

Project Administration Manual

Project Number: 43574-025
Loan and/or Grant Number(s): LXXXX
March 2016

India: Uttar Pradesh Major District Roads
Improvement Project

ABBREVIATIONS

ADB	=	Asian Development Bank
AFS	=	audited financial statements
CAAA	=	Controller of Aid Accounts and Audit
CRN	=	core road network
CSC	=	construction supervision consultants
DMF	=	design and monitoring framework
DPR	=	detailed project report
EIA	=	environmental impact assessment
EMP	=	environmental management plan
ESMS	=	environmental and social management system
GACAP	=	governance and anticorruption action plan
GDP	=	gross domestic product
GOUP	=	Government of Uttar Pradesh
ICB	=	international competitive bidding
IEE	=	initial environmental examination
IDC	=	interest during construction
IPP	=	indigenous people plan
LAR	=	land acquisition and resettlement
LIBOR	=	London interbank offered rate
MDR	=	major district road
MORTH	=	Ministry of Road Transport and Highways
NCB	=	national competitive bidding
NGOs	=	nongovernment organizations
PAI	=	project administration instructions
PAM	=	project administration manual
PIU	=	project implementation unit
PPP	=	public private partnership
PPTA	=	project preparatory technical assistance
QCBS	=	quality- and cost based selection
RP	=	resettlement plan
RRP	=	report and recommendation of the President to the Board
SBD	=	standard bidding documents
SH	=	state highway
SOE	=	statement of expenditure
SPS	=	Safeguard Policy Statement
SPRSS	=	summary poverty reduction and social strategy
STI	=	sexually-transmitted infections
TOR	=	terms of reference
UPPWD	=	Public Works Department of the Government of Uttar Pradesh

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Project Administration Manual Purpose and Process

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

I. PROJECT DESCRIPTION

1. **Project Location, Description, and Rationale.** Uttar Pradesh is India's most populous state with population of about 200 million. While its population is around 16% of the population of India, it has only about 7% of the country's geographical area. Uttar Pradesh also has the largest rural population in the country, with agriculture being the main activity contributing 46% of state income. Uttar Pradesh is amongst the poorer states in the country, and though it contributes around 8.5% to India's total gross domestic product, the per capita income is less than half the national average. Almost 80% of the population lives in rural areas, and combined with the dispersed nature of industrial development, this means that the road network is a critical element of the economic infrastructure. The total road network of Uttar Pradesh is approximately 300,000 kilometers (km), and the road density per 100,000 population of Uttar Pradesh is 104 km against a national average of 142 km. In terms of condition, about 40% of the state's road network is rated as "poor" to "very poor", and only 13% is rated as "good". About 58% of this network is of road width less than 5.5 meters (m) and barely 5% has greater than 2-lane width. Finally, if appropriate road capacity metrics are used, only 35% of National Highways and 60% of state highways have comfortable capacity utilization, while the rest are in need of capacity augmentation, such as widening.¹

2. To address the problems of road connectivity and capacity in the state, Public Works Department, Government of Uttar Pradesh (UPPWD) has prepared a "Strategic Core Road Network Master Plan" for Uttar Pradesh. The scope of this study, prepared by reputed national consulting firms, included (i) preparation of vision statement and strategic master plan; (ii) identification of Core Road Network (CRN), and requirements for upgrading it; (iii) preparation of requirements for augmentation and improvement of state highways, Major District Roads (MDRs), and Other District Roads (ODRs); (iv) planning connectivity to all habitations by all-weather roads; and (v) preparation of implementation and financing plan for achieving the above targets, including assessment of potential participation of private sector. The CRN study of UPPWD estimates a total investment of \$16 billion spread in four phases from 2014 to 2031 (the horizon year for the plan). This investment rate of \$1 billion every year is proposed to be mainly met through a combination of government budget (about 60%), PPP (about 30%), and multilateral borrowing of about 10%.

3. The Government of Uttar Pradesh (GOUP) has requested ADB's financial assistance for addressing improvements to MDRs, which will be ADB's first road sector assistance to Uttar Pradesh.² MDRs form the key linkage between rural roads and state highways, connect peri-urban and urban areas, and have to be essentially developed to complete state road connectivity. Developing this network will foster inclusiveness by enabling larger segments of the state's population to better access markets and basic services. The project constitutes (i) rehabilitating and upgrading about 430 km of MDRs; (ii) improving road maintenance and asset management; and (iii) conducting a road safety audit on MDRs in the CRN, and implementing remedial measures. While detailed project reports (DPRs) have been prepared by UPPWD's consultants, ADB has provided a project preparatory technical assistance (PPTA) to review and supplement the DPRs.³

¹ Sources: (i) Census of India, 2011; (ii) United Nations Development Programme – Uttar Pradesh Economic and Human Development Indicators; (iii) Public Works Department of the Government of Uttar Pradesh - "Strategic Core Road Network Master Plan."

² In parallel, GOUP is also availing a loan from the World Bank, for improving state highways: Uttar Pradesh Core Road Network Development Project, for \$400 million.

³ TA-8427 IND: Uttar Pradesh Major District Road Investment Program (43574-022) for \$700,000.

4. **Impact and Outcome.** The impact will be improved mobility and accessibility improved, aligned with the Twelfth Five-Year Plan of the Government of India.⁴ The outcome will be improved efficiency and safety of the core road network in Uttar Pradesh.

5. **Outputs.** The project outputs will be (i) MDRs, designed to all-weather standards and road safety, reconstructed and rehabilitated; (ii) road maintenance and asset management improved; and (iii) road safety of MDRs in the CRN audited and safety features installed. About 430 km of MDRs will be reconstructed and rehabilitated to two-lane width of 7 meters. The roads will be designed for all-weather use and with road safety features. The construction contracts will include 5-year performance-based maintenance obligations to ensure better asset quality and improved maintenance. A road safety audit will be carried out for all MDRs in the CRN, and appropriate and cost-efficient measures will be implemented to address accident-prone spots.

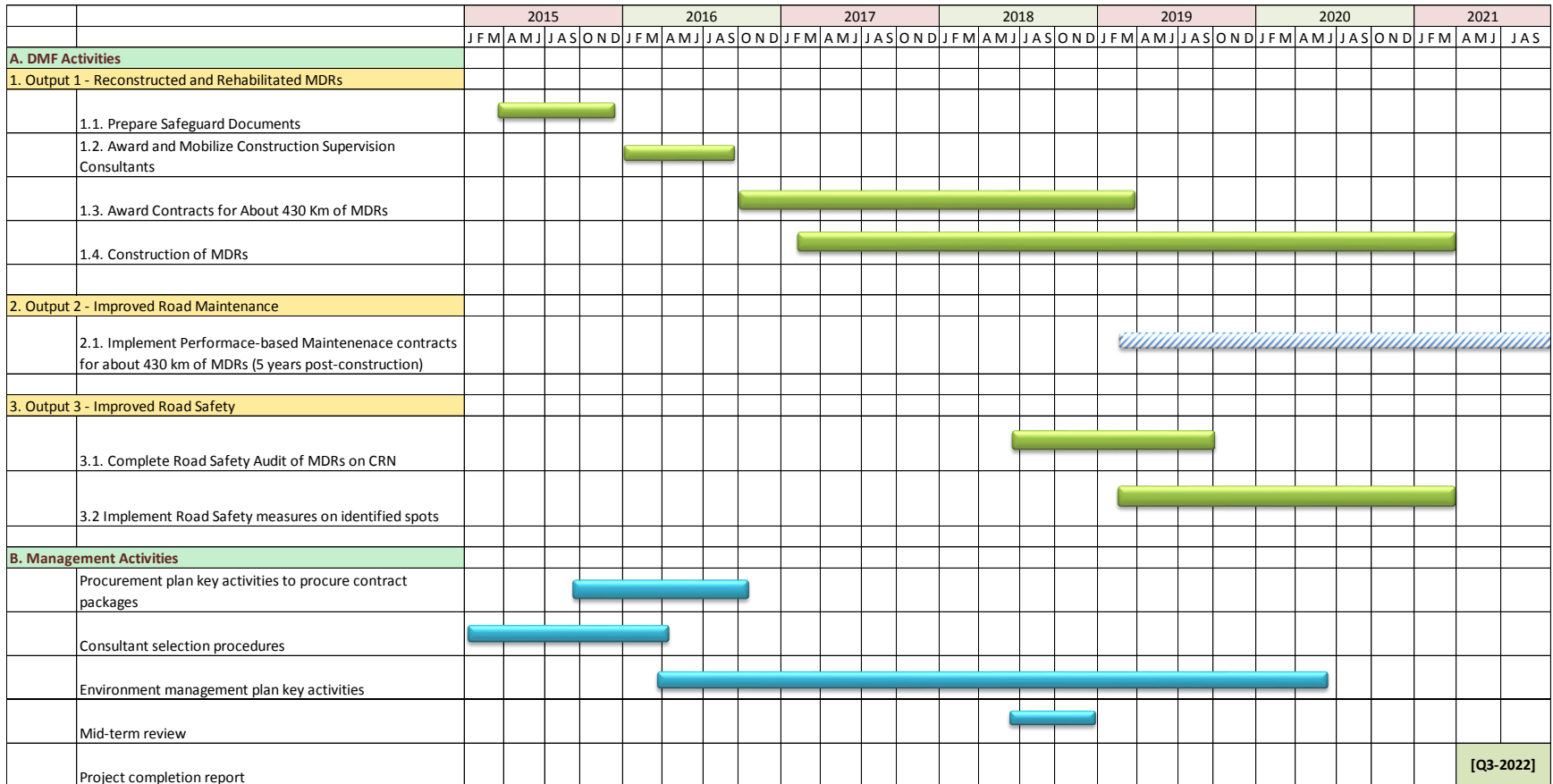
II. IMPLEMENTATION PLANS

A. Project Readiness Activities

Indicative Activities	Months										Who responsible	
	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	June 2016	July 2016	Aug 2016	Sep 2016		
Advance contracting actions	X											UPPWD
Retroactive financing actions				X								UPPWD
Establish project implementation arrangements	X											UPPWD
ADB Board approval					X							ADB
Government budget inclusion					X							Government (ongoing)
Loan signing									X			Government/ADB
Government legal opinion provided										X		Government/ADB
Loan effectiveness										X		Government/ADB

⁴ Government of India, Planning Commission. *Twelfth Five-Year Plan, 2012–2017*. Delhi.

B. Overall Project Implementation Plan



[Q3-2022]

III. PROJECT MANAGEMENT ARRANGEMENTS

A. Project Implementation Organizations: Roles and Responsibilities

Project Implementation Organizations	Management Roles and Responsibilities
<ul style="list-style-type: none"> • Executing agency 	<p>The executing agency will be the Government of Uttar Pradesh, acting through Uttar Pradesh Public Works Department (UPPWD). The project will be implemented through a project implementation unit (PIU) in UPPWD.</p> <ul style="list-style-type: none"> ➤ overall coordination of project implementation ➤ procurement of works ➤ consultant recruitment ➤ day-to-day project management ➤ ensure compliance with safeguard requirements ➤ withdrawal applications ➤ project progress reports ➤ maintaining project accounts ➤ implementation of safeguard activities
<ul style="list-style-type: none"> • ADB 	<p>Monitor and review overall implementation of the project in consultation with the EA including: the project schedule; actions required in terms of poverty reduction, environmental impacts, and resettlement plans and project road selection, if applicable; timeliness of budgetary allocations and counterpart funding; project expenditures; progress with procurement and disbursement; statement of expenditure when applicable; compliance with particular loan covenants; and the likelihood of attaining the project's immediate development objectives.</p>

B. Key Persons Involved in Implementation

Executing Agency

Government of Uttar Pradesh,
acting through the UPPWD

Officer's Name : Mr. A.K Mishra
 Position: Chief Engineer, Externally Aided Projects
 Uttar Pradesh Public Works Department
 Government of Uttar Pradesh
 Telephone: +91 522 223 6496
 Email address: ceeapuppwd@gmail.com
 Office Address: 96, M.G. Marg
 Lucknow, Uttar Pradesh
 India – 226001

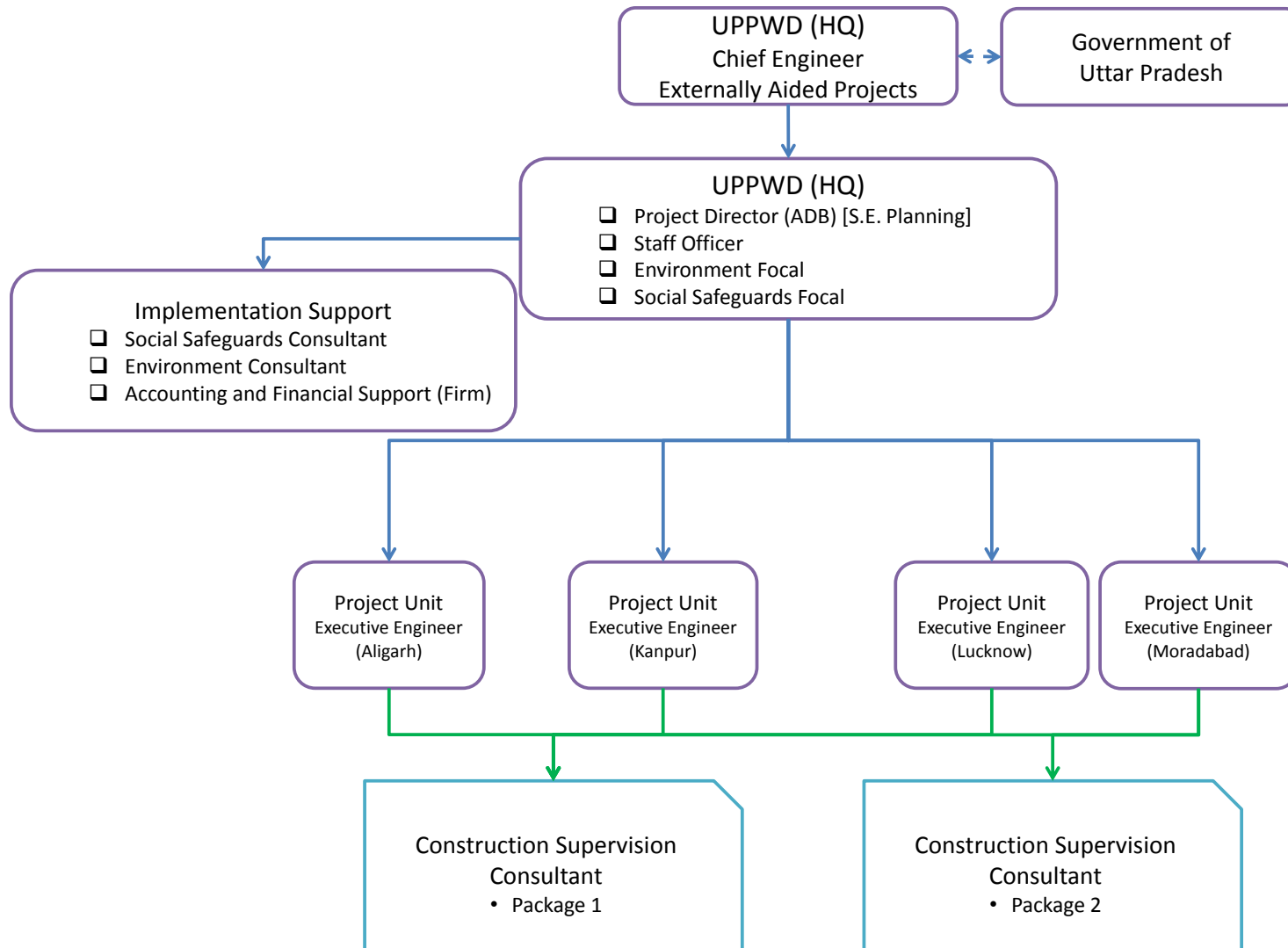
ADB
Transport and Communications
Division (SATC)

Staff Name: Hiroaki Yamaguchi
Position: Director
Telephone No. +63-2-632-6794
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Mission Leader

Staff Name: Ravi Peri
Position: Principal Transport Specialist
Telephone No. +63-2-683-1771
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C. Project Organization Structure



IV. COSTS AND FINANCING

A. Investment and Financing Plans

6. The project is estimated to cost \$428 million (Table 1).

Table 1: Project Investment Plan

(\$ million)

Item	Amount ^a
A. Base Cost ^b	
1. Rehabilitation of roads	361.00
2. Road maintenance	13.00
3. Road safety	11.00
Subtotal (A)	385.00
B. Contingencies ^c	27.00
C. Financing Charges during Implementation ^d	16.00
Total (A + B + C)	428.00

^a This includes taxes and duties of about \$20 million to be financed from government resources by cash contribution and ADB. The amount of taxes and duties to be financed by ADB are (i) within the reasonable threshold identified during the CPS preparation process; (ii) represent only 5% of the investment plan; and (iii) apply only to ADB-financed expenditures. The financing of the taxes and duties is considered material and relevant to the success of the project.

^b In June 2015 prices.

^c Physical contingencies computed at 2% for civil works; price contingencies at 2.5% of foreign exchange costs and 5.5% of local currency costs.

