.

f. Independent inspection of road maintenance

- (i) Inspect the conformity and quality of the contractual documents. Checkups shall focus in particular on (a) the consistency of the contractual documents; (b) the existence of and compliance with relevant procedures on contractual documents, such as administrative orders, addendums, variation orders, etc.; and (c) the execution of works in accordance with the contractual basis.
- (ii) The task of independent inspection of road maintenance needs to be carried out up to the defects liability period. After this period, the project roads will be under the performance-based maintenance (PBM) contract, the cost of which will be borne by the Government of the People's Republic of Bangladesh budget through the concerned road divisions of the RHD. During the PBM period, if necessary, the client may appoint or engage a separate consultant from the government budget for road maintenance quality checks.
- (iii) Perform site visits in regular intervals as per consultation and agreement with the RHD and perform tests during which the auditor will, in particular, examine the following:
 - a. the reality and the quality of the setting out of works and its adherence to the drawings; the consistency between the approved drawings and the works actually carried out and the quantities accounted for in the interim payment certificates;
 - b. the quality of the works in conformity with the contract's technical specifications;
 - c. the project management documents, such as work register, including the list of equipment used daily; relevant measurement books; calculation notes and as-built drawings approved by the supervision team; minutes of site meetings; the topographical, geotechnical, and every other intermediary task's acceptance reports; progress reports of the supervising consultant; any other contractual documents and administrative orders; site correspondence, and all correspondences between the contractor, the supervising consultant, and the administration;
 - d. the site management aspects such as the quantity and efficiency of the topographical and geotechnical teams' deliveries, the laboratory testing, and also the adequacy and availability of equipment, etc.;
 - e. remaining works to be executed;
 - f. any pre-dispute situations that are likely to result in a claim from the contractor or a site shut down;
 - g. the checks and verifications to be performed by the auditor will be carried out using appropriate methods and techniques, including but not necessarily limited to site surveys, laboratory and site tests, measurements, photos and calculations to verify quantities on the basis of statements, and documents produced by the contractor and the supervising consultant; and
 - h. the auditor may recommend and execute further in-depth measures if deemed necessary.

Task 2: Establishment of the RRTC and ROU

- (i) The RRTC will support the institutional development of the RHD. The Bangladesh Road Research Laboratory and the RHD Training Centre for Quality Control, Research and Training for Human Resource Development will be merged to support the RHD's road sector development strategy as well as road operation scheme. The consultant will prepare the design of the RRTC office building, including landscape design, architectural design, and structural design, with necessary geotechnical

- investigation/survey in connection with the design and required facilities and equipment.
- (ii) Prepare detailed design report and operational plan for the RRTC, including plan and profile, civil works drawing, structural designs, cost estimate, construction drawings, land acquisition and resettlement plan, IEE/EIA reports, rate analysis, detailed bill of quantities, and bid documents for execution of civil works in accordance with ADB Procurement Guidelines with necessary procurement assistance.
 - (iii) The road operation unit will be established as the field offices of the RRTC. The ROU will be initially implemented along the Dhaka–Elenga–Hatikumrul–Rangpur road. The RRTC and ROU will pilot good practices on overloading control, road asset management, and road safety, with necessary safety operation and asset management plan to establish a well-maintained and safe corridor. The consultant will propose the necessary number of axle load control stations, design, required facilities and equipment, operation plan, other recommendations in relation to other agencies, and the necessary management and safety provisions to reduce the safety vulnerability.
 - (iv) Prepare and develop tools for the ROU for the effective management and operation of PBM contracts/periods while the same contractors will maintain the constructed roads.
 - (v) Assist the RHD in establishing the RRTC and ROU, and prepare and deliver required trainings.

D. Consultant's Inputs

10. The assignment will be carried out over a period of 60 months from the date of project commencement (expected by the end of 2017). The assignment will be implemented by a consulting firm. It is anticipated that about 887 person-months of inputs by international consultants and 2,497 person-months by national consultants, and 2,288 person-months of support staff will be required.