^d Includes interest and commitment charges. Interest during construction for the ADB loan is computed at the 5-year forward London interbank offered rate plus a spread of 0.5% and maturity premium of 0.10%. Commitment charges for an ADB loan are 0.15% per year on the undisbursed loan amount.

Source: Asian Development Bank estimates.

7. The government has requested a loan of \$300,000,000 from ADB's ordinary capital resources to help finance the project. The 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, a commitment charge of 0.15% per year and such other terms and conditions set forth in the loan agreement and project agreement. The Government has requested that repayment will follow the straight-line repayment option. Based on the above loan terms and this repayment option, the average loan maturity is 15.25 years and the maturity premium payable to ADB is 0.10% per annum.

8. The financing plan is in Table 2. ADB will finance 70% of the project cost. This is considered acceptable, taking into account that GOUP has allocated its counterpart financing for 30% of the cost. By including more roads in the loan, the benefits will be spread into more areas of the state.

9. The government will make available the loan proceeds to GOUP on a back-to-back basis and GOUP will bear the foreign exchange risk on the ADB loan in accordance with the policy of the government.

Table 2: Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank		
Ordinary Capital Resources	300	70
Government (state Government of Uttar Pradesh)	128	30
Total	428	100

Source: Government of Uttar Pradesh and Asian Development Bank estimates.

10. Detailed cost estimates by expenditure category, as well as cost estimates by year are given in tables in the subsequent section.

B. Detailed Cost Estimates by Expenditure Category

Table 3: Detailed Cost Estimates by Financier
(\$ million)

	Component	Total \$ Million	ADB		GOUP	
			%	Amount	%	Amount
A.	Land acquisition, resettlement and rehabilitation, utility shifting	28.79	0.0%	0.00	100.0%	28.79
B.	Civil Works	319.64	81.3%	259.85	18.7%	59.79
1	Hussainganj- Hathgaon- Auraiya- Alipur Marg (MDR 81C)	22.18				
2	Nanau- Dadon (82W)	23.65				
3	Muzaffarnagar- Baraut (135W)	40.27				
4	Haliyapur- Kudebhar- Belwai (66E, 69C)	75.97				
5	Kaptanganj- Hata- Gauri Bazaar- Rudrapur (25E); Kaptanganj- Naurangiya (O31)	70.65				
6	Bulandshahr- Anoopshahr- Dibai Chowk (58W)	26.04				
7	Mohanlalganj- Maurawan- Unnao Marg (MDR-52C)	31.13				
8	Aliganj- Soron Marg (MDR-45W)	26.75				
C.	Maintenance Works	12.79	0.0%	0.00	100.0%	12.79
D.	Road Safety Works	10.00	81.3%	8.13	18.7%	1.87
E.	Consulting Services	10.00	100.0%	10.00	0.0%	0.00
F.	Project Management	4.00	0.0%	0.00	100.0%	4.00
	Subtotal A-F	385.22	72.2%	277.98	27.8%	107.24
G.	Contingencies					
	1. Physical	7.00	81.3%	5.69	18.7%	1.31
	2. Price	20.00	81.3%	16.26	18.7%	3.74
	Subtotal Contingencies	27.00	81.3%	21.95	18.7%	5.05
H.	Financing Charges					
	1. IDC	14.00	0.0%	0.00	100.0%	14.00
	2. Commitment Charges	2.00	0.0%	0.00	100.0%	2.00
	Subtotal Financing Charges	16.00	0.0%	0.00	100.0%	16.00
	TOTAL	428.00	70.0%	300.00	30.0%	128.00

^a In June 2015 prices. Taxes and duties are included in the cost estimates.

Note: "Works" refer to civil works and road safety initiatives.

Source: UPPWD and Asian Development Bank estimates.

Table 4: Detailed Cost Estimates by Year
(\$ million)

	Component	Total \$ Million	2016	2017	2018	2019	2020	2021
A.	Land acquisition, resettlement and rehabilitation, utility shifting	28.79	5.76	11.52	7.20	4.32	0.00	0.00
B.	Civil Works	319.64	6.39	31.96	47.95	63.93	63.93	105.48
1	Hussainganj- Hathgaon- Auraiya- Alipur Marg (MDR 81C)	22.18						
2	Nanau- Dadon (82W)	23.65						
3	Muzaffarnagar- Baraut (135W)	40.27						
4	Haliyapur- Kudebhar- Belwai (66E, 69C)	75.97						
5	Kaptanganj- Hata- Gauri Bazaar- Rudrapur (25E); Kaptanganj- Naurangiya (O31)	70.65						
6	Bulandshahr- Anoopshahr- Dibai Chowk (58W)	26.04						
7	Mohanlalganj- Maurawan- Unnao Marg (MDR-52C)	31.13						
8	Aliganj- Soron Marg (MDR-45W)	26.75						
C.	Maintenance Works	12.79	0.00	0.00	0.00	1.92	2.56	8.31
D.	Road Safety Works	10.00	0.00	0.00	1.50	2.50	2.50	3.50
E.	Consulting Services	10.00	1.00	1.00	1.50	1.50	2.00	3.00
F.	Project Management	4.00	0.40	0.40	0.60	0.60	0.80	1.20
	Subtotal A-F	385.22	13.55	44.88	58.74	74.76	71.79	121.49
G.	Contingencies							
	1. Physical	7.00	0.00	0.70	1.05	1.40	1.40	2.45
	2. Price	20.00	1.20	2.60	3.60	4.00	4.00	4.60
	Subtotal Contingencies	27.00	1.20	3.30	4.65	5.40	5.40	7.05
H.	Financing Charges							
	1. IDC	14.00	0.02	0.40	1.17	2.27	3.49	6.66
	2. Commitment Charges	2.00	0.11	0.41	0.35	0.26	0.17	0.70
	Subtotal Financing Charges	16.00	0.12	0.81	1.52	2.53	3.66	7.36
	TOTAL	428.00	14.88	48.99	64.91	82.69	80.85	135.91

^a Maintenance costs included in the contract will be paid by UPPWD for five years beyond completion of construction for each road stretch
Source: UPPWD and Asian Development Bank estimates.

Table 5: Detailed Cost Estimates by Output
(\$ million)

	Component	Total \$ Million	Output 1: Rehabilitation of Roads		Output 2: Road Maintenance		Output 3: Road Safety	
			%	Amount	%	Amount	%	Amount
A.	Land acquisition, resettlement and rehabilitation, utility shifting	28.79	100%	28.79	0%	0.00	0%	0.00
B.	Civil Works	319.64	100%	319.64	0%	0.00	0%	0.00
1	Hussainganj- Hathgaon- Auraiya- Alipur Marg (MDR 81C)	22.18						
2	Nanau- Dadon (82W)	23.65						
3	Muzaffarnagar- Baraut (135W)	40.27						
4	Haliyapur- Kudebhar- Belwai (66E, 69C)	75.97						
5	Kaptanganj- Hata- Gauri Bazaar- Rudrapur (25E); Kaptanganj- Naurangiya (O31)	70.65						
6	Bulandshahr- Anoopshahr- Dibai Chowk (58W)	26.04						
7	Mohanlalganj- Maurawan- Unnao Marg (MDR-52C)	31.13						
8	Aliganj- Soron Marg (MDR-45W)	26.75						
C.	Maintenance Works	12.79	0%	0.00	100%	12.79	0%	0.00
D.	Road Safety Works	10.00	0%	0.00	0%	0.00	100%	10.00
E.	Consulting Services	10.00		7.50		1.50		1.00
F.	Project Management	4.00		3.65		0.1		0.25
	Subtotal A-F	385.22		359.58		14.39		11.25
G.	Contingencies							
	1. Physical	7.00	100%	7.00	0%	0.00	0%	0.00
	2. Price	20.00	100%	20.00	0%	0.00	0%	0.00
	Subtotal Contingencies	27.00	100%	27.00	0%	0.00	0%	0.00
H.	Financing Charges							
	1. IDC	14.00	100%	14.00	0%	0.00	0%	0.00
	2. Commitment Charges	2.00	100%	2.00	0%	0.00	0%	0.00
	Subtotal Financing Charges	16.00	100%	16.00	0%	0.00	0%	0.00
	TOTAL	428.00		403.00		14.00		11.00

^a Maintenance costs included in the contract will be paid by UPPWD for five years beyond completion of construction for each road stretch
Source: UPPWD and Asian Development Bank estimates.

C. Allocation and Withdrawal of Loan Proceeds

Table 5: Allocation and Withdrawal of Loan Proceeds

Sl. No.	Item	Amount Allocated \$ Category	Percentage of ADB Financing from the Loan Account
1	Works ^a	268,000,000	81 percent of total expenditure claimed
2	Consulting Services	10,000,000	100 percent of total expenditure claimed*
3	Unallocated	22,000,000	
	Total	300,000,000	

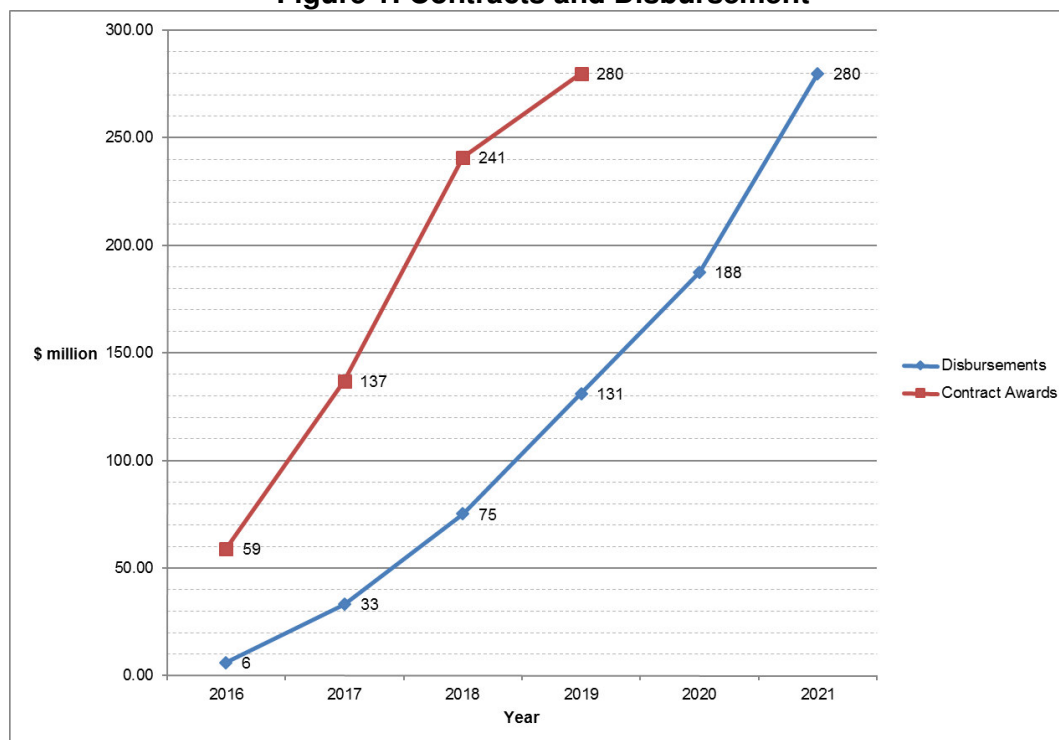
^a "Works" refer to civil works and road safety initiatives.

* Exclusive of taxes and duties within the territory of the Borrower.

D. Contract and Disbursement S-Curve

11. The following graph(s) show contract awards and disbursement for the allocated amounts over the life of the project, and annually based on the contract awards and disbursement projections.

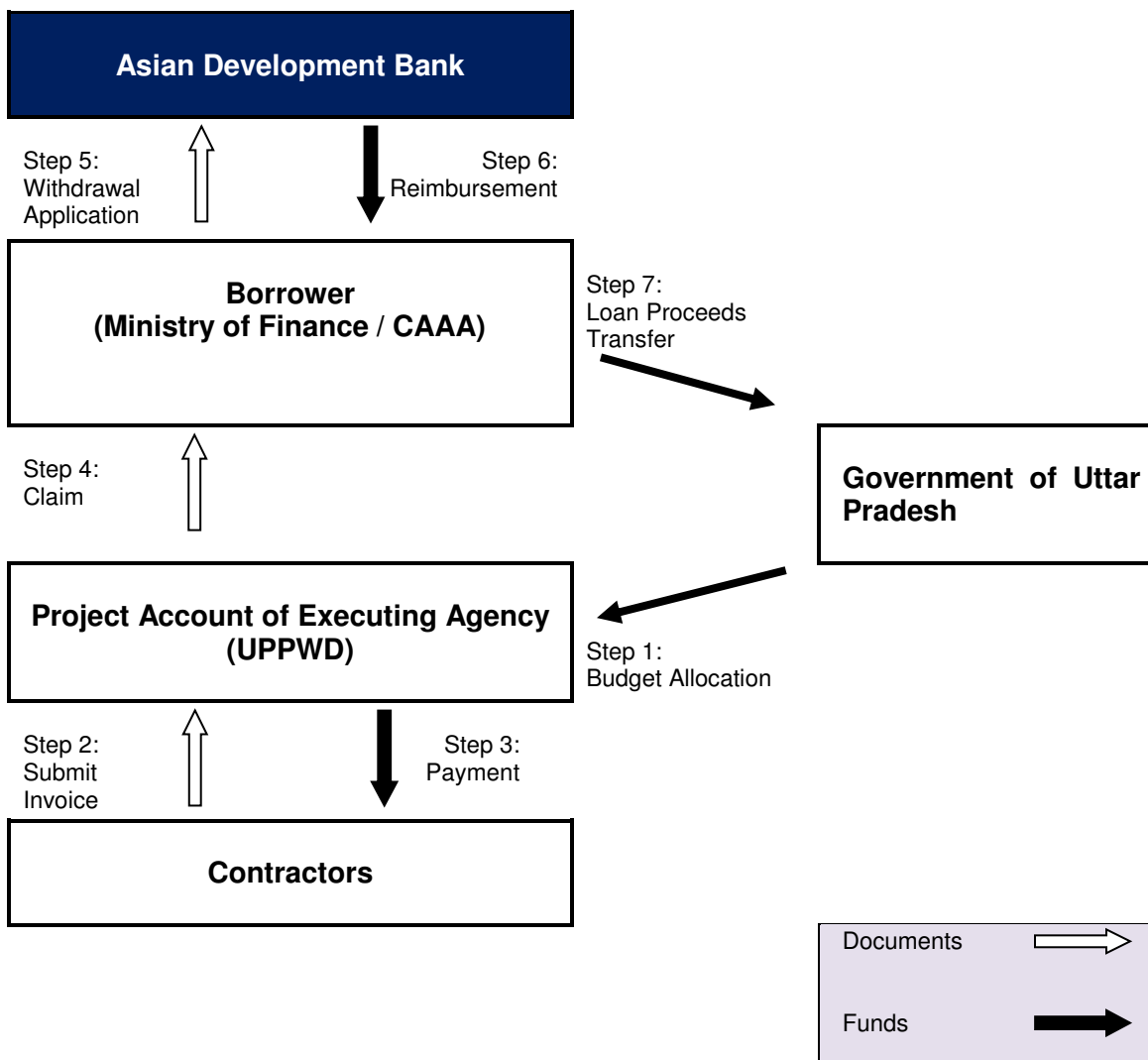
Figure 1: Contracts and Disbursement



E. Fund Flow Diagram

12. GOUP will provide the ADB loan and counterpart funds to UPPWD for project implementation, ensuring sufficient budget for payments to the contractors based on the submitted invoices. UPPWD will then submit claims to the borrower, who will submit them to ADB. ADB will pay to the borrower out of the loan and the Borrower will provide Additional Central Assistance to UPPWD through GOUP. GOUP will be responsible for meeting the financial responsibilities and obligations of UPPWD for the project. The following diagram shows how the funds will flow from ADB and the borrower to implement project activities.

Figure 2: Fund Flow Diagram



V. FINANCIAL MANAGEMENT

13. The executing agency, UPPWD, is a department of the government of Uttar Pradesh. UPPWD will maintain a separate account for the project. Financial management risks will be considered and updated throughout the life of the project. Risk mitigation measures will also be updated accordingly.

A. Financial Management Assessment

14. The financial management assessment (FMA) was conducted 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.⁵ The same PIU in UPPWD has been the implementing agency for one prior World Bank loan, and is currently managing another World Bank loan; hence there is knowledge of multilateral agency procedures. UPPWD follows cash based accounting, since it is a government department. The accounting system has the controls in place to ensure that all transactions are correctly made and adequately explained. All accounting and supporting documents are maintained for a minimum 8 years from the date of transaction. Accounts are audited as per government procedures by the office of the Auditor General.

15. Key risk areas include (i) manual record keeping; (ii) inadequate number of staff at the division level, and (iii) a large number of the present staff not trained in computer application and is also not familiar with ADB procedures. Key mitigating actions to address these risks include (i) introduction of computerized accounting at the division level, (ii) deployment of additional staff for the accounting function (iii) training of accounting staff in computer application and updating on accounting techniques and procedures, and (iv) familiarization of accounting staff with ADB procedures. With the above proposed actions, the overall financial management arrangements are considered satisfactory for the project. However, there is need to support the PIU with accounting and finance experts. An external accounting firm will be recruited under the project, which will assist the PIU in relevant finance and accounting functions, including reporting and record keeping. Based on the assessment, even after such external support, the overall financial management risk of the project is categorized as "Moderate." The Financial Management Assessment has identified the following action points:

- Assurances in the project agreements that counterpart funds for the project (implementation and maintenance) will be made available on time;
- Need for external support in accounting and finance.

Table 6: Inherent Risks

Risk Type	Risk Assessment	Risk Description	Risk Mitigation Measures
1. Country Specific Risk	M	Delay in fund disbursement can lead to cash flow problems and thereby delay project implementation	Assurances that GOUP/ UPPWD shall ensure timely release of funds including counterpart funds to the projects as the project is to be on reimbursable basis and the loan covenants to include the requirement.
2. Entity Specific Risk	M	UPPWD will be developing MDRs for the first time under ADB	UPPWD has implemented World Bank financed projects in the State as stated above, and the requirements under ADB

⁵ Available at: <http://www.adb.org/projects/operations/financial-management-resources>. See also Analysis of Projects Guidelines (2005): <http://www.adb.org/Documents/Guidelines/Financial/default.asp>.

Risk Type	Risk Assessment	Risk Description	Risk Mitigation Measures
		loan.	loan would be more or less similar. Hence, with experience of implementing projects funded by multilateral institutions, UPPWD is in a position to carry out the proposed ADB-funded project. However, a specific project implementation unit is to be set up to implement and oversee proper execution.
3. Project Specific Risk	M	Delays in fund disbursement for maintenance period would impact maintenance activities.	Maintenance funds will be of lower scale than construction, and UPPWD should not have an issue managing the same. Further, assurances that GOUP/UPPWD shall ensure timely release of funds could be part of loan covenants.
Overall Inherent Risk	M		

Legend: H=High; S=Substantial; M=Moderate; N=Negligible or Low.

Table 7: Control Risks

Risk Type	Risk Assessment	Risk Description	Risk Mitigation Measures
1. Fund Flow	N	Timely availability of counterpart funds for project implementation. Funds for maintenance of MDRs need to be released by GOUP/UPPWD on time.	Assurances in project agreements Necessary arrangements need to be in place in coordination with GOUP and UPPWD for maintenance purposes. Also, for the MDRs, the EPC contracts may be designed to have a maintenance provision for the initial 5 years, so that obligations will be clear and known upfront.
2. Staffing	M	Existing staff needs to be strengthened to manage the additional workload for ADB-funded MDR project.	UPPWD is adequately staffed at present in key positions. Separate staff at Division level exists to carry out the responsibilities. Some of the divisions would require additional staff with appropriate qualification and experience to execute the work considering the current work load of the present staff. In addition, suitable training in computer application and better familiarization with accounting procedures and practices, as suggested in Chapter 3 of this report, would address the risk.
3. Accounting Policies and Procedures	N		The Accounts are prepared in accordance with the Accounting Standards prescribed by the Uttar Pradesh PWD Accounting Rules & System which is time tested and in accordance with Generally Accepted Accounting Principles; and is being also followed for the World Bank Project.
4. External Audit	N	Compliance with financial rules and regulations and accounting policies and standards. No major qualifications were available.	Pre-audit of payments above Rs.10000 is carried out prior to issue of cheques by Divisional Accounts Officer placed from the office of Controller of Accounts. Also, external audit is carried out by the Office of the Comptroller & Auditor General (National

Risk Type	Risk Assessment	Risk Description	Risk Mitigation Measures
			Auditor for the Government)
5. Internal Audit	N	The system relies on pre-audit and a chain of approvals prior to expenditure. As a normal practice there is no mechanism for internal audit in any government department unlike in case of public sector corporations and private sector companies. However, the expenditure bills of the department are examined by a designated accounts officer deputed by the office of the accountant general at the division level.	Pre-audit of payments above Rs.10000 is carried out prior to issue of cheques by Divisional Accounts Officer placed from the office of Controller of Accounts.
6. Reporting and Monitoring	M	Maintenance of funds received from Government needs to be segregated by category of roads	Financial Statements are prepared in accordance with the applicable accounting standards; and funds for maintenance of MDRs may be shown separately.
7. Information System	M	Budget and periodical accounts are prepared as per the applicable accounting standards. Manual system is followed. There is no other financial MIS.	Financial Reporting of funds received and expenses made by purpose for which fund is received may be separately maintained through basic computer application.
Overall Control Risk		M	

Legend: H=High; S=Substantial; M=Moderate; N=Negligible or Low.

B. Disbursement

16. The loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2015, as amended from time to time), and detailed arrangements agreed upon between the government and ADB.⁶ Online training for project staff on disbursement policies and procedures is available at http://wpqr4.adb.org/disbursement_elearning. Project staff are encouraged to avail of this training to help ensure efficient disbursement and fiduciary control.

17. The Statement of Expenditures (SOE) procedure will be used to reimburse eligible expenditures not exceeding \$100,000 equivalent per individual payment. SOE records should 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

⁶ Available at: <http://www.adb.org/sites/default/files/loan-disbursement-handbook.pdf>

independent audit. Reimbursement of individual payments in excess of the SOE ceiling should be supported by full documentation when submitting the withdrawal application to ADB.

18. ADB's imprest account procedure will not be used for the project.

19. UPPWD 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.

20. Before the submission of the first withdrawal application, the government should 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 US\$100,000 equivalent. Individual payments below this amount should generally be paid by UPPWD and subsequently claimed to ADB through reimbursement, unless otherwise accepted by ADB. ADB reserves the right not to accept withdrawal applications below the minimum amount.

21. All disbursements under government financing will be carried out in accordance with regulations of the Government of India and GOUP.

C. Accounting

22. UPPWD will maintain separate project financial statements and records by funding source for all expenditures incurred on the project. Project financial statements will follow accounting principles and practices prescribed by the government's accounting laws and regulations.⁷

D. Auditing

23. UPPWD will cause the detailed consolidated project financial statements to be audited in accordance with the government's audit regulations by an auditor appointed by the Auditor General, which is acceptable to ADB. The audited financial statements (AFSs) shall be submitted in the English language to ADB within 6 months of the end of the fiscal year by the executing agency.

24. SOE records should 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. The annual audit report will include a separate audit opinion on the use of the SOE procedures.

25. The annual audit report for the project financial statements, which shall be submitted by the executing agency in the English language to ADB within 6 months of the end of the fiscal year, will include an audit opinion which covers (i) whether the project financial statements present a true and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting framework; (ii) whether loan proceeds were used only for the purposes of the project or not; and (iii) the level of compliance for each financial covenant contained in the legal agreements for the project. If a management letter is prepared by the auditor, this shall also be submitted to ADB.

⁷ Government laws and regulations, and following Indian Generally Accepted Accounting Principles.

26. To ensure the timely submission of audited project financial statements, UPPWD shall formally request the Comptroller and Auditor General (CAG) to include audits of the project in their yearly work plan through the DEA. Unaudited project financial statements should be submitted to CAG for audit within 3 months of the end of the fiscal year.

27. The government and UPPWD have been made aware of ADB's policy on delayed submission,⁸ and the requirements for satisfactory and acceptable quality of the AFSs. ADB reserves the right to require an addition in the auditor as mutually agreed with the borrower, 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.

28. 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.

29. 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 2011.⁹ 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.¹⁰

VI. PROCUREMENT AND CONSULTING SERVICES

A. Advance Contracting and Retroactive Financing

30. All advance contracting and retroactive financing will be undertaken in conformity with ADB's *Procurement Guidelines* (April 2015, as amended from time to time)¹¹ and ADB's *Guidelines on the Use of Consultants* (March 2013, as amended from time to time).¹² The issuance of invitations to bid under advance contracting and retroactive financing will be subject to ADB approval. The Borrower, GOUP, and UPPWD, have been advised that approval of advance contracting and retroactive financing does not commit ADB to finance the project.

31. **Advance contracting.** GOUP through UPPWD has requested advance action for procurement of works to expedite the consultant selection process, including finalization of the

⁸ ADB Policy on delayed submission of audited project financial statements:

- 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 six months, requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment letters will not be processed.
- When audited project financial statements have not been received within 6 months after the due date, ADB will withhold processing of requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement and issuance of new commitment letters. ADB will (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 six months.
- When audited project financial statements have not been received within 12 months after the due date, ADB may suspend the loan.

⁹ Public Communications Policy: <http://www.adb.org/documents/pcp-2011?ref=site/disclosure/publications>

¹⁰ This type of information would generally fall under public communications policy exceptions to disclosure. ADB. 2011. *Public Communications Policy*. Paragraph 97(iv) and/or 97(v).

¹¹ <http://www.adb.org/Documents/Guidelines/Procurement/Guidelines-Procurement.pdf>

¹² <http://www.adb.org/Documents/Guidelines/Consulting/Guidelines-Consultants.pdf>

request for proposal; and the tender process of works, including preparation of the bidding documents for civil works and call for tender.

32. **Retroactive financing.** The government and GOUP, through UPPWD, have requested approval for retroactive financing. If approved by the ADB Board, up to 20% of the amount of the loan proceeds (\$60 million, 20% of \$300 million) will be eligible for retroactive financing, provided that expenditures are incurred on works and consulting services for the investment program in accordance with agreed procedures and during the 12 months before the signing of the loan and project agreements.

B. Procurement of Goods, Works and Consulting Services

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

34. UPPWD and ADB have discussed procurement packages and procedures and understood that the proposed project involves only national competitive bidding (NCB). The procurement plan should be updated whenever change in the procurement arrangements is required and agreed.

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

36. Procurement activities under UPPWD will be the responsibility of the designated officer, Chief Engineer (Externally Aided Projects), who will be supported by the Project Director, and other staff and consultants. ADB will closely monitor all major project implementation activities. Contracts for civil works will comprise about 10 national competitive bidding (NCB) packages. All contracts for civil works and goods will be procured in accordance with ADB's Procurement Guidelines. ADB's standard bidding documents will be used in all cases.

37. All consultants will be recruited according to ADB's *Guidelines on the Use of Consultants*.¹³ The terms of reference for all consulting services are detailed in Section D.

38. Consulting services are required to facilitate project management and implementation. Construction Supervision Consultants (CSC) will be funded out of loan proceeds. The expertise requirements of national consultants are given in the relevant sections of the terms of reference in Attachment 5. Consulting firms will be engaged using the quality- and cost- based selection (QCBS) method with a standard quality to cost ratio of 80:20.

39. UPPWD will institute a referencing system in record-keeping. All procurement files including bid invitations, winning bids, evaluation reports, pre-contract documents, contract documents and invoices are kept in single contract files. The government regulations require keeping all records for eight years which sufficiently covers ADB's requirement to keep the project records for two years after project completion, considering that all projects under the proposed loan are envisioned to be completed within 3-4 years following procurement activities.

¹³ Checklists for actions required to contract consultants by method available in e-Handbook on Project Implementation at: <http://www.adb.org/documents/handbooks/project-implementation/>

C. Procurement Plan

40. The procurement plan is in Attachment 1 and describes all procurement of goods and works to be undertaken for the project based on the Procurement Capacity Assessment undertaken separately for UPPWD.

D. Consultant's Terms of Reference

41. The terms of reference for the CSC, as well as the accounting firm are given in the relevant sections of the terms of reference in Attachment 5.

VII. SAFEGUARDS

42. Pursuant to ADB's Safeguard Policy Statement (2009) (SPS), ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth at Appendix 5 of the SPS.¹⁴

A. Environmental Safeguards

43. In accordance with requirements of the SPS, the project roads have been categorized as environment category "B" as no attributable, significant, long term or irreversible environmental impacts are anticipated and none of the road fall inside protected areas. Therefore, initial environmental examination (IEE) was conducted and environmental management plans (EMPs) have been prepared for each project road and consolidated in one report.

44. Forest clearance will be obtained by UPPWD before start of construction works in the respective road sections.¹⁵ Permits, certificates, and no-objection letters, for regulated activities such as installation and operation of hot mix plants and crushers, sourcing of construction and ground water, earth borrowing, and quarrying will be obtained by the contractor before the implementation of the respective construction activity.

45. Road-specific environmental and monitoring plans were prepared and form part of the bidding documents to address all anticipated environmental impacts from the project implementation. The environment monitoring plan provides various environment quality parameters and checking the effectiveness of the respective EMP. It comprises activities on testing the quality of air, water, and noise through laboratory tests and physical monitoring of problems of soil erosion, and habitat enhancement activities carried out and occupational health and safety issues. Quality testing of air, water and noise will be outsourced by the contractor to recognized and approved laboratories, while physical monitoring activities will be carried out by the CSC. UPPWD will carry out the activities related to tree plantation and maintenance either by including in the construction contracts, or through specialized agencies that can carry out tree plantation, maintenance, monitoring and reporting.

46. The mandatory 1:2 compensatory plantation for the loss of avenue trees along UPPWD roads will be done. In addition, near locations of sensitive receptors such as schools, hospitals, and other areas identified in the IEE, additional plantation will be undertaken by the UPPWD with the consent of concerned land owners and jurisdictional district forest offices, to minimize

¹⁴ Available at: <http://www.adb.org/sites/default/files/pub/2009/Safeguard-Policy-Statement-June2009.pdf>

¹⁵ Due process will be followed for use of land managed by the Forest Department, including the entire stretch of Nanau-Dadon (82W), km 7-31 of Muzaffarnagar- Baraut (135W), Km 33-48 of Hussainganj- Hathgaon- Auraiya- Alipur Marg (MDR 81C), and 0.8km of Mohanlallganj- Maurawan- Unnao Marg (MDR-52C).

environmental impacts from the road improvements. The cost of the additional plantation is included in the civil works contract.

47. The EMP for all project roads will be attached to the respective contract documents. The responsibilities of respective parties and agencies on implementing the environmental safeguards are given below:

(i) **UPPWD.** Ensure that all environment safeguard requirements as stated in the IEE and loan covenants for the project are complied to. Submit annual environmental monitoring reports as necessary to ADB for disclosure on the ADB website.

- **Environmental Expert, UPPWD.** Compliance monitoring of the requirements of the IEE and EMP for respective project roads. Preparation of annual environmental monitoring reports for the project based on monthly and quarterly monitoring reports prepared at the site level.
- **Environmental Focal Person, Project site, UPPWD.** Routine monitoring of site level implementation of the EMP. Review and approval of monthly/quarterly environmental monitoring checklists or reports.

(ii) **Contractor.** Implementation of the EMP and submission of self-monitoring reports. Recommend to CSC updating of the EMP when necessary.

(iii) **Environmental Specialist, CSC.** Routine monthly compliance inspection and monitoring, assessing the completeness and effectivity of measures, providing technical advice, and on the job training to the contractor to enable effective implementation of the EMP. Conduct “with cause” inspection to focusing on pending non-compliance and ensure immediate return to compliance status by the contractor. Update the EMP as necessary, together and in consultation with the contractor. Preparation of monitoring and inspection checklists/reporting formats to be completed on a monthly basis. Submit the completed checklists/reports to the environmental focal person from PIU at the site level. Provide necessary technical support to the environmental focal person at the site level as well as UPPWD.

48. An orientation cum training workshop will be carried out by ADB experts and the CSC environmental specialist during the pre-construction stage and further during construction stages for UPPWD staff, other CSC staff, and the contractors.

B. Social Safeguards

49. **Involuntary Resettlement.** The project is categorized as “A” as per ADB’s SPS. A total of 976 non-titled households are expected to be affected by the project, among which 27 are expected to be physically displaced. Road designs have been modified to avoid resettlement impacts to the extent possible. UPPWD owns the Right of Way (RoW) for all road corridors. The RoW has been verified with the local Land Revenue Records Department and the project does not require private land acquisition. Overall, impacts are limited to external sections of residential and commercial structures (i.e. verandahs, stairs, and balconies) without affecting the latter’s viability.¹⁶ The improvements will be conducted on the current road alignment,

¹⁶ Should there be impacts on structures’ main walls, the viability of the structure will be considered as compromised and the AP as fully displaced. Moreover, any affected person considering that their structure is no longer viable for other reason will submit his/her grievance to the Grievance Redress Committee (GRC).

accommodating in the process the standard designs to fit civil works within the existing width, avoiding in the process most impacts on walls of permanent structures (i.e., pucca).

50. Seven (7) Resettlement Plans (RPs) and one (1) Due Diligence Report have been prepared.¹⁷ The RPs were prepared in accordance with (i) the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013”, effective from 1 January 2014 (hereinafter called LA Act 2013) and Ordinance Amendment; (ii) State laws and regulations; (iii) ADB’s Safeguard Policy Statement, 2009; (iv) Uttar Pradesh Direct Negotiation Policy (2015), and (v) UPPWD/ADB’s Resettlement Framework approved in April 2015. Affected persons (titleholders and non-titleholders) will be compensated at replacement cost and be provided with relocation and reconstruction assistance as well as income restoration assistance. Special measures have been integrated for vulnerable households. Compensations and assistance measures are described in the Entitlement Matrix approved for all RPs. UPPWD will recruit an NGO to help facilitate the implementation of the RPs.