Required Experts

No.	Title	Relevant Experience and Qualification	Position	Person-Months
Key Expert (International)				
IC01	Team Leader/ Senior Highway Engineer	<ul style="list-style-type: none"> • Bachelor degree in civil engineering, post graduate degree preferred • Min. 20 years of professional experience • Min. 15 years in planning, preparation, design and construction of highway projects, at least 7 years as project team leader 	1	45
IC02	Senior Quality Control/ Material Engineer	<ul style="list-style-type: none"> • Bachelor degree in civil/mechanical/material engineering, post graduate degree preferred • Min. 15 years of professional experience • Min. 10 years of experience in quality control and materials testing 	4	160
IC03	Senior Pavement Engineer	<ul style="list-style-type: none"> • Bachelor degree in civil engineering, post graduate degree preferred • Min. 15 years of professional experience • Min. 10 years of experience in road pavement design and construction 	4	160
IC04	Senior Contract/Procurement Specialist	<ul style="list-style-type: none"> • Bachelor degree in engineering or construction science, post graduate degree preferred • Min. 15 years of professional experience 	1	24

No.	Title	Relevant Experience and Qualification	Position	Person-Months
		<ul style="list-style-type: none"> Min. 10 years of experience in preparation/management of construction contracts and procurements for international bidding 		
IC05	Senior Hydrologist/ River Training Engineer	<ul style="list-style-type: none"> Bachelor degree in civil engineering, post-graduate degree preferred Min.15 years of professional experiences Min.10 years of experience in hydraulic/hydrologic engineering and river training design and construction 	2	72
IC06	Senior Geotechnical Engineer	<ul style="list-style-type: none"> Bachelor degree in civil engineering, post-graduate degree preferred Min.15 years of professional experiences Min.10 years of experience in foundation design and geotechnical engineering 	1	24
IC07	Senior Road Safety Specialist	<ul style="list-style-type: none"> Bachelor degree in civil engineering, post graduate degree preferred Min. 15 years of professional experience Min. 10 years of experience in road safety design/audit 	2	30
IC08	Senior Bridge Engineer	<ul style="list-style-type: none"> Bachelor degree in civil engineering, post graduate degree preferred Min. 15 years of professional experience Min. 10 years of experience in bridge design and construction 	4	72
IC09	Senior Technical Compliance Expert	<ul style="list-style-type: none"> Bachelor degree in civil engineering/post graduate degree in other Discipline Min. 15 years of professional experience Min. 10 years of experience in preparation and implementation of project 	2	72
IC10	Senior Structural Engineer	<ul style="list-style-type: none"> Bachelor degree in civil engineering, post graduate degree preferred Min. 15 years of professional experience Min. 10 years of experience in road pavement and structure design 	4	120
IC11	Environment Specialist	<ul style="list-style-type: none"> Master degree in environmental engineering or environmental science, Min. 15 years of professional experience Min. 10 years of experience in environment impact assessment for road/infrastructure projects 	1	24
IC12	Resettlement Specialist	<ul style="list-style-type: none"> Bachelor degree in social science, post graduate degree preferred Min. 15 years of professional experience Min. 10 years of experience in social development and resettlement planning in Bangladesh preferably Preferably for road/infrastructure projects 	1	6
IC13	Asset Management Specialist	<ul style="list-style-type: none"> Bachelor degree in civil engineering or other relevant subject Min.15 years of professional experiences Min.10 years in as Asset Management Specialist. Preferably should have the knowledge of managing research and training centers. 	1	20
IC14	Axle load Control Specialist	<ul style="list-style-type: none"> Bachelor degree in civil engineering or other relevant subject 	1	24