51. All RPs have been disclosed on ADB’s and the EA’s websites. The RPs will also be made available at the PIUs’ offices (division level). Moreover, a summarized version of the RPs will be made available in relevant Gram Panchayat and other local offices. Leaflets with the Entitlement Matrix and contact information of the Grievance Officer will be distributed by the EA with the support of the non-government organization (NGO) at the onset of RP implementation.

52. UPPWD through relevant PIUs, will (i) implement the project in accordance with the RPs, (ii) ensure that all affected persons is be paid compensation and assistance prior to the destruction of asset and commencement of the civil works, (iii) handover land free of encumbrance to the contractors on a sectional basis only after affected persons (titleholders and non-titleholders) have received the relevant compensation and assistance, (iv) continue the consultation process with the support of the RPs implementing NGO throughout implementation and distribute the EMP leaflet at the onset of the implementation of the RPs, (v) establish an efficient grievance redress mechanism prior to the start of RP and project implementation and inform affected households and road resident about grievance redress mechanism contact information, and (vi) submit semi-annual monitoring reports to ADB on the implementation of resettlement activities.

53. If during project implementation, there are design modifications that entail private land acquisition or significant additional resettlement impacts (e.g., 40 or more households affected), the RP for that road will be updated with a new census and inventory of lost assets and approval of ADB will be obtained prior award of civil works contracts, or further implementation of the relevant section of the project. Any private land acquisition undertaken through negotiated settlement as per Uttar Pradesh Direct Land Purchase Policy (2015) will have to be verified by an Independent Monitor (Third Party Verifier) and documented in the Annex of the updated RP.¹⁸ This, as well as the implementation progress of the RPs, will also be reported in the Social Semi-Annual Report to be submitted to the ADB. Any other minor variation of the RP will be reported in the Semi-Annual Reports.

54. The responsibilities of respective parties and agencies in implementing the social safeguards are the following:

¹⁷ Bulandshahr- Anoopshahr- Dibai Chowk Road (58W) is the only project road where no resettlement impacts have been identified and therefore a Due Diligence Report has been prepared in lieu of a Resettlement Plan.

¹⁸ As stipulated in the section about negotiated settlement in paragraph 25, Appendix 2 of ADB’s SPS.

- (i) **UPPWD.** Ensure compliance of all social safeguard requirements as stated in the RPs, PAM and loan covenants. Submit semi-annual social monitoring reports and additional reports as necessary to ADB for disclosure on ADB website. The implementation arrangements are the following:
- **Social Safeguards Officer, UPPWD Headquarters PIU.** Supervise the implementation of all RPs. Review and approve semi-annual Social Monitoring Reports for the project and submit to ADB for disclosure. The Social Safeguards Officer will be supported by an outsourced resettlement expert consultant, who will be hired to support UPPWD at an institutional level in this task.
 - **Safeguards Focal Person, Field PIU.** Responsible for the day-to-day implementation of RPs and coordination with NGO at project level, as well as management of the project EMP(s). Liaise with local authorities and affected people. Review and approve the monthly/quarterly monitoring reports prepared by the RP implementing NGO and Resettlement Specialist under the CSC. Responsible for receiving and addressing complaints at project level.
- (ii) **Resettlement Implementation NGO.** UPPWD will recruit one RP implementing NGO. The NGO will be responsible for the implementation of the 7 RPs and conduct other social activities (HIV/AIDS, human trafficking, and road safety awareness) on all project roads.
- (iii) **Contractor.** Ensure that civil works only starts on the relevant section after it has been declared free of encumbrance by UPPWD. Coordinate closely with NGO, safeguards focal person, and be responsive to address relevant grievances.
- (iii) **Resettlement Specialist, CSC.** Conduct regular site-level monitoring, providing technical advice to UPPWD and NGO to enable the timely implementation of the RPs. Updating the RPs as necessary together and in consultation with the NGO/UPPWD. Provide guidance in the RP implementation to ensure compliance with ADB's SPS 2009. Prepare social monitoring reports on a semi-annual basis. Provide any other necessary technical support to the safeguard focal person at the site level as well as UPPWD's central level. Participate in and support the Grievance Redress Committees at Field and headquarter levels, providing tools to properly document and monitor the resolution of grievances. The CSC Resettlement Specialist will also conduct a training of UPPWD and NGO staff at the onset of the implementation of the RPs.
- (iv) **Independent Monitor.** The Independent Monitor will evaluate the compliance of the RPs during implementation and upon their completion. Moreover, in the case of negotiated land settlements to acquire private land, the Independent Monitor will act as third party verifier to certify the fairness and transparency of the process.

55. An initial coordination and training workshop for staff of UPPWD, the PIUs, CSC and contractors will be carried out by ADB and the CSC Resettlement Specialist during the pre-construction stage and further during construction stages.

56. **Impact on indigenous peoples.** The project has been categorized "C" as per ADB's SPS.

C. Grievance Redress Mechanism

57. A project-specific grievance redress mechanism (GRM) will be established to receive,

evaluate and facilitate the resolution of affected people's concerns, complaints and grievances about the social and environmental performance at the level of the project. The availability of the GRM will be widely disseminated. The GRM will aim to provide a time-bound and transparent mechanism to voice and resolve social and environmental concerns linked to the project. The project-specific GRM is not intended to bypass the government's own redress process. The GRM will consist of two levels: a field-level grievance redress committee (GRC) and state-level GRC.

Field level GRC will comprise of the:

- (i) Executive Engineer, Field PIU
- (ii) Focal Safeguards Person, Field PIU
- (iii) Resettlement Expert and Environment Expert from the CSC
- (iv) A representative from AP community.

The PIU Headquarter level GRC will comprise of the:

- (i) Executive Engineer, UPPWD
- (ii) Safeguards Project Officer, UPPWD Central
- (iii) Resettlement Consultant and Environment Consultant to UPPWD
- (iv) Resettlement Expert and Environment Expert from the CSC

58. **Field level GRC.** Affected persons (APs) will have the flexibility of conveying grievances/suggestions in person to the PIU/UPPWD's local office, orally by calling the GRC's local number of the PIU's Focal Safeguards Person, which will be posted on signboards at different points of the project site, or in writing by submitting their grievances to the local PIU/PWD's office and contractor's site. A complaint register will be maintained by the Focal Safeguards Person at the PIU's office and by the contractor's environmental officer at the construction sites to record the details related to the date of complaint, type of complaint, date of personal hearing, action taken and date of communication sent to complainant will be recorded. The Focal Safeguards Person will consolidate all grievances, categorize and prioritize them and report any serious cases to the state-level GRC (see below). He/she will investigate grievances through site visits and consultation with relevant parties like affected persons, contractors, etc., with the support of the CSC's Resettlement Expert and Environment Expert. If grievances are not resolved at this stage, they will be sent to the state-level GRC.

59. **Headquarter PIU-Level GRC.** Level 2 GRC will meet every month (if grievances are brought to the Committee), determine the merit of each grievance, and resolve grievances within a month of receiving the complaint. Records will be kept of all grievances received including: contact details of complainant, date the complaint was received, nature of grievance, agreed corrective actions and the date these were effected, and final outcome. The GRCs will continue to function during the life of the Project. The CSC and UPPWD Central Resettlement Expert (i.e., Safeguards Project Officer, see paragraph 66 below) will offer guidance in resolving grievances and report on the efficiency of the GRM in the Semi-Annual Reports.

60. **Indicative timeframe for resolution.** The GRCs are expected to resolve grievances of the eligible persons within a stipulated time of 3 weeks at the field level and one month at the state level.

61. **Costs.** All costs involved in resolving the complaints (meetings, consultations, communication and reporting/information dissemination) will be borne by the Project.

VIII. GENDER AND SOCIAL DIMENSIONS

62. **Gender.** For the project, gender-sensitive measures have been integrated to maximize project benefits to women. The table below list the measures and institutions responsible for implementation.

Table 8: Gender-Sensitive Measures

	Activity	Responsibility
1	Integrate safety and elderly-women-children-disabled (EWCD) friendly features into road design such as well marked crossings, safety signage, hard shoulder, soft shoulder, or covered drains depending on available ROW and local needs	Designed by DPR Consultant Implemented by civil works contractor Monitored by PIU/CSC
2	Include bus stops into the road designs	Designed by DPR Consultant Implemented by civil works contractor Monitored by PIU/CSC
3	Ensure 30% female representation in HIV/AIDS, human trafficking, road safety and personal safety awareness campaigns	Conducted by NGO Monitored by PIU/UPPWD and CSC
4	Ensure continuous consultation of women during project implementation	Conducted by NGO/PIU Documented by NGO with support of CSC and UPPWD Resettlement Consultant
5	Monitor female employment in civil works and road maintenance	Conducted by CSC Monitored by UPPWD
6	Include labor standards related clauses in contracts	Conducted by UPPWD Monitored by CSC

63. **HIV/AIDS**

- (i) **For labor:** The State and UPPWD shall ensure that the Works contracts under the Project incorporate provisions to the effect that the contractors are required to (i) carry out HIV/AIDS awareness programs for labor, and (ii) disseminate information at worksites on risks of sexually transmitted diseases and HIV/AIDS as part of health and safety measures for those employed during construction. Such contracts will also include clauses for termination in case of any breach of the stated provisions by the Contractors. The CSC will monitor the implementation.
- (ii) **For communities:** UPPWD through the RP implementing NGO, will conduct STI and HIV/AIDS awareness campaigns to road resident communities, liaising with existing governmental and non-governmental organizations working in this field in Uttar Pradesh.

64. **Human Trafficking, Personal Safety and Road Safety Awareness Campaigns.** UPPWD through the RP implementing NGOs, will conduct human trafficking, personal safety and road safety awareness campaigns to road resident communities, liaising with existing governmental and non-governmental organizations working in this field in Uttar Pradesh.

65. **Labor Standards.** The State and UPPWD shall ensure that the Works contracts under

the Project follow all applicable labor laws of Government of India and State of Uttar Pradesh and that these further include provisions to the effect that contractors follow and implement all statutory provisions on labor (including not employing or using children as labor, not using forced labor, equal pay for equal work), health, safety, welfare, sanitation, and working conditions. Such contracts will also include clauses for termination in case of any breach of the stated provisions by the contractors. The CSC will monitor the implementation.

IX. PERFORMANCE MONITORING, EVALUATION, REPORTING AND COMMUNICATION

A. Project Design and Monitoring Framework

66. The design and monitoring framework is in Attachment 2.

B. Monitoring

67. **Project performance monitoring.** The achievement of the project performance targets will be assessed following the DMF. UPPWD will, within 3 months of the loan signing, develop a systematic project performance monitoring system, in form and substance acceptable to ADB, for use throughout the life of the Project. UPPWD will also establish, within 3 months of loan effectiveness, a baseline for performance indicators to be used for monitoring implementation of each project road. UPPWD will conduct annual evaluation surveys for each road project, in accordance with the project performance monitoring system, to evaluate the scope, implementation arrangements, progress, and achievement of the project objectives.

68. **Compliance monitoring.** Compliance with covenants will be monitored through ADB's project administration missions – including project inception mission to discuss and confirm the timetable for compliance with the loan covenants; project review missions to review the borrower's compliance with particular loan covenants and, where there is any noncompliance or delay, discuss proposed remedial measures with the Government; and mid-term review mission, if necessary, to review covenants to assess whether they are still relevant or need to be changed, or waived due to changing circumstances.

69. **Safeguards monitoring.** Implementation of the EMPs, RPs, and other social mitigation measures will be monitored internally by designated UPPWD officers and externally by the CSC.

- (i) **Environment Safeguard Monitoring.** For environment safeguards records, the contractor will prepare and maintain records of self-monitoring reports detailing the status and effectivity mitigation measures implementation. Based on these records and monthly compliance inspections by designated UPPWD staff and CSC, monitoring reports will be compiled on a quarterly basis. Highlighting among others: (i) the veracity of the self-monitoring reports, (ii) compliance to domestic environmental statutes and guidelines, (iii) status and effectivity of mitigation measures, and (iv) compliance action plans to address identified non-compliances. These quarterly monitoring reports will further be compiled into one annual report covering all the project roads for submission to ADB for disclosure on the ADB website. If there are any changes in the design or alignment or if there are any unanticipated impacts, the EMP of the respective project road will be updated to account for any additional or new environmental impacts and relevant corrective actions. Further, the need for revising the respective IEE report will also be reviewed and confirmed in discussion with ADB. The CSC in

consultation with the UPPWD Environment and Social Unit will develop guidelines and outlines of all monitoring reports including inspection checklist and will be issued to all contractors upon issuance of notice to proceed.

- (ii) **Social Safeguard Monitoring.** The Safeguard Officer with the support of Resettlement Consultant at UPPWD central will be responsible for the overall internal monitoring and evaluation of the progress on social safeguard. The Safeguards Officer will monitor and verify the implementation of each RP to determine whether resettlement goals have been achieved, and livelihood and living standards have been restored, and provide recommendations for improvement. Monitoring will also ensure the recording of consultation with APs during implementation, including: their understanding of entitlement policies, options, and alternatives; compensation valuation and disbursement, livelihood restoration packages, grievance redress procedures and staff competencies. The internal monitor will also evaluate the performance of the NGO (if required). The Resettlement Specialist will advise UPPWD on safeguard compliance issues. If significant non-compliance issues are identified, UPPWD is required to prepare a corrective action plan to address such issues. UPPWD will document monitoring results, identify the necessary corrective actions, and reflect them in a corrective action plan. UPPWD, in each quarter, will study the compliance with the action plan developed in the previous quarter. Compliance with loan covenants will be screened by UPPWD. Semi-annual monitoring reports will be prepared by the EA with the support of UPPWD and submitted to ADB.
- (iii) **Gender Monitoring.** The CSCs will undertake monitoring of social safeguards, including awareness activities, which entail collecting sex segregated data that will be reported on a semi-annual basis.

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. UPPWD will monitor project implementation in accordance with the schedule and time-bound milestones, and keep ADB informed of any significant deviations that may result in the milestones not being met. A project completion report¹⁹ will be submitted by UPPWD within 3 months of physical completion of the project, providing detailed evaluation of the progress of implementation, costs, consultant performance, social and economic impact, and other details as requested by ADB.

D. Reporting

71. UPPWD will provide ADB with (i) quarterly progress reports in a format consistent with ADB's project performance reporting system; (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 next 12 months; and (iii) a project completion report within 3 months of physical completion of the project. To ensure projects continue to be both viable and

¹⁹ Project completion report format available at: <http://www.adb.org/sites/default/files/pai-6-07-a.pdf>

sustainable, project financial statements and the executing agency AFSs, together with the associated auditor's report, should be adequately reviewed.

E. Stakeholder Communication Strategy

72. Salient information regarding the project, including scope, general progress status, beneficiaries, invitation for bid and consultant recruitment notices, will be provided to the general public. The information will be made available and updated through the official website of UPPWD. The safeguard documents, i.e., initial environmental examination including EMP, resettlement framework, resettlement plans, will be posted on ADB's website. Moreover, UPPWD, with the support of the RP implementation NGO, will implement the stakeholders' communication plan, which includes the distribution of leaflets with the Entitlement Matrix and short description of grievance mechanism with PIU contact number at the onset of implementation. UPPWD will provide relevant information, including information from the above documents in a timely manner, in an accessible place and in a form and languages understandable to the displaced people and other stakeholders. If the displaced people are illiterate, other appropriate communication methods will have to be used. These activities will be monitored and reported in the semi-annual Social Monitoring Report.

X. ANTICORRUPTION POLICY

73. The government, state government, and UPPWD are advised of ADB's Anticorruption Policy (1998, as amended to date). Consistent with its commitment to good governance, accountability and transparency, implementation of the Project shall adhere to ADB's Anticorruption Policy. ADB reserves the right to review and examine, directly or through its agents, any alleged corrupt, fraudulent, collusive, or coercive practices relating to the Project. In this regard, investigation of government officials, if any, would be requested by ADB to be undertaken by the government.

74. To support these efforts, relevant provisions of ADB's Anticorruption Policy are included in the Loan Regulations, Agreements, and the bidding documents. In particular, all contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the State and UPPWD, and all contractors, suppliers, consultants, and other service providers as they relate to the Project. Individuals/entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contract under the Project.²⁰

75. Uttar Pradesh has been amongst the first states in the country to enact specific legislation for anticorruption measures, through the "*Lokayukta Tatha Up-Lokayukta Adhininyam*" (Act No. 42 of 1975) (Act to appoint an anticorruption ombudsman with specific powers). UPPWD will follow norms and standards prescribed in the executive orders issued by the State Government from time to time, which emphasizes on transparency in managing of works. To achieve this goal, the e-tendering system has been introduced in 2009. Other initiatives such as computerization of accounts and web-based work progress monitoring system have been developed to enhance transparency.

76. ADB's Anticorruption Policy designates the Office of Anticorruption and Integrity²¹ as the point of contact to report allegations of fraud or corruption among ADB-financed projects or its staff. Office of Anticorruption and Integrity is responsible for all matters related to allegations of

²⁰ ADB's Integrity Office web site is available at: <http://www.adb.org/integrity/unit.asp>

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

fraud and corruption. For a more detailed explanation refer to the Anticorruption Policy and Procedures. Anyone coming across evidence of corruption associated with the Project may contact the Anticorruption Unit by telephone, facsimile, mail, or email at the following numbers/addresses:

- by email at integrity@adb.org or anticorruption@adb.org
- by phone at +63 2 632 5004
- by fax to +6326362152
- by mail at the following address

(Please mark correspondence Strictly Confidential):

Office of Anticorruption and Integrity
 Asian Development Bank
 6 ADB Avenue
 Mandaluyong City 1550
 Metro Manila, Philippines

77. The website of UPPWD will provide updated, detailed information on project implementation. For example, it will include procurement-related information, such as ongoing tenders, list of participating bidders, name of the winning bidder, basic details on bidding procedures adopted, amount of contract awarded, and the list of goods and/or services procured.

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.²²

79. UPPWD shall issue an order to establish a GRM. The relevant committees and staff to make the mechanism operational have to be put in place prior to carrying out social surveys for any project road. The GRM will ensure greater accountability, to receive and resolve complaints, as well as to act upon stakeholders' reports of irregularities on project related matters, including grievances concerning environment and resettlement. The existence of this mechanism will be publicized 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.

²² For further information, see: <http://www.adb.org/Accountability-Mechanism/default.asp>.

XII. RECORD OF PAM CHANGES

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

Sl. No.	Date	Description of Revisions

PROCUREMENT PLAN

Basic Data

Project Name: Uttar Pradesh Major District Roads Improvement Project	
Project Number: 43574-025	Approval Number:
Country: India	Executing Agency: Public Works Department - Uttar Pradesh
Project Procurement Classification: Category B	Implementing Agency: Project Management Unit Government of Uttar Pradesh
Project Procurement Risk: Low	
Project Financing Amount: US\$ 428,000,000 ADB Financing: US\$ 300,000,000 Cofinancing (ADB Administered): Non-ADB Financing: US\$ 128,000,000	Project Completion Date: 31 March 2021
Date of First Procurement Plan: 17 July 2015	Date of this Procurement Plan: 17 July 2015

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

1. Procurement and Consulting Methods and Thresholds

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

Procurement of Goods and Works		
Method	Threshold	Comments
International Competitive Bidding for Goods	US\$ 10,000,000 and Above	
National Competitive Bidding for Goods	Between US\$ 100,000 and US\$ 9,999,999	
Shopping for Goods	Up to US\$ 99,999	
International Competitive Bidding for Works	US\$ 40,000,000 and Above	
National Competitive Bidding for Works	Up to US\$ 39,999,999	

Consulting Services	
Method	Comments
Least-Cost Selection for Consulting Firm	For one Finance and Audit firm to assist PIU
Quality- and Cost-Based Selection for Consulting Firm	

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

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

Package Number	General Description	Estimated Value	Procurement Method	Review (Prior/Post)	Bidding Procedure	Advertisement Date (quarter/year)	Comments
2-1	Road Construction, including associated works: Hussainganj - Hathgaon- Auraiya - Alipur	22,260,000.00	NCB	Prior	1S1E	Q4 / 2015	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Large Works Comments: Bidding 1S1E based on eGP system and single stage evaluation.
2-2	Road Construction,	23,810,000.00	NCB	Prior	1S1E	Q4 / 2015	Prequalification of Bidders:

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	including associated works: Nanau - Dadon						N Domestic Preference Applicable: N Bidding Document: Large Works Comments: Bidding 1S1E based on eGP system and single stage evaluation.
2-3	Road Construction, including associated works: Muzaffarnagar - Baraut	37,910,000.00	NCB	Prior	1S1E	Q4 / 2015	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Large Works Comments: Bidding 1S1E based on eGP system and single stage evaluation.
2-4	Road Construction, including associated works: Haliyapur Kudebhar - Semari (NH Crossing)	38,070,000.00	NCB	Prior	1S1E	Q4 / 2015	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Large Works Comments: Bidding 1S1E based on eGP system and single stage evaluation.
2-5	Road Construction, including associated works: Semari (NH Crossing) - Belwai	35,240,000.00	NCB	Prior	1S1E	Q4 / 2015	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Large Works Comments: Bidding 1S1E based on eGP system and single stage evaluation.
2-6	Road Construction, including associated works: Kaptanganj - Hata - Gauri Bazaar - Rudrapur	35,000,000.00	NCB	Prior	1S1E	Q4 / 2015	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Large Works Comments: Bidding 1S1E based on eGP system and single stage evaluation.
2-7	Road Construction, including associated works: Kaptanganj - Naurangiya	36,000,000.00	NCB	Prior	1S1E	Q4 / 2015	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Large Works Comments: Bidding 1S1E based on eGP system and single stage evaluation.
2-8	Road Construction, including associated works: Bulandshahr - Anoopshahr - Dibai Chowk	27,000,000.00	NCB	Prior	1S1E	Q4 / 2015	Prequalification of Bidders: N Domestic Preference Applicable: N

Consulting Services								
Package Number	General Description	Estimated Value	Number of Contracts	Recruitment Method	Review (Prior/Post)	Advertisement Date (quarter/year)	Type of Proposal	Comments
4-1	Finance and audit firm to support PIU	75,000.00	1	LCS	Prior	Q1 / 2015	BTP	Assignment: National

B. Indicative List of Packages Required Under the Project

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

Goods and Works							
Package Number	General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Procurement Method	Review (Prior/Post)	Bidding Procedure	Comments
5-1	Road Safety Works	10,000,000.00	1	NCB	Prior	1S1E	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Large Works Comments: Bidding 1S1E based on eGP system and single stage evaluation.

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

DESIGN AND MONITORING FRAMEWORK

Impact the Project is Aligned with			
Mobility and accessibility improved (Twelfth Five-Year Plan) ^a			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
<p>Outcome</p> <p>Efficiency and safety of the core road network in Uttar Pradesh improved</p>	<p>By 2022</p> <p>a. Movement of people and goods on rehabilitated roads measured by annual average daily traffic increased to 71,000 (2015 baseline: 53,400)</p> <p>b. Average travel time on the project roads reduced by 25% (2015 baseline: 1.61 minutes per km)</p> <p>c. Vehicle operating cost (economic) on the project roads reduced by 25% (2015 baseline: Rs13 per km in the case of cars and Rs27 per km in the case of medium trucks)</p> <p>d. Annual deaths from road accidents on the project roads reduced to fewer than 100 (2014 baseline: 109)</p>	<p>a. Post-implementation measurement by UPPWD</p> <p>b. Post-implementation measurement by UPPWD</p> <p>c. Post-implementation measurement by UPPWD</p> <p>d. Data collated from police jurisdictions by UPPWD</p>	<p>a. Severe economic reversals are encountered in the state</p> <p>b. Poor cooperation and coordination from Transport and Traffic Police departments in regulation and enforcement</p>
<p>Outputs</p> <p>1. MDRs, designed to all-weather standards and road safety, reconstructed and rehabilitated</p> <p>2. Road maintenance and asset management improved</p> <p>3. Road safety of MDRs in the CRN audited and safety features installed</p>	<p>By 2021</p> <p>1. About 430 km of MDRs reconstructed and rehabilitated, with road safety features friendly to the elderly, women, children, and people with disabilities at appropriate locations^b</p> <p>2. Contracts with 5-year, performance-based maintenance adopted for all MDRs under the project</p> <p>3. Road safety audit of MDRs in the CRN conducted and appropriate and cost-efficient measures for addressing accident-prone spots implemented</p>	<p>1. Progress reports by UPPWD</p> <p>2. Progress reports by UPPWD</p> <p>3. Road safety audit report, progress reports by UPPWD</p>	<p>Major turnover in key UPPWD staff during implementation</p>

<p>Key Activities with Milestones</p> <p>Output 1: MDRs, designed to all-weather standards and road safety, reconstructed and rehabilitated</p> <p>1.1 Award and mobilize construction supervision consultant by Q3 2016 1.2 Award contracts for reconstruction and/or rehabilitation of about 430 km of roads by Q4 2016 and complete construction by Q4 2021 1.3 Initiate post-implementation measurement of indicators by UPPWD by Q1 2021</p> <p>Output 2: Road maintenance and asset management improved</p> <p>2.1 Start implementation of performance-based contracts for MDRs under the project by Q4 2018</p> <p>Output 3: Road safety of MDRs in the CRN audited and safety features installed</p> <p>3.1 Conduct road safety audit by Q4 2019 3.2 Implement appropriate and cost-efficient measures for addressing accident-prone spots by Q4 2020</p> <p>Project Management Activities</p> <p>Project implementation units established by Q1 2016 Project implementation support consultants recruited by Q1 2016 Counterpart funds available by Q1 2016 Resettlement plan activities completed by Q4 2016</p>
<p>Inputs</p> <p>ADB: \$300 million loan Government of Uttar Pradesh: \$128 million</p>
<p>Assumptions for Partner Financing</p> <p>Not applicable.</p>

ADB = Asian Development Bank, CRN = core road network, km = kilometer, MDR = major district road, Q = quarter, Rs = Indian rupees, UPPWD = Public Works Department of the Government of Uttar Pradesh.

^a Government of India, Planning Commission. *Twelfth Five-Year Plan, 2012–2017*. Delhi.

^b Features include well marked crossings, safety signage, and pedestrian walkways.

Source: Asian Development Bank.

LIST OF PROJECT ROADS

Sl. No.	MDR Number *	Name of Road	District	Length (km)
1	81C	Hussainganj- Hathgaon- Auraiya- Alipur	Fatehpur	36
2	82W	Nanau- Dadon	Aligarh	30
3	135W	Muzaffarnagar- Baraut	Muzaffarnagar, Baghpat	59
4	66E, 69C	Haliyapur- Kudebhar- Belwai	Sultanpur	96
5	25E, O31	Kaptanganj- Hata- Gauri Bazaar- Rudrapur Kaptanganj- Naurangiya	Deoria Kushinagar	84
6	58W	Bulandshahr- Anoopshahr- Dibai Chowk	Bulandshahr	36
7	52C	Mohanlalganj- Maurawan- Unnao	Lucknow, Unnao	54
8	45W	Aliganj- Soron	Etah, Kashiram Nagar	36
		Total		431

Source: Uttar Pradesh Public Works Department.

SUMMARY OF DESIGN STANDARDS

The design standards and general design considerations for all project roads include the following:

- i. Design standards will be in conformance with Indian Road Congress (IRC) codes and MORTH circulars and standards for design of roads and bridges.
- ii. As per IRC: 73, the minimum carriage-way width for MDRs is 3 meters. In consideration of future traffic growth and level of service, out of 8 project roads, six project roads will be widened to 7.0 m carriage-way with 2.5 m earthen shoulder and remaining two roads namely; Bulandshahar- Anoopshahar and Muzaffarnagar– Baraut will be widened to 7 meter carriage-way with 1.5 m paved shoulder and 1.0 m earthen shoulder.
- iii. In built-up and urban areas, the widening will be accommodated within the existing right-of-way.
- iv. Proper cross-drainage structures will be provided, wherever necessary, to ensure all weather connectivity. The overall width of culverts and new bridges will be 12 meters.
- v. In built up areas, covered side-drains of rectangular shape will be provided. Footpaths will also be provided in built up areas.
- vi. Adequate road safety features will be provided in accordance with the requirements of Indian Roads Congress and/or Ministry of Road Transport and Highways standards.
- vii. Design speeds will range from 50 to 80 kilometers per hour, depending on available right of way and location. At rail-road crossings, 20 kilometers per hour speed has been proposed.
- viii. In open areas, flexible pavement with varying thicknesses having 150 mm to 300 mm Granular Sub Base (GSB), 250 mm thick WMM, Dense Bituminous Macadam (DBM) of 50 mm to 100 mm and bituminous concrete of 30 mm to 40 mm thickness has been proposed.
- ix. The built-up sections will be constructed with rigid pavement. Such sections will have 250 mm thick pavement quality concrete (PQC), 150 mm dry lean cement concrete (DLC) and 200 mm GSB.

TERMS OF REFERENCE FOR CONSULTANTS

- Attachment 5A – Supervision Consultants, Firm
- Attachment 5B – Accounting Support Consultant, Firm
- Attachment 5C – Social Safeguard Consultant; Environment Safeguards Consultant
(Both individual)
- Attachment 5D – Road Safety Consultant, Firm

ATTACHMENT 5A

Terms of Reference for Construction Supervision Consultants Package 1 [UP-SC-1]

A. BACKGROUND

1. The Government of India has applied for a loan from the Asian Development Bank (ADB), and intends to utilize part of this loan towards the cost of the contract for consulting services related to construction supervision of Civil Works to be taken up under the proposed project of improving major district roads in the state of Uttar Pradesh, details of which are elaborated in subsequent sections. A project implementation unit (PIU) under the Uttar Pradesh Public Works Department (UPPWD) is designated as the Implementing Agency (IA) for the project. The government of Uttar Pradesh, acting through the UPPWD will be the executing agency (EA) for the project.

2. The state of Uttar Pradesh has a road network of approximately 300,000 km, out of which 173,000 km is under UPPWD. The roads under UPPWD comprise 7,550 km of National Highways (NHs), 7,530 km of state highways, 7,544 km of Major District Roads (MDRs), 39,245 km of Other District Roads (ODRs), and 118,166 km of Village Roads. Only about 60% of SHs are double lane. In the entire state 62% of MDRs and 83% of ODRs have widths less than 7 m.

3. A strategic option study carried earlier in 1996 indicated that the state lacked in terms of good quality roads compared to many other states of the country in terms of traffic capacity and road condition and a strategic core road network was identified for improvement. Based on that study, the Uttar Pradesh State Roads Project was completed in the year 2010, wherein almost 2,600 km of roads out of the network were upgraded or rehabilitated with World Bank assistance.

4. In view of the emerging traffic trends, it is clear that there is an urgent need for further improving the road network of the state and redefining the core road network from time to time. Keeping this in mind, a study to prepare a road network master plan of the state has been done, wherein consultants appointed by UPPWD have identified an updated Core Road Network (CRN) for the state comprising:

National Highway	7,550 km
State Highways	7,530 km
Major District Roads	5,761 km
Other District Roads	3,254 km
Total	24,095 km

5. The Government of Uttar Pradesh has a long-term program to improve the core road network (CR and, as part of this program, has applied for a financial assistance from ADB for the Uttar Pradesh Major District Roads Improvement Project (UPMDRIP) – hereinafter referred as “the Project.” The project will focus on MDRs forming part of the CRN.

6. The UPMDRIP will potentially have three components:
i. Civil Works Component: The scope of this component shall include upgrading/reconstructing/widening as well as rehabilitating selected MDRs

(hereinafter referred as “Project Roads”) from the CRN based on the available Budget.

- ii. Road Safety Component: A comprehensive and coordinated package of road safety sub-components.
- iii. Road Sector and Institutional Reform Component: This component is likely to include a program to strengthen UPPWD asset management of SHs, MDRs and ODRs, to support the application of IT systems for human resource management and works budgeting and management across the UPPWD organization.

7. Total project cost is about Rs.2500 Crore, and the project implementation period is about 36 months. All procurement will be in accordance with ADB’s Procurement Guidelines (2013, as amended from time to time).

B. OBJECTIVE OF THE ASSIGNMENT

8. The Civil Works Component will be undertaken in two phases. The list of roads to be included in Phase-I is provided in Attachment 1. Phase II works will be identified by UPPWD and designed by the same engineering consultant already recruited by UPPWD for Phase I roads. This TOR refers to Civil Works under Phase 1.

9. The improvement works shall primarily consist of raising the formation level to the design, widening to a standard two lanes from the existing single and intermediate lane widths, and pavement rehabilitation/strengthening. Road sections with high volumes of non-motorized traffic may be widened to 10 m with 1.5 m fully paved shoulders. Roads in urban areas may also require further widening for parking and/or provision for drains, sidewalks and parking where required. In some Phase II roads, re-alignments and land acquisition may be required.

C. SCOPE OF SERVICES

10. UPPWD now wishes to engage a team of multi-disciplinary expertise, hereinafter called the Construction Supervision Consultant (CSC), to carry out construction supervision as “Engineer”, hereinafter called the “Services”, for the Civil Works under the proposed project in accordance with the terms of reference below.

11. The overarching objective of these Services is to provide high quality technical and project management support during project implementation to ensure achievement of the project development objectives within the stipulated time and resources. In achieving these objectives, the CSC is required to provide all required assistance and support to the UPPWD in complying with the requirements of ADB’s requirements for project implementation. The CSC is encouraged to refer to these policies available on ADB’s website (<http://www.adb.org/documents/handbook-project-implementation>) before submitting the proposal and during delivery of these services. The Works contract documents may be based on ADB standard bidding document for works in India, as amended from time to time for National Competitive Bid procured contracts.