No.	Title	Relevant Experience and Qualification	Position	Person-Months
		<ul style="list-style-type: none"> Min.15 years of professional experiences Min.10 years in design and operation of axle load control facilities and equipment, at least 5 years as Axle Load Control Specialist. 		
IC15	Senior Social Development Specialist	<ul style="list-style-type: none"> Bachelor degree in social science, post-graduate degree preferred Min.15 years of professional experiences Min.10 years of experience in social development and resettlement planning, preferably for road/infrastructure projects 	1	18
IC16	Operation and Management Specialist	<ul style="list-style-type: none"> Master degree in Civil Engineering Min.15 years of professional experiences Min. 3 years of experience in development of Operation and Management plan of Research and Training Institute 	1	10
Sub-Total			31	881
Key Expert (National)				
NC01	Deputy Team Leader/ Highway Engineer	<ul style="list-style-type: none"> Bachelor degree in civil engineering, post graduate degree preferred Min. 15 years of professional experience Min. 10 years in planning, preparation, design and construction of highway projects 	1	45
NC02	Pavement Engineer	<ul style="list-style-type: none"> Bachelor degree in civil or material engineering Min. 10 years of professional experience Min. 8 years in road pavement design, construction and maintenance 	4	160
NC03	Highway Engineer	<ul style="list-style-type: none"> Bachelor degree in civil engineering Min. 10 years of professional experience Min. 8 years in preparation, design and construction of highway projects 	4	160
NC04	Structural Engineer (Bridge)	<ul style="list-style-type: none"> Bachelor degree in civil engineering Min. 10 years of professional experience Min. 8 years in structure and bridge design 	4	144
NC05	Senior Architect	<ul style="list-style-type: none"> Bachelor degree in Architect, post graduate degree preferred Min. 15 years of professional experience Min. 10 years in planning, preparation and design of Building Preferably in preparation of plan and design of Research and Training Institute. 	1	6
NC06	Structural Engineer (Building)	<ul style="list-style-type: none"> Bachelor degree in Civil, post graduate degree preferred Min. 15 years of professional experience Min. 10 years in planning, preparation and design of Building Preferably in preparation of plan and design of Research and Training Institute. 	1	12
NC07	Resident Engineers	<ul style="list-style-type: none"> Bachelor degree in civil engineering, post graduate degree preferred Min. 15 years of professional experience Min. 8 years in Project Engineer/Project Manager in highway and infrastructure projects 	10	400
NC08	Quality and Materials Engineers (Road)	<ul style="list-style-type: none"> Bachelor degree in civil engineering Min. 10 years of professional experience 	9	324

No.	Title	Relevant Experience and Qualification	Position	Person-Months
		<ul style="list-style-type: none"> Min. 8 years of experience in quality control, materials testing and road construction 		
NC09	Quality and Materials Engineers (Building)	<ul style="list-style-type: none"> Bachelor degree in civil Engineering Min. 10 years of professional experience Min. 8 years of experience in quality control, materials testing and building construction 	1	30
NC10	Electrical Engineer	<ul style="list-style-type: none"> Bachelor degree in Electrical, post graduate degree preferred More than 7 year experience in planning, design of electrical works, construction and supervision of buildings 	1	6
NC11	Plumbing Engineer	<ul style="list-style-type: none"> Bachelor degree in Civil, post graduate degree preferred More than 7 year experience in planning, plumbing design, construction and supervision of buildings 	1	24
NC12	Junior Site Engineer	<ul style="list-style-type: none"> Bachelor degree in civil/material engineering Min. 1 years of professional experience 	9	324
NC13	Quantity Surveyors	<ul style="list-style-type: none"> Bachelor degree in engineering and construction science Min. 10 years of professional experience Min. 8 years in quantity survey, cost estimate and BOQ preparation 	10	360
NC14	Project Coordinator	<ul style="list-style-type: none"> Bachelor degree in engineering/other relevant subject Min. 15 years of professional experience Min. 5 years in Project Engineer/Project Coordinator 	3	120
NC15	Road Safety Engineer	<ul style="list-style-type: none"> Bachelor degree in civil engineering, post graduate degree preferred Min. 10 years of professional experience Min. 8 years of experience as road safety planning and design 	4	120
NC16	Environment Specialist	<ul style="list-style-type: none"> Bachelor degree in environmental engineering or environmental science Min. 10 years of professional experience Min. 5 years in environmental impact assessment for road infrastructure projects 	4	120
NC17	Asset Management Specialist	<ul style="list-style-type: none"> Bachelor degree in civil engineering or other relevant subject Min.10 years of professional experiences Min.5 years in as Asset Management Specialist. 	2	24
NC18	Social Development Specialist	<ul style="list-style-type: none"> Bachelor degree in social science, post graduate degree preferred Min. 10 years of professional experience Min. 5 years of experience in social development Preferably for road/infrastructure projects Experience in designing and conducting community awareness campaigns Experience in gender mainstreaming activities 	2	48