12. In support of the overarching objective, the key tasks of the services, shall include, but not be limited to, the following:

Construction Supervision of Civil Works (Time-Based)

13. The CSC will carry out all construction supervision activities for road works to ensure that works are carried out as per required quality and specifications with due regards to environment, social, and safety aspects in compliance with the contract conditions, environmental management plan, and international best practices for road construction;

14. The CSC shall assume delegated powers, duties and responsibilities assigned to the “Engineer” under the civil works contracts by the Employer. Minimum requirements for the supervision activities are presented in **Attachment 2**;

15. The construction period for civil contracts will vary, depending on the scope of works, but is expected to be 24 months. Different contract packages will commence at different times, with an overlap. Prior to commencement of construction, the CSC will carry out a design review, for which it would need to mobilize about 6–8 weeks prior to contractor’s mobilization. After completion of construction, the CSC shall remain mobilized on site for a 12 month period of post construction monitoring and defects notification;

16. Review designs, drawings, BOQ provisions and specifications with respect to actual site conditions and suggest modifications, if required or deemed appropriate. Any realignment, redesign/modification, any additional design of bridge desired for completion of the project will be done by CSC and related approvals from concerned authorities will be obtained by the CSC without any extra cost including remuneration of personnel, equipment, software and office supplies;

17. Prepare an overall plan and schedule for the project in sufficient detail to ensure all important activities are identified, clearly show linkages between activities, allow monitoring of progress, provide early indications of potential problems, and enable interventions by the UPPWD, other consultants and contractors to maintain the project schedule. This plan will require updating at regular, frequent intervals;

18. Assist the UPPWD in the preparation of the overall project implementation program including pre-construction activities, procurement, financial management and implementation. The Consultants are expected to mobilize 6-8 weeks in advance of the commencement of construction;

19. Monitor actual physical progress and costs against plans and budgets and prepare detailed Quarterly Progress Reports on activities, progress and costs of all project components. The report will be a summary of progress reports prepared by contractors, consultants and other agencies in all components of the project. The contents and formats of the report will be agreed with the UPPWD. Monitor the progress and quality of construction/maintenance works for compliance with the contractual provisions. Make regular field inspections of all construction and maintenance works and hold regular meetings with contractors, other consultants and UPPWD field divisions. Inform UPPWD and ADB of potential delays, cost overruns and non-compliances and recommend corrective actions;

20. Carry out two construction stage safety audits and a post-construction audit for all project roads/ contracts. This audit shall be carried out by the independent road safety audit team;

21. Ensure requisite insurances have been received and they comply with the requirements of the contract;

22. Review compliance with the documentation and advance actions requirements, including securing all statutory clearances and permits or handing over of site, and advise on issuing the notice to set the Commencement Date;

23. Assess the achievement of project development objectives through monitoring of result framework indicators agreed between UPPWD and ADB (outcomes and outputs in the design and monitoring framework). This may require primary and secondary data collection including road user satisfactory surveys, road condition surveys along CRN, traffic surveys, assessment of vehicle operating costs, collection of road crash fatality and serious injury data, assessment of road asset values. The project development objectives will be defined with ADB at a later stage. However, the survey may be conducted at one or two locations on each project road for establishing reasonable baseline data;

24. Prepare the Mid-Term Review Report of the project in agreed format;

25. The Consultants have to propose road safety expert additionally in his team for looking after all the aspects of road safety .The CSC Safeguard Specialist will act as External Monitor for the implementation of the Resettlement Plans (RPs) of the subproject roads to ensure compliance with the ADB's Safeguards Policy Statements (2009)¹ and the approved Resettlement Framework (i.e., R&R Policy). The key activities outlined in the RPs will be implemented and internally monitored by an implementing non-governmental organization (NGO) or consultant, in coordination with UPPWD. The role of the External Monitor will be to provide expert advice in all matters relating to resettlement and land acquisition, including, but not limited, to the following activities:

¹ <http://www.adb.org/sites/default/files/institutional-document/32056/safeguard-policy-statement-june2009.pdf>.

- i. Provide support to the engineering team during construction in minimizing social and resettlement impacts of the projects;
- ii. Verify/ or establish a socio-economic baseline of the affected persons prior to the start of resettlement activities;
- iii. Update the Resettlement Plan(s) if and when necessary;
- iv. Support the establishment of and coordinate the Grievance Redress Mechanism at the field level (i.e. document, monitor and guide the resolution);
- v. Verify whether the summarized final versions of the resettlement plan(s), pamphlets and signpost have been disclosed locally. Assess the adequacy and effectiveness of the consultative process and provide guidance when necessary;
- vi. Monitor the disbursement of entitlements and additional assistance to affected persons as stipulated in the Entitlement Matrix.² This will be conducted through reviewing documentation and progress reports prepared by the NGO, site visits and interviews with affected persons, UPPWD, the project implementation unit (PIU), local officials, village leaders, etc. A random check of 10% of affected households and focus group discussions are required;³
- vii. Assess the adequacy of assets measurement, entitlements, sufficiency of budget, and timeliness of mitigation measures; assess performance of NGO;
- viii. Propose Corrective Action Plans -identify weaknesses and compliance issues regarding resettlement activities and propose corrective actions when necessary;
- ix. Provide training on ADB's RP implementation to contractor, PIU and UPPWD staff;
- x. Encourage contractor to recruit APs in construction activities and monitor;
- xi. Monitor the relocation/rehabilitation of Community Property Resources (CPR) and work with engineering team to avoid damaging sensitive structures (i.e. graveyards, sacred and religious structures);
- xii. Support/guide the implementation and assess the development impact of the livelihood training program;
- xiii. Post resettlement assessment - Assess level of disruption and restoration of economic productivity and standards of living post resettlement. This will include qualitative and quantitative evaluation on the sustainability of living conditions of APs, including a quantitative sample survey of at least 20% of

² See RP and Resettlement Framework documents.

³ Particular attention to female and vulnerable APs will be provided.

affected households. The level of satisfaction of affected persons should also be assessed;

- xiv. Other activities related to the social responsibilities of the project - Monitor the contractor's compliance with core labor standards contract clauses, in particular the prohibition of Child Labor, the prohibition to discriminate, and Equal Pay for Equal Work. Monitor and report on the NGO STI & HIV/AIDS and human-trafficking awareness activities with the communities and the contractor's compliance with STI & HIV/AIDS provisions in the Civil Works Contracts; and
- xv. Prepare semi-annual social monitoring report for UPPWD and ADB respectively in the format prescribed by ADB.

26. Inspect the works at appropriate intervals during the Defect Notification Period for the Permanent Works (to the extent of the duration of the services) and advise the UPPWD on remedial works, if any;

27. Review the IEE report and update the Environmental Management Plan (EMP) and Environmental Monitoring Plan (EMOP) in accordance with the contract:

- i. Ensure the contractor implements the EMP;
- ii. Conduct coordination and training workshops on roles and responsibilities on EMP and EMOP implementation;
- iii. Prepare Environmental Monitoring reports based on the EMP monitoring and EMOP implementation activities as given in the contract to be submitted to ADB (once a year at least);

28. Conduct analyses and make recommendations on engineering issues including pavement investigations in case of any pavement failure during construction and contractual disputes;

29. Monitor Project costs and provide an updated forecast of costs at completion in the Quarterly Progress Reports. Alert the UPPWD and Asian Development Bank of unexpected major cost overruns at the earliest possible time; and

30. Participate in various discussions/ meetings/ missions as may be called upon by ADB and provide required information/ documents. The consultants have to provide for training of batches of about 20 persons, with about 2-3 such programs at various times. Consultant will make available the experts for conducting the training. The venue will be made available by UPPWD or arranged out of provisional sums.

D. DATA AND RESOURCES TO BE PROVIDED BY UPPWD

31. The following data and resources will be provided by UPPWD:

- i. Available base maps, existing road inventories, including data on pavement history and condition, traffic statistics and road crash fatality and serious injury statistics, geographical map so fall districts including category of road thereon as per IRC:1981-2001 Road Development Plan.
- ii. Detailed project reports prepared for the projects, design/ drawings of bridges, and roads including sub-soil investigation reports.
- iii. Other facilities, which UPPWD can provide (e.g. accommodation in Inspection Houses depending upon their availability).

E. TEAM COMPOSITION AND DURATION OF CSC

32. The estimated duration of services will be 36 months.

33. Proposed key professionals and indicative person-months are indicated in the table below:

	Key Professionals	Person-months
1.	Team Leader	36
2.	Deputy Team Leader (Construction Management Specialist)	36
3.	Senior Material- cum- Quality Control Engineer (2, 36 months)	72
4.	Resident Engineers (6 in numbers, 36 months)	216
5.	Senior Surveyor (2, 36 months)	72
6.	Senior Bridge Engineer	18
7.	Senior CAD Expert	36
8.	Environmental Specialist	18
9.	Social Development Specialist	24
10.	Contract Administration Specialist	18
	Total	546

34. Notes:

- i. Key professionals at positions 1-3 in the above table must be from the Lead/ Principal Firm in case of association, failing which the proposal shall be non-responsive in the Technical Evaluation.
- ii. The CSC team will have to work and be located both its main offices in Lucknow, and in a suitable number of field offices.
- iii. The above Key Professionals are minimum requirements. The CSC has to propose additional non-key technical support staff and administrative staff, as required, to best meet the objectives of the assignment. The INDICATIVE list of Non-key Professionals is given in the following table, but is for guidance only. However, the numbers and person-months for such staff shall be included in the technical proposal and the costs in respect of these personnel

are to be included in the financial proposal, and will be deemed to have been so included. CVs shall be provided at the time that the post is to be filled. Candidates shall meet the requirements for responsiveness of that position, as per good engineering practice.

	[INDICATIVE] Non-Key Professionals	[INDICATIVE] Person-months
1.	Quantity surveyors, 3	108
2.	Field Engineers, 6	216
3.	Surveyors, 6	216
4.	CAD Draftsmen, 3	108
5.	Lab Technician, 6	216
	Total	864

- iv. The CSC shall, if so required by the Client, provide any additional service at rates or on man-month rates as per the contract, or as mutually agreed upon, as a variation order.

F. QUALIFICATIONS AND EXPERIENCE OF KEY PROFESSIONALS WHOSE CV WOULD BE EVALUATED

1. Team Leader (National)

35. Educational Qualifications

Minimum - Graduate in Civil/ Highway/ Transportation Engineering
Desirable- Post Graduation or equivalent in Civil engineering/ Highway Engineering/ Transportation Engineering/ Construction Management

36. General Experience

Minimum- total work experience after Graduation – 20 years
Desirable- Experience of one Highway Project as Team Leader in Developed Countries

37. Relevant Experience

- (i) Team Leader for at least one Infrastructure/ Road Projects of similar complexities in Developed Country
- (ii) Team Leader for at least one Infrastructure/ Road Projects of similar size and complexities in Developing Country

38. Essential Knowledge and Experience

- (i) Project Management Experience for Infrastructure development projects from design to delivery.
- (ii) Thorough experience in design, construction, supervision and management of major highway projects.
- (iii) The candidate must demonstrate knowledge and experience of international 'best practices' and modern highway construction technology through several road design and construction projects in different countries.
- (iv) Administering FIDIC / International Funded Contracts.
- (v) Computer Aided Project Management Tools & Interpretation
- (vi) Experience of managing a team of at least 20 multi-disciplinary experts as well as strong people management skills during a project or corporate assignment.

2. Deputy Team Leader (Construction Management Specialist) (National)

39. Educational Qualifications

Minimum - Graduate in Civil/ Highway/ Transportation Engineering

Desirable- Post Graduation or equivalent in Civil engineering/Highway Engineering/ Transportation Engineering/Construction Management

40. General Experience

(i) Minimum total work experience after graduation – 15 years

(ii) Desirable- Experience of one Highway Project as Deputy Team Leader in Developed Countries

41. Relevant Experience

(i) Minimum 10 years of total work experience in supervision of road construction projects

(ii) Candidate should have worked as Team Leader of at least one road construction supervision project.

42. Essential Knowledge and Experience

(i) The candidate must have experience in administering FIDIC conditions of Contracts, specifications and Standards for Highway Projects relevant to India and International best practice, Modern Survey & Construction Techniques and Computer Aided Project Management Tools & Interpretation

(ii) Experience of managing a team of at least 15 multi-disciplinary experts as well as strong people management skills during a project or corporate assignment.

(iii) Should have knowledge of contract law, disputes resolution and arbitration.

3. Senior Material-cum-Quality Control Engineer (National)

43. Educational Qualifications

Minimum - Graduate in Civil/Highway/Transportation Engineering

Desirable – Post Graduation or equivalent in any Civil Engineering Discipline

44. General Experience

Minimum total work experience after Graduation – 15 years

45. Relevant Experience

(i) Minimum experience in material testing and quality control of highway and/or bridge design and construction projects – 10 years

(ii) Material Engineer for at least two projects of similar size and complexities.

46. Essential Knowledge and Experience

(i) A thorough knowledge of Specifications and Standards for Highway Projects in developing countries including India and International best practice

(ii) A thorough knowledge on modern techniques of materials investigation and laboratory testing is essential including monitoring quality control documentations at Laboratory.

(iii) The candidate must have wide experience on designs using alternative and local materials, in use of materials in pavement structures and in preparing specifications for the construction materials.

(iii) The candidate should have experience of Supervising Contractor's Crushers & Mixing Plants, design of Bitumen & Concrete Mix, preparation of Quality assurance/control Manual/system

4. Resident Engineers (6 nos.) (National)

47. Educational Qualifications

Minimum - Graduate in Civil/ Highway/ Transportation Engineering
 Desirable- Post Graduation or equivalent in Civil engineering/ Highway Engineering/ Transportation Engineering/Construction Management
 Desirable - Professional/ chartered accreditation with a recognized engineering/management institute

48. General Experience

Minimum total work experience after -graduation – 15 years

49. Relevant Experience

(i) Minimum 10 years of total work experience in supervision of road construction projects
 (ii) Candidate should have worked as RE of at least one road construction supervision project of similar size and complexity.

50. Essential Knowledge and Experience

The candidate must have experience in administering FIDIC conditions of Contracts, specifications and Standards for Highway Projects relevant to India and International best practice, Modern Survey & Construction Techniques and Computer Aided Project Management Tools & Interpretation

5. Senior Surveyor (National)

51. Educational Qualifications

Minimum - Diploma in Civil/ Highway/ Transportation Engineering
 or
 Graduate in Civil/ Highway/ Transportation Engineering with 15 years experience

Desirable – Post Graduation or equivalent in any Civil Engineering Discipline

52. General Experience

Minimum total work experience after Graduation – 15 years

53. Relevant Experience

(i) Minimum total work experience
 After Diploma – 20 years
 After Graduation – 15 years

54. Essential Knowledge and Experience

(i) A thorough knowledge of Specifications and Standards for Highway Projects in developing countries including India and International best practice
 (ii) A thorough knowledge on modern techniques of survey e.g. total stations, GPS etc.

6. Senior Bridge Engineer (National)

55. Educational Qualifications

Minimum - Graduate in Civil engineering
 Desirable- Post Graduation or equivalent in Structural Engineering

56. General Experience

Minimum total work experience after Graduation – 15 years

57. Relevant Experience

(i) Minimum Bridge Design, rehabilitation and Construction experience in Developing Countries – 10 years

(ii) Design Lead for at least one major bridge design and construction of similar size and complexities in Highway Project.

58. **Essential Knowledge and Experience**

(i) The candidate must demonstrate knowledge of various internationally accepted design codes and methodologies and familiarity with international 'best practices' through several bridge design projects in different countries.

(ii) The candidate must have capability to design bridges with alternative materials and structural arrangements.

(iii) The candidate must have the experience of planning and monitoring geotechnical and hydraulic investigations for the bridges and interpreting the findings thereof.

(iv) Experience in preparing and reviewing bridge construction methodologies/sequencing.

(v) Experience in Computer Aided Bridge Design Tools & Interpretation

(vi) Experience of managing a team of at least 10 multi-disciplinary engineers as well as strong people management skills during a project or corporate assignment.

7. Senior CAD Expert (National)

59. **Educational Qualifications**

Minimum - Graduate in Civil/ Highway/ Transportation Engineering

Desirable – Additional qualifications in CAD in Civil Engineering

60. **General Experience**

Minimum total work experience after Graduation – 10 years

61. **Relevant Experience**

(i) CAD experience in AutoCAD, MX Road, or similar software, in CAD applications of road projects, including data imports from GPS, Total Station, checking of vertical and horizontal profiles, and structural drawings – 10 years

62. **Essential Knowledge and Experience**

A thorough knowledge of Specifications and Standards for Highway Projects in developing countries including India and International best practice

8. Environmental Specialist (National)

63. **Educational Qualifications**

Minimum – Master's Degree or equivalent in Environment Sciences or related field

64. **General Experience**

Minimum total work experience after post-graduation – 15 years

65. **Relevant Experience**

(i) Minimum 10 years of total work experience on carrying out environment impact assessments of road development projects

(ii) Desirable - Environmental Expert in at least two externally funded (World Bank or ADB) projects

66. **Essential Knowledge and Experience**

(i) The candidate must have knowledge of the Asian Development Bank's guidelines, procedures and operational policies/directives.

(ii) Candidate should be conversant with all the activities expected to be undertaken for Environmental / Forest / Wild life clearance procedures and pertinent guidelines of Ministry of Environment & forests (MoEF), Government of India.

(iii) The candidate must have the experience of preparing environmental management plans and supervising & monitoring implementation of the plans.

9. Social Development Specialist (National)

67. Educational Qualifications

Minimum – Master’s Degree or equivalent in Social Sciences or related field

68. General Experience

Minimum total work experience after post-graduation – 15 years

69. Relevant Experience

(i) Minimum Social/ resettlement expert in at least two externally funded (World Bank or ADB) projects of similar size and complexity

70. Essential Knowledge and Experience

(i) The candidate must have knowledge of the Asian Development Bank’s guidelines, procedures and operational policies/directives.

(ii) Experience in preparation of RAP, gender plan, LAP, community consultations and IPDP is required.

(iii) Familiarity with project area and local language will be advantageous

(iv) The candidate must have a demonstrated track record of managing projects based upon the specific COTS PMIS / E-Tools proposed to be deployed by the CSC.

10. Contract Administration Specialist (National)

71. Educational Qualifications

Minimum - Graduate in Civil/ Highway/ Transportation Engineering/ Law

Desirable- Post Graduation or equivalent in Civil engineering/ Highway Engineering/ Transportation Engineering/ Construction Management/ Law

Minimum total work experience after graduation – 20 years

72. Relevant Experience

(i) Minimum 10 years of construction supervision and/or total Project Management experience in Infrastructure projects

(ii) Must have been on dispute resolution board or arbitration panel of at least two road projects

(iii) Candidate should have worked as Contract Specialist of at least one road construction supervision project.

73. Essential Knowledge and Experience

(i) The candidate must have experience of administering FIDIC conditions of Contracts, specifications and Standards for Highway Projects relevant to India and International best practice, Modern Survey & Construction Techniques and Computer Aided Project Management Tools & Interpretation

(ii) Should have knowledge of contract law, disputes resolution and arbitration.

G. FACILITIES TO BE PROVIDED BY THE CSC

74. The CSC shall be required to provide their own office accommodation, support staff, equipment, communication and IT facilities, transportation, and all resources, amenities, and facilities required to complete the services. Provision will be made in their office for visiting staff from the UPPWD Project Management Unit, including a meeting room with all facilities for 20 participants.

H. REPORTS

75. The CSC's assignment is driven by performance of the services in the field, and not by reports. However, the CSC shall submit the following reports, in a form and manner to be finalized between UPPWD and the CSC:

- i. Inception Report: 30 days after mobilization
- ii. Quarterly Performance Reports:
- iii. Draft Final Report:
- iv. Final Report:

76. The consultants are not required to submit monthly progress report. However they have to submit five hard and two soft copies of the reports mentioned above.

ATTACHMENTS

1. List of Proposed Roads for Phase I Civil works
2. Minimum Requirements for Supervision Activities.

Proposed Roads for Phase I Civil Works

Sl. No.	Road	District	Length (Km)
1	Hussainganj- Hathgaon- Auraiya- Alipur Marg (MDR 81C)	Fatehpur	36
2	Nanau- Dadon (82W)	Aligarh	30
3	Muzaffarnagar- Baraut (135W)	Muzaffarnagar/ Baghpat	59
4	Haliyapur- Kudebhar- Belwai (66E, 69C)	Sultanpur	96
5	Kaptanganj- Hata- Gauri Bazaar- Rudrapur (25E)	Deoria	84
	Kaptanganj- Naurangiya (O31)	Kushinagar	
6	Bulandshahr- Anoopshahr- Dibai Chowk (58W)	Bulandshahr	36
	Total		341

Minimum Requirements for Supervision Activities

1. To the extent not already included in the scope of its responsibilities as the "Engineer" under the civil works contract, the CSC shall be responsible to:
 - i. Assist UPPWD to negotiate the mutually beneficial terms and conditions as well as construction schedule;
 - ii. Ensure the contractor adheres to the agreed schedule at the time of signing the contract for submitting all documents (performance bonds, insurance policies, license, etc.) completing the Engineer's facilities, and any other requirements as stipulated in the specifications and the civil works contract;
 - iii. Review the work program in consultation with the contractor, and hold joint monthly meetings with UPPWD to review the contractor's claims, the CSC's verification of the accuracy of the claims and withdrawal applications, and agree on their submissions to the Bank;
 - iv. Review the geometry, pavement, bridge, and other structural designs, specifications, construction method etc. ordered by UPPWD and revise or update if possible to achieve greater economy, safety, reliability, and/or durability;
 - v. Prepare working drawings, and provide written confirmation to the UPPWD indicating the acceptance of ownership of the drawings; working drawings will be prepared by the contractors and reviewed and approved (on the behalf of UPPWD) by the supervision consultants.
 - vi. Daily presence on site such as needed but not limited to inspectors of works, surveyors, material technicians and senior Engineer's staff. Ensure day-to-day quality control and quantity measurements of the works carried out;
 - vii. Planning and execution of construction supervision and contract administration, including effective and regular supervision of the works, maintenance of project records, correspondence and diaries, as well as quality control testing to ensure that the works are executed in accordance with the contract;
 - viii. Approve and monitor the contractor's construction program and method statements, verifying that they are consistent with the project implementation schedule and with the design solutions, the requirements of existing normative documents, technological sequence and safety of construction, informing about it in a written form to UPPWD, with a copy to the Bank;
 - ix. Develop quality and quantity assurance control manual and conduct daily monitoring in accordance with the manual, which will be oriented to the day by day quantity and quality control and approval of the contractor's works.

- x. Provide survey data to the contractor and checking the contractor's setting-out of the works and inform of its accuracy in a written form to UPPWD, with a copy to the Bank;
- xi. Inspect, prepare inspection acts, and test all materials and works to ensure compliance with specifications and giving immediate notice to the contractor in the event that such materials and works fail to comply with the specifications. Copies of notices will be included in the quarterly progress reports to UPPWD and the Bank;
- xii. Inspect regularly the contractor's construction equipment, installations, housing, medical facilities, etc. and prepare inspection acts, and ensure that they are adequate and in accordance with the terms and conditions specified in the contract for the works;
- xiii. Maintain, check, record and approve the daily progress records produced by the contractors on work progress, labor, equipment, major construction materials, at site, work accomplished, weather, river conditions, accidents as well as any other events affecting projects cost or implementation conditions of the Project.
- xiv. Ensure that road safety design requirements are implemented in accordance with the contract and works are undertaken with due regards to safety of road users and workers ;
- xv. Issue notices to the contractor advising of any non-compliance with environmental mitigation measures, asset out in the contract documents. Copies of all notices should be provided to UPPWD and the Bank at the time of issue. Before issuing such notices, the should, as appropriate, have advised the contractor of the non-compliance and given an opportunity to the contractor to make good any adverse impact prior to the notice being issued;
- xvi. Establish efficient procedures for verifying contractor performance and reporting progress and problems in a timely manner, including quality control reports, quantity survey records, requests for variation or change orders, requests for time extension, and contractor's claims and invoices. The will prepare the necessary procedures and present them to UPPWD and the Bank for approval;
- xvii. Ensure that the contractor does not involve child labor in the execution of civil works contracts in accordance with the provisions of the contract agreement;
- xviii. Prepare and issue to UPPWD and the Bank the following reports, whose format and content should be acceptable to UPPWD and the Bank an inception report, monthly progress reports, a detailed quarterly report, and a project completion report;
- xix. Certify payments for the works against the relevant bill of quantities and issue the Interim Payment Certificates, the Final Payment Certificate and other certificates, including Taking Over Certificate, as required under the civil works contract;

- xx. Keep UPPWD and the Bank informed of implementation problems that could jeopardize the project objectives and recommend how those objectives can be safeguarded;
- xxi. Evaluate claims, disputes, extensions of time, and the like, including issuing variation orders list and quantity of additional works for UPPWD's and the Bank's approval as appropriate and in line with the limits placed on UPPWD's authority, as well as advising UPPWD on all matters relating to the execution of the works;
- xxii. Issue of the Engineer's decisions/instructions as appropriate under the civil works contract;
- xxiii. Provide timely assistance to the contractor in all matters related to interpretation of the contract documents, ground survey controls, planning, quality control testing and other matters relating to Project;
- xxiv. Provide UPPWD with complete records, reports and "as-built" drawings for the works;
- xxv. Conduct a complete joint review of the works with all stakeholders and the Bank, as well as a safety audit , prior to hand over of the site to UPPWD;
- xxvi. Following the issue of the Taking Over Certificate, during the balance of the contract period inspect and approve the execution of the outstanding works(if any), as well as the rectification of any defects or damage -advise on any extension to the contract period that may be required for such works;
- xxvii. To a reasonable amount, if so required by UPPWD, provide any of the following additional services within the contract amount(i) prepare reports, including technical appraisals, additional contract documentation, and/or reviewing and commenting on the contractor's proposals, as may be required for any additional work required for the successful completion of the Project; and(ii) provision of any other specialist services as may be required from time to time;
- xxviii. For sake of clarity, to the extent that duties of the described in paragraph 3 here of directly conflict with such 's obligations under the civil works contract, then the shall be required to comply with the requirements specified in the civil works contract;
- xxix. The CSC will be on its behalf responsible for the contractor's low-quality works **and/or low-quality materials used by the contractor if such works or materials have** already been accepted and approved by the CSC .

2. PWD will engage a Third Party Quality Auditor to review quality of works and supervision services. CSC is to provide all required information/records and participate with Auditors during site visits/discussions/tests. CSC will be responsible for ensuring observations of Auditors are addressed.

ATTACHMENT 5B
Terms of Reference for Financial Management Firm

A. Background

1. The Government of Uttar Pradesh (GOUP), acting through the Public Works Department (UPPWD) is implementing a project with financial assistance from the Asian Development Bank (ADB). The Uttar Pradesh Major District Roads Improvement Project (UPMDRIP, the Project), costing about \$428 million, will improve about 430 km of major district roads (MDRs) in the state of Uttar Pradesh, and contribute to road safety and sustainable maintenance.

2. The project will be implemented by a dedicated Project Implementation Unit (PIU), headed by the Chief Engineer (Externally Aided Projects), established at the UPPWD Headquarters in Lucknow. The PIU would be responsible for overall project management, financial management and procurement, and monitoring and evaluation. In addition, 4 PIU field units, each headed by an Executive Engineer, will function from Aligarh, Kanpur, Lucknow, and Moradabad. The PIU would be supported by Construction Supervision Consultants, which will be a firm of consultants being recruited for the purpose.

B. Objective

3. Sound financial management is a key for the successful implementation of this project. The accounting will be done by UPPWD on a cash basis using government systems, and expenditures will be recorded at the time of final payment. The rules of accounting will be guided by PWD Manual, and State Financial Handbook. The field divisions of UPPWD will maintain accounting records at the respective locations. The objective of the assignment is to provide support to the PIU in discharging finance and accounting functions and assisting them in ensuring that financial rules/practices, fiduciary aspects are appropriately handled at all levels of the project. The firm will work in close association with accounts staff and engineers of UPPWD Head office, field offices (divisions/circles) of GOUP.

C. Scope of Assignment and Detailed Tasks

4. The firm shall familiarize itself with the working of the UPPWD in terms of finance and accounting, and also the processes followed in the ongoing World Bank loan. The firm shall also familiarize itself with the requirements of ADB for Project Financial Accounting and other aspects of financial management (<http://www.adb.org/projects/operations/financial-management-resources>).

5. Support the project to deal with all financial management issues as per the norms and guidelines prescribed by GOUP and ADB.

6. Advise project on financial matters; support in accounting and implementing sound financial management practices.

7. Support in the preparation of annual work plans and budget estimates of the project.

8. Verify requisition by divisions/circles related to cash credit limit (CCL) and support in timely allotment and transfer of funds.

9. Carryout monthly and quarterly monitoring of budget vis-à-vis actuals, analyze

variances and support in undertaking corrective actions.

10. Facilitate project in drafting documents/ correspondences/ reports on financial issues to be dealt with UPPWD and ADB.
11. Undertake sample field review of financial records maintained by project divisions/circles for maintaining financial discipline and report anomalies/deficiencies to management.
12. Verify monthly expenditure statements and financial records submitted by project divisions/circles for completeness and correctness. Carry out review of internal controls, contract terms/conditions followed in processing payments.
13. Support PIU, project divisions/circles in obtaining DDO reconciliation statements and AG expenditure reconciliation certificates.
14. Support PIU and field divisions in compliance to government statutory requirements and tax laws i.e. deduction and timely remittances of taxes etc.
15. Strict monitoring of bank guarantees (i.e. bank confirmations, timely renewals etc.) and insurance policies.
16. Prepare project progress reports and financial reports for UPPWD and ADB.
17. Consolidate individual expenditure statements/financial reports received by various field divisions and prepare disbursement claim (Interim Financial Reports) for submission to office of CAAA for seeking ADB disbursement.
18. Follow-up with office of CAAA on ADB disbursements and reconcile claims admitted and disbursed to UPPWD.
19. Facilitate internal audit as per ToRs agreed with ADB and support in compliance to the audit actions.
20. Prepare annual project financial statements as per formats agreed with ADB and ensure timely submission of Project Financial Statements to office of State AG.
21. Facilitate external project audit by State AG and ensure timely submission of audit report to UPPWD and ADB.
22. Facilitate project in timely and effective resolution of AG audit observations.
23. Liaise and coordinate with Treasury Banks, State AG, CAAA, consultants, other project staff etc. for effective implementation of the project.
24. Carry out any other work related to financial management assigned by Superintending Engineer (Planning) from time to time.

D. Period of Assignment

25. The services of the firm would be initially required for a period of 24 months starting from January 2016 and may be renewed after assessing the pace of project implementation, performance of the firm on mutual consent. The physical staff presence of the firm in PIU at Lucknow is required for 2 weeks in a month. The staff presence would

be required during ADB missions and UPPWD project review meetings.

E. Services and facilities

26. The firm will be provided furnished office space in PIU, Lucknow with basic office facilities like telephone, stationary etc. to carry out project work. The experts will be required to bring their own computer, software, and internet access points as required.

27. The firm will be provided with all required project documents/ correspondences/ reports/ contract records, access to project sites and offices, as necessary to deliver the terms of assignment.

28. Travel and other logistic expenses for field visits will be provided as per TA/DA norms of UPPWD. The travel will be pre-approved by PIU.

F. Deliverable and Reporting Requirement

29. The deliverables will be as per scope of work. This is not a reporting assignment, but for providing ongoing accounting and finance services. However, the firm will also be required to submit the following:

- Quarterly report to Chief Engineer (Externally Aided Projects) or constituted committee of UPPWD, Lucknow before beginning of each quarter, highlighting the work program of next quarter.
- Monthly report to Chief Engineer (Externally Aided Projects) or constituted committee of UPPWD, Lucknow by the 10th of each month highlighting the tasks carried out during the past month.

G. Terms of Payment

30. The payment will be made in twenty four equal installments of the contract value in every second week of the next month upon submission of invoice by the firm. The payment will be approved by Chief Engineer (Externally Aided Projects) or constituted committee of UPPWD.

H. Monitoring and Review

31. The Chief Engineer (Externally Aided Projects) UPPWD may constitute a review committee to monitor and review the work of the firm.

I. Requisite Qualification and Experience

Position	Area of Specific Expertise	Minimum Qualification and professional Experience
Financial Management Expert, (One) Based at PIU, Lucknow	Accounting and Taxation	<ul style="list-style-type: none"> • Bachelor's Degree in Finance & Accounts with at least 8 to 10 years of experience in government accounting and PWD systems. Preference will be given to Chartered / Cost Accountant. • Experience in similar externally aided projects or road infrastructure projects would be an added advantage. • Excellent reading, writing and verbal communication skills of local language (Hindi) is essential. • Fluency in English is desirable. • Good computer knowledge is required. • Not more than 50 years of age.
Financial Management Analyst, (One) Based at PIU, Lucknow	Accounting and Taxation	<ul style="list-style-type: none"> • Bachelor's Degree in Finance & Accounts, CA (Inter) or ICWA (Inter) with at least 3 to 5 years of experience in accounting. • Excellent reading, writing and verbal communication skills of local language (Hindi) is essential. • Fair knowledge of English is desirable. • Working knowledge of computer is required.

ATTACHMENT 5C

Terms of Reference for Environmental Safeguards Expert and Social Safeguards Expert (Both Individuals, National)

A. Background

1. The Government of Uttar Pradesh (GOUP), acting through the Public Works Department (UPPWD) is implementing a project with financial assistance from the Asian Development Bank (ADB). The Uttar Pradesh Major District Roads Improvement Project (UPMDRIP, the project), costing about \$428 million, will improve about 430km of MDRs in the state of Uttar Pradesh, and contribute to road safety and sustainable maintenance.

2. The project will be implemented by a dedicated Project Implementation Unit (PIU), headed by the Chief Engineer (Externally Aided Projects), established at the UPPWD Headquarters in Lucknow. The PIU would be responsible for overall project management, financial management and procurement, monitoring and evaluation. In addition, 4 PIU field units, each headed by an Executive Engineer, will function from Aligarh, Kanpur, Lucknow, and Moradabad. The PIU would be supported by Construction Supervision Consultants, which will be a firm of consultants being recruited for the purpose.