No.	Title	Relevant Experience and Qualification	Position	Person-Months
NC19	Resettlement Specialist	<ul style="list-style-type: none"> Bachelor degree in social science Min. 10 years of professional experience in implementing resettlement plans in Bangladesh Min. 5 years of experience in resettlement for road / infrastructure projects 	2	48
NC20	Risk Assessment Specialist (Utility Services)	<ul style="list-style-type: none"> Bachelor degree in civil engineering, post graduate degree preferred Min. 10 years of professional experience Min. 3 years of experience in road safety design/Utility Service mapping and risk assessment 	1	8
NC21	Contract/Procurement Specialist	<ul style="list-style-type: none"> Bachelor degree in engineering or construction science, post graduate degree preferred Min. 15 years of professional experience Min. 10 years of experience in preparation/management of construction contracts and procurements for international bidding 	1	16
Sub-Total			75	2499
Support Staff				
SS01	Topographic Surveyors	<ul style="list-style-type: none"> Diploma degree in civil engineering Min. 10 years of professional experience Min. 5 years of experience in road/highway/ bridge surveys 	8	204
SS 02	Site Manager	<ul style="list-style-type: none"> Diploma in civil Engineering Min. 10 years of professional experience Min. 5 years in site Manager/site supervisor 	4	192
SS 03	Work Supervisors	<ul style="list-style-type: none"> Diploma in civil Engineering/H.S.C Min. 8 years of professional experience Min. 5 years as Work Supervisor 	16	640
SS 04	CAD Technicians	<ul style="list-style-type: none"> Diploma in civil Engineering Min. 8 years of professional experience Min. 5 years as CAD technician 	8	288
SS 05	Laboratory Technicians	<ul style="list-style-type: none"> H.S.C in science background Min. 3 years of professional experience as a laboratory technician 	8	288
SS06	Assistant Laboratory Technicians	<ul style="list-style-type: none"> H.S.C in science background Min. 1 years of professional experience as a laboratory technician 	16	576
Sub-Total			60	2188

Note: 1) The key expert (International) for the positions IC01, IC02 (Lead Position), IC03 (Lead Position), IC04, IC06, IC07 (Lead Position), IC08 (Lead Position), IC09 (Lead Position), IC11, IC13, IC14 & IC16 will be evaluated for Technical Evaluation.

2) The key expert (National) for the positions NC01, NC03 (Lead Position), NC04 (Lead Position), NC05, NC07 (Lead Position), NC13 (Lead Position), NC20 & NC21 will be evaluated for Technical Evaluation.

3) IC01: Team Leader/ Senior Highway Engineer, IC02: Senior Quality Control/ Material Engineer (One position), IC03: Senior Pavement Engineer (One position), IC08: Senior Bridge Engineer (One position), IC16: Operation and Management Specialist and NC03: Highway Engineer (One position) must be from Lead Firm.

E. Output and Reporting Requirements

11. In the attendance sheet that should be provided along with the consultant invoice, the local site consultant personnel (consultant and staff) attendance sheet (especially for offices under

resident engineers) shall be countersigned by the authorized person determined by the client. However, the team leader of the consultant shall countersign the entire attendance (field and head office) sheet that will be an integral part of the consultant invoice.

12. The consultant will prepare and submit reports in a format and content agreed upon with the RHD and ADB. The project director may require the consultant to perform other tasks consistent with the above scope, including preparation of technical appraisals, additional contract documentation, and review of and comments on the contractor's proposals. The documentation and reporting requirements include but are not limited to the following:

- (i) Report and update the works implementation schedule, highlight any unforeseen delays, and propose timely corrective measures.
- (ii) Undertake project performance monitoring and evaluation following the project framework and ADB's Project Performance Management System Handbook and reporting up to project completion.
- (iii) Collect baseline survey data based on the indicators in the project's design and monitoring framework, and measure the indicators over time during the assignment period. Design a simple MS Excel or similar system for recording the baseline and periodic data.
- (iv) Develop and maintain a storage and retrieval system of records.
- (v) Document information supplied by the field teams, decisions made at meetings, progress on civil works, certified achievements and milestones, financial records, any deviations from or changes to the contract plan (scope, cost, materials time), correspondences, site diaries, test data and quality control reports, quality survey records, as-built drawings, and progress reports.

13. The specific reporting requirements under each task are as follows.

Task 1:

- (i) Design reports, including plan and profile, civil works drawing, structural designs, cost estimate, construction drawings, environment impact assessment, land acquisition and resettlement plan, rate analysis, detailed bill of quantities, bid documents
- (ii) Reports on HIV/AIDS, anti-trafficking, and road safety awareness campaigns, and gender mainstreaming activities
- (iii) Updates on IEEs, resettlement plans, and due diligence reports based on the detailed design, if required
- (iv) Monthly progress reports on the design and bidding progress, or as requested by the government and ADB
- (v) Inception report
- (vi) Monthly progress reports
- (vii) Quarterly progress reports
- (viii) Annual environmental monitoring reports
- (ix) Semi-annual social monitoring reports
- (x) Project performance monitoring reports
- (xi) Quality assurance manual
- (xii) Maintenance manuals
- (xiii) Inception report, describing procedure and approved standards for maintenance quality check
- (xiv) Site inspection report
- (xv) Quality check reports, including remedial measures if weakness is found

- (xvi) Monthly progress reports or as requested by the government and ADB
- (xvii) Project completion report, including a road safety audit report

Task 2:

- (i) Inception report
- (ii) Business models, including operation plan and staffing requirements
- (iii) Design reports, including plan and profile, civil works drawing, structural designs, cost estimate, construction drawings, environment impact assessment, land acquisition and resettlement plan, rate analysis, detailed bill of quantities, bid documents
- (iv) Updated IEEs, resettlement plan, and due diligence reports based on the detailed design if required
- (v) Monthly progress reports on the design and bidding progress, or as requested by the government and ADB
- (vi) Manual for research and training to support the RHD's development and maintenance strategy
- (vii) Manual for operation and management tools for performance-based maintenance
- (viii) Project completion report

F. Data, Local Services, Personnel, and Facilities to be Provided by the Client

- 14. The client will provide the consultant with the following:
 - (i) access to design reports prepared by the TA consultant of STPPF, data, records, and other information required to perform the assigned tasks;
 - (ii) counterpart staff and engineers to work with the consultant;
 - (iii) work permits and other documents as necessary for the consultant and each of the personnel;
 - (iv) assistance in obtaining the necessary visa for the personnel and, if appropriate, their eligible dependent;
 - (v) assistance in clearance through customs of any property required for the services and of the personal effects of the personnel and their eligible dependents; and
 - (vi) issuance to officials, agents, and representatives of the government all such instructions as may be necessary or appropriate for the prompt and effective implementation of the services.

- 15. The client through the civil works contracts will provide the consultant with the following:
 - (i) office space at site (including utilities, office equipment, and furnishings) for international and national experts, and for other as-needed field/technical support staff;
 - (ii) housing accommodation at site for national consultants and field staffs;
 - (iii) vehicles for site supervision;
 - (iv) vehicles for all international consultants;
 - (v) vehicles for all national consultants and appropriate field staffs;
 - (vi) motorbikes for the work supervisor;
 - (vii) fully equipped and furnished testing laboratory; and
 - (viii) necessary survey equipment (total station and GPS).