B. Objective

3. ADB's projects strongly support environmental and social safeguards actions in line with ADB's Safeguards Policy Statement (2009) and other policies such as ADB's Public Communications Policy (2011). More specifically, UPPWD has to meet specific obligations under social safeguards and environmental safeguards. UPMDRIP is classified as 'A' for Social Safeguards and 'B' for Environmental Safeguards. UPPWD will be implementing and monitoring safeguards action through its field units (PIU) and headquarters PIU. In addition, there are specific obligations on the contractors, supervision consultants, and resettlement NGOs recruited by UPPWD. The objective of the assignment is to provide support to the PIU in discharging environmental and social safeguards function and assisting them in ensuring that environmental and social safeguards functions, obligations, reporting, and fiduciary aspects are appropriately handled at all levels of the Project.

4. Two individual experts are proposed to be separately recruited, and based in the headquarters PIU of UPPWD in Lucknow. The experts will work in close association with the Superintending Engineer (Planning) and nominated safeguards staff in the PIU and coordinate with other project consultants and NGOs to assist the PIU in meeting, monitoring, and reporting on its safeguards obligations. The experts shall familiarize themselves with the working of the UPPWD in terms of safeguards and with a thorough understanding of ADB's safeguards requirements vis-à-vis the project.

C. Scope of Work and Position Requirements

5. **Social Development Expert (national, 24 person-months):** Assist the PIU in understanding, monitoring, and reporting on the implementation of Resettlement Plans (RPs) in accordance with ADB's Safeguard Policy Statement (2009) and other related policies such as the Public Communications Policy (2011). The Expert will ensure that the PIU has undertaken payment of compensation to people affected by the project prior to hand-over of the site to the contractor. Prepare the due-diligence reports on resettlement implementation as needed under the Project. Provide monthly and quarterly reports on resettlement implementation and provide

updates on the schedule and financial aspects of resettlement to the team. Ensure consultations of affected persons are undertaken and documented during RP implementation. Participate in and document the Grievance Redress Mechanism. Monitor and provide guidance to the work of the supervision consultants and NGOs for resettlement implementation (engaged by UPPWD) and monitor the resettlement implementation at the project sites and provide training, if required, to the local UPPWD and supervision consultant staff. The required qualifications of the Social Development Expert are as follows:

- (i) **Educational Qualifications.** Minimum – Master’s Degree or equivalent in Social Sciences or related field
- (ii) **General Experience.** Minimum total work experience after post-graduation – 15 years
- (iii) **Relevant Experience.** Minimum Social/ resettlement expert in at least two externally funded (World Bank or ADB) projects of similar size and complexity.
- (iv) **Essential Knowledge and Experience**
 - (a) The candidate must have knowledge of the Asian Development Bank’s guidelines, procedures and operational policies/directives.
 - (b) Experience in preparation and monitoring of Resettlement Plans, gender plan, LAP, community consultations and IPDP is required.
 - (c) Familiarity with project area and local language will be advantageous

6. **Environment Expert (national, 24 person-months):** Assist the PIU in understanding, monitoring, and reporting on the Environmental Management Plan (EMP) and other measures related to environmental protection in accordance with ADB's Safeguard Policy Statement (2009). Prepare the due-diligence reports on EMP implementation as needed under the Project. Provide monthly and quarterly reports on EMP implementation and provide updates on the schedule and financial aspects to the team. Monitor EMP implementation at the project sites and provide training, if required, to the local UPPWD and PMC staff. The required qualifications of the Environment Expert are as follows.

- (i) **Educational Qualifications.** Minimum – Master’s Degree or equivalent in Environment Sciences or related field
- (ii) **General Experience.** Minimum total work experience after post-graduation – 15 years
- (iii) **Relevant Experience.** Minimum 10 years of total work experience on carrying out environment impact assessments of road development projects
- (iv) **Essential Knowledge and Experience.**
 - (a) Desirable - Environmental Expert in at least two externally funded (World Bank or ADB) projects
 - (b) The candidate must have good knowledge of the Asian Development Bank’s guidelines, procedures and operational policies/directives.

- (c) Candidate should be conversant with all the activities expected to be undertaken for Environmental / Forest / Wild life clearance procedures and pertinent guidelines of Ministry of Environment & forests (MoEF), Government of India.
- (d) The candidate must have the experience of preparing environmental management plans and supervising & monitoring implementation of the plans.

D. General Scope of Work for Both Experts

- 7. Support the PIU to deal with all safeguards management issues as per the norms and guidelines prescribed by UPPWD and ADB.
- 8. Carry out monthly and quarterly monitoring of safeguard activities.
- 9. Facilitate PIU in drafting documents/ correspondences/ reports on safeguards issues to be dealt with UPPWD and ADB.
- 10. Undertake sample field review of activities by project divisions/circles for safeguards, and report anomalies/deficiencies to management.
- 11. Verify monthly statements and records submitted by project divisions/circles for completeness and correctness. Carry out review of internal controls.
- 12. Support PIU and field divisions in compliance to Government statutory requirements with reference to safeguards.
- 13. Prepare project progress reports and safeguards monitoring reports for UPPWD and ADB.
- 14. Facilitate project in timely and effective resolution of any safeguards issues/ observations.
- 15. Liaise and coordinate with various agencies (forest, revenue, etc.) for effective implementation of the Project.
- 16. Carry out any other work related to safeguards activities assigned by Superintending Engineer (Planning) from time to time.

E. Services and Facilities

- 17. The firm will be provided furnished office space in PIU, Lucknow with basic office facilities like telephone, stationary etc. to carry out project work. The experts will need to get their own computer/ laptop, software, and internet access points as required.
- 18. The firm will be provided with all required project documents/ correspondences/ reports/ contract records, access to project sites and offices, as necessary to deliver the terms of assignment.
- 19. Travel and other logistic expenses for field visits will be provided as per TA/DA norms of UPPWD. The travel will be pre-approved by PIU.

F. Deliverable and Reporting Requirement

20. The deliverables will be as per scope of work. This is not a reporting assignment, but for providing ongoing support services of a technical nature. The experts will be expected to assist UPPWD in preparing required documentation, monitoring reports, and submissions to ADB. However, the firm will also be required to submit,

- Quarterly report to Chief Engineer (Externally Aided Projects) or constituted committee of UPPWD, Lucknow before beginning of each quarter, highlighting the work program of next quarter.
- Monthly report to Chief Engineer (Externally Aided Projects) or constituted committee of UPPWD, Lucknow by the 10th of each month highlighting the tasks carried out during the past month.

G. Terms of Payment

21. The payment will be made in twenty four equal installments of the contract value in every second week of the next month upon submission of invoice by the firm. The payment will be approved by Chief Engineer (Externally Aided Projects) or constituted committee of UPPWD.

ATTACHMENT 5D
TERMS OF REFERENCE FOR ROAD SAFETY CONSULTANT (FIRM)

A. BACKGROUND

1. The Government of India has applied for a loan from the Asian Development Bank (ADB), and intends to utilize part of this loan towards the cost of the contract for consulting services related to Road Safety to be taken up under the proposed project of improving major district roads in the state of Uttar Pradesh, details of which are elaborated in subsequent sections. A project implementation unit (PIU) under the Uttar Pradesh Public Works Department (UPPWD) is designated as the Implementing Agency (IA) for the project. The government of Uttar Pradesh, acting through the UPPWD will be the executing agency (EA) for the project.

2. The state of Uttar Pradesh has a road network of approximately 300,000km, out of which 173,000km is under UPPWD. The roads under UPPWD comprise 7,550 km of National Highways (NHs), 7,530 km of State Highways (SHs), 7,544 km of Major District Roads (MDRs), 39,245 km of Other District Roads (ODRs) and 118,166 km of Village Roads. Only about 60% of SHs are double lane. In the entire state 62% of MDRs and 83% of ODRs have widths less than 7 m.

3. In view of the emerging traffic trends, it is clear that there is an urgent need for further improving the road network of the state and redefining the core road network from time to time. Keeping this in mind, a study to prepare a road network master plan of the state has been done, wherein consultants appointed by UPPWD have identified an updated Core Road Network (CRN) for the state comprising:

National Highway	7,550 km
State Highways	7,530 km
Major District Roads	5,761 km
Other District Roads	3,254 km
Total	24,095 km

4. The Government of Uttar Pradesh has a long-term program to improve the CRN and, as part of this program, has applied for a financial assistance from ADB for the Uttar Pradesh Major District Roads Improvement Project (UPMDRIP) – hereinafter referred as “the Project.” The project will focus on MDRS forming part of the CRN. The estimated Project cost is \$428 million.

5. The UPMDRIP will have two main components:

- i. **Civil Works Component.** The scope of this component shall include upgrading/ reconstruction/ widening selected major districts roads from the CRN based on the available budget.
- ii. **Road Safety Component.** A comprehensive and coordinated package of road safety sub-components.

B. SCOPE OF THE ROAD SAFETY COMPONENT

6. **Road Safety.** As per the Ministry of Road Transport and Highways (MORTH) report of 2013, the country's road safety record is not very good, though it has been showing some improvement in the trend after 2010. Amongst the states in India, Uttar Pradesh has a poor record of road accidents, and ranks seventh highest in the country in terms of number of accidents of registered vehicles. However, it has the highest proportion of fatal accidents in the country, with over 11% in 2013. It is in this context that Uttar Pradesh became one of the first states in the country to establish a "Road Safety Policy" in 2014. The Road Safety Policy, established in partnership with the World Bank and the Government of New Zealand, covers the following areas: (i) building awareness of road safety, (ii) strengthening institutional arrangements, (iii) establishing a road safety database, (iv) ensuring safer road infrastructure, (v) promoting safer vehicles, (vi) training drivers for safety, (vii) enforcement of traffic laws, and (viii) emergency medical assistance to accident victims. The present projects of the World Bank and ADB will facilitate UPPWD's actions to improving road safety.

7. Under the UPMDRIP, the selected Road Safety Consultant (RSC) will (i) conduct a detailed safety audit of the MDRs under the CRN (approximately 6000 km), and including all eight roads taken up under the UPMDRIP; (ii) propose designs and drawings for improving identified accident prone locations (black spots); and (iii) supervise the contractor(s) implementing such improvement measures.

C. SCOPE OF SERVICES

8. UPPWD now wishes to engage a team of multi-disciplinary expertise, hereinafter called the RSC, to carry out the broad scope of work mentioned in 2.2 above. The overarching objective of these Services is to provide quality technical support to assess, design, and supervise defined road safety features on the MDRs in the CRN. In achieving these objectives, the RSC is required to provide all required assistance and support to the UPPWD in complying with the requirements of ADB's requirements for project design and implementation. The RSC is encouraged to refer to these policies available on ADB's website (<http://www.adb.org/documents/handbook-project-implementation>) before submitting the proposal and during delivery of these services. The works contract for road safety components may be based on Asian Development Bank standard bidding document for works in India, as amended from time to time for National Competitive Bid procured contracts.

9. In support of the overarching objective, the key tasks of the services, shall include, but not be limited to, the following:

1. Road Safety Audit

- i. The RSC will carry out a safety audit of **all MDRs in the CRN**, including all 8 roads taken up under UPMDRIP (including the junctions with other state roads, national highways). The audit will, inter-alia, examine and determine accident statistics (fatal, grievous, others), map them by approximate location, identify causative factors¹, and prioritize spots for corrective measures.

¹ In many cases, if not a majority, the cause is indicated as 'driver error.' This is a catchall phrase that covers various contributions such as engineering related (poor curves, junctions, sight distances, road conditions), awareness related (pedestrians running across), and so on. Data should be properly assessed and marked.

- ii. Based on this prioritization of accident spots where engineering interventions can help, the RSC will prepare designs and drawings for addressing them in an optimal cost way. Typical measures will include signage, dividers, junction traffic management installations (passive and active), S-curve improvements, and so on. All improvements will be done within existing available land, and no acquisition is envisaged. The project cost for this is estimated to be about \$10 million.
- iii. UPPWD will procure a contractor(s) for carrying out these safety enhancement features. The RSC will be responsible for all construction supervision activities for such road safety works to ensure that works are carried out as per required quality and specifications with due regards to environment, social, and safety aspects in compliance with the contract conditions, environmental management plan, and international best practices for road construction.
- iv. The RSC shall assume delegated powers, duties and responsibilities assigned to the “Engineer” under the civil works contracts by the Employer. Minimum requirements for the supervision activities are presented in **Attachment 2**.
- v. The construction period for such contract(s) depends on the scope of works, but is expected to be about 24 months.
- vi. The RSC will prepare an overall plan and schedule for the project in sufficient detail to ensure all important activities are identified, clearly show linkages between activities, allow monitoring of progress, provide early indications of potential problems, and enable interventions by the UPPWD, other consultants and contractors to maintain the project schedule. This plan will require updating at regular, frequent intervals.
- vii. The RSC will assist the UPPWD in the preparation of the overall project implementation program including pre-construction activities, procurement, financial management and implementation.
- viii. The RSC will monitor actual physical progress and costs against plans and budgets and prepare detailed Monthly Progress Reports on activities, progress and costs of all project components. The report will be a summary of progress reports prepared by contractors, consultants and other agencies in all components of the project. The contents and formats of the report will be agreed with the UPPWD.
- ix. The RSC will review compliance with the documentation, including securing of all statutory clearances and permits or handing over of site, and advise on issuing the notice to set the Commencement Date;
- x. Assess the achievement of project development objectives through monitoring of result framework indicators agreed between UPPWD and ADB (outcomes and outputs in the design and monitoring framework – DMF).
- xi. Prepare environmental and social safeguards reports in the formats prescribed by ADB. Support the UPPWD in matters relating to safeguards, including updating the Resettlement Plan, monitoring the implementation of the resettlement plan and providing expert advice in all matters relating to acquisition and resettlement
- xii. Advise the UPPWD on safeguard compliance issues and if necessary a corrective action plan will be prepared to address such issues.
- xiii. Monitor Project costs and provide an updated forecast of costs at completion in the Quarterly Progress Reports. Alert the UPPWD and Asian Development Bank of unexpected major cost overruns at the earliest possible time.

- xiv. Participate in various discussions/ meetings/ missions as may be called upon by ADB and provide required information/ documents.

D. DATA AND RESOURCES TO BE PROVIDED BY UPPWD

10. The following data and resources will be provided by UPPWD:
- i. Available base maps, existing road inventories, including data on pavement history and condition, traffic statistics and road crash fatality and serious injury statistics, geographical maps of all districts including category of road thereon as per IRC: 1981-2001 Road Development Plan.
 - ii. Detailed project reports prepared for the projects, design/ drawings of bridges, and roads including sub-soil investigation reports.
 - iii. Limited office space in UPPWD office. The RSC will need to make all other office, accommodation, and equipment arrangements.

E. DURATION OF RSC TEAM

11. The estimated duration of services will be 36 months
12. Proposed Key Professionals and indicative person-months are indicated in the table below:

	Key Professionals	Person-months
	International	
1.	Team Leader (Road Safety Expert)	18
	National	
2.	Deputy Team Leader (Traffic and Transport Engineer)	24
3.	Highway Engineer	24
4.	Senior Material- cum- Quality Control Engineer	24
5.	Resident Engineers (3 in numbers)	36
6.	Senior Surveyor (2)	48
7.	Senior CAD Expert	24
8.	Environmental Specialist	18
9.	Social Development Specialist	24
10.	Contract Administration Specialist	24
	Total	264

13. Notes:
- i. Key professionals at positions 1-3 in the above table must be from the Lead/ Principal Firm in case of association, failing which the proposal shall be non-responsive in the Technical Evaluation.
 - ii. The RSC team will have to work and be located both its main offices in Lucknow, and in a suitable number of field offices.
 - iii. The above Key Professionals are minimum requirements. The RSC has to propose additional non-key technical support staff and administrative staff, as required, to best meet the objectives of the assignment. The INDICATIVE list of Non-key Professionals is given in the following table, but is for guidance only. However, the numbers and person-months for such staff shall be included in the technical proposal and the costs in respect of these personnel are to be included in the financial proposal, and will be deemed to have been so included. CVs shall be provided at the time that the post is to be filled. Candidates shall meet the

requirements for responsiveness of that position, as per good engineering practice.

	[INDICATIVE] Non-Key Professionals	[INDICATIVE] Person-months
1.	Quantity surveyors, 2	48
2.	Field Engineers, 4	96
3.	Surveyors, 4	96
4.	CAD Draftsmen, 2	48
5.	Lab Technician, 4	96
	Total	384

- iv. The RSC shall, if so required by the Client, provide any additional service at rates or on man-month rates as per the contract, or as mutually agreed upon, as a variation order.
- v. Traffic surveys and topographic surveys will be covered under Provisional Sums. However, these have to be assessed, coordinated, and analyzed by the professional staff of the RSC.
- vi. Training and awareness programs and/or materials will be covered under Provisional Sums. However, these have to be prepared and conducted by the professional staff of the RSC.

F. FACILITIES TO BE PROVIDED BY THE RSC

14. The RSC shall be required to provide their own office accommodation, support staff, equipment, communication and IT facilities, transportation, and all resources, amenities, and facilities required to complete the services. Provision will be made in their office for visiting staff from the UPPWD Project Management Unit, including a meeting room with all facilities for 20 participants.

G. REPORTS

15. The RSC's assignment is driven by performance of the services in the field, and not by reports. However, the RSC shall submit the following reports, in a form and manner to be finalized between UPPWD and the RSC:

- i. Inception Report: 30 days after mobilization
- ii. Monthly Performance Reports:
- iii. Draft Final Report:
- iv. Final Report: