Project Administration Manual

Project Number: 50288-001 Loan Number: LXXXX October 2017

Republic of the Philippines: Infrastructure Preparation and Innovation Facility

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Project Administration Manual's 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 of Philippines (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 Department of Finance (DOF) as the executing agency; the Department of Public Works and Highways (DPWH), and the Department of Transportation (DOTr) as implementing agencies, are wholly responsible for the implementation of this ADB-financed project, as agreed jointly between the Government and ADB, and in accordance with Government and ADB's policies and procedures. ADB staff is responsible to support implementation including compliance by the DOF, DPWH and DOTr with their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.
- 3. At loan negotiations, the borrower and ADB shall agree to the PAM and ensure consistency with the loan agreement. Such agreement shall be reflected in the minutes of the loan negotiations. In the event of any discrepancy or contradiction between the PAM and 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's administrative procedures (including the Project Administration Instructions of ADB) and upon such approval they will be subsequently incorporated in the PAM.

ABBREVIATIONS

ADB – Asian Development Bank DOF – Department of Finance

DOTr – Department of Transportation

DPWH – Department of Public Works and Highways

EIRR – economic internal rate of return FIRR – financial internal rate of return

GDP – gross domestic product

ICC – Investment Coordination Committee ISA – International Standards on Auditing

ISAE – International Standards on Assurance Engagements
ISSAI International Standards of Supreme Audit Institutions

NEDA - National Economic Development Authority

ODA – overseas development assistance

PIB – public information booklet SOE – statement of expenditures

TA – technical assistance

I. PROJECT DESCRIPTION

A. Rationale

- 1. **Accelerating Infrastructure Investment.** The current administration under the Ten-Point Socioeconomic Agenda¹ aims to ramp up public infrastructure projects such as national roads, expressways, bridges, airports, subways, and railways. Public spending on infrastructure is expected to reach 7% of gross domestic product (gross domestic product) by 2022—or approximately \$14.5 billion annually, from the current level of 3.4% of gross domestic product in 2016. To materialize the goals of infrastructure investment, the government requested the Project from the Asian Development Bank (ADB) to help the two key agencies responsible for national public infrastructure projects, namely the Department of Public Works and Highways (DPWH) and the Department of Transportation (DOTr), conduct pre-investment activities which will in turn help accelerate the Investment Coordination Committee (ICC) review and approval process and ensure timely, high-quality procurement and implementation.²
- 2. **Core Development Problem**. Infrastructure enables access to work, markets, education, healthcare, housing, and other services that allow people to uplift their standards of living. Lack of or underdeveloped infrastructure has been identified as one of the most significant constraints to the Philippines' growth prospects. While the country has improved consistently in the Global Competitiveness Ranking from 65th in 2012–2013 to 57th in 2016–2017, its overall infrastructure significantly lacks behind other emerging Southeast Asian countries. In 2016–2017, the Philippines was ranked 112th out of 138 countries in terms of infrastructure quality, well below other Southeast Asian countries, such as Malaysia (19th), Thailand (72nd), and Indonesia (80th). The impacts of underdeveloped public infrastructure are high costs of doing business, which, in turn, undermine business potential and economic opportunities, especially in rapidly growing urban areas. Significant catch-up in infrastructure development is needed in the Philippines to realize the country's potential and remain competitive.
- 3. **Infrastructure Development Constraints**. Underdeveloped infrastructure is attributed to five factors: (i) inadequate infrastructure investment; (ii) lack of inter-agency coordination; (iii) inadequate or incomplete infrastructure plans and implementation programs; (iv) limited access to international expertise and constrained technical and management know-how in project preparation and implementation; and (v) inadequate sustainability of infrastructure. Coordination between the two main agencies responsible for infrastructure (DPWH and DOTr) and other key agencies is limited, which constrains project preparation and implementation. Infrastructure projects are often not delivered as planned due to either dated project formulation or dated project implementation, or both. Delays in safeguard compliance, procurement, and land acquisition as well as inadequate project management systems delay timely project delivery. The lack of project management and monitoring systems also implies that infrastructure is often delayed, inefficiently operated, and inadequately maintained, thereby undermining sustainability of project benefits.
- 4. **Tackling constraints to infrastructure planning, design, and implementation**. To enhance national capacity, additional access to international sources of innovation, expertise, advice, and best practices would enable DPWH and DOTr to incorporate expertise and innovation in project formulation and implementation. An ADB-funded Project and its international procurement systems would facilitate DPWH and DOTr access to required specific technologies, international expertise, and innovation, complementing and building on nationally available

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¹ The Ten-Point Socioeconomic Agenda, as presented during the 'Sulong Hakbang Tungo sa Kaunlaran' consultative workshop held on 20–21 June 2016.

² The Government's official request for ADB's assistance was made on 8 February 2017.

expertise. The Project will help DPWH and DOTr to more effectively execute and implement public infrastructure projects by accelerating the due diligence stages, detailed engineering designs, and the bidding process preparation.

- 5. **A Medium-term Solution.** The Project offers a short- to medium-term solution to meet the near term needs for increased capacity of DPWH and DOTr in preparing public infrastructure projects in the Philippines. ADB has supported the government to address infrastructure constraints through infrastructure projects and providing access to international best practices and innovation through project loans. The Project will supplement these interventions by providing DPWH and DOTr with easier access to international expertise and best practices. They will allow the government to act on its Ten-Point Socioeconomic Agenda to support the increase in spending on public sector infrastructure. In addition, the Project will provide support for the preparation of the long-term solution to the problem by: (i) building capacity of government agencies to effectively plan, identify, design, manage, and implement projects; and (ii) set the groundwork for a holistic examination of the current national procurement system and develop options for additional efficiency in its implementation. A separate TA Grant (TA 9336) has been provided to timely support capacity development and system management of public sector infrastructure development in the key agencies of National Economic and Development Authority (NEDA), DPWH, and DOTr in the short-to-medium term.³
- 6. **Alignment with the ADB Strategic Agenda**. The Project is included in the Country Operations and Business Plan 2017–2019. It contributes to the inclusive economic growth and environmentally-sustainable growth agenda of ADB's Midterm Review of Strategy 2020.⁴
- 7. **Value added by ADB assistance**. The project will build upon ADB's successful experience supporting the Public–Private Partnership Center for the Philippines and enhance the government public sector agencies' institutional set-up and capacity to identify, finance, and implement public-financed projects. The project will also be supported by the separate TA grant which will develop a public infrastructure project system management procedure and strengthen capacity of DPWH and DOTr staff to effectively implement and monitor projects.
- 8. The ADB assistance will provide value addition in the direct support to DPWH and DOTr in delivering more effective and innovative infrastructure projects through: (i) enhanced effectivity of identification, analysis, and planning for infrastructure gaps using international best practices, especially roads, urban transport, urban water, sanitation, and flood management; (ii) addressing critical constraints such as resettlement processes and inadequate access to international knowledge, best practices, innovation, and technology; and (iii) implementation management of sophisticated public infrastructure projects with international expertise to supplement national expertise and resources. The project will also help define key operational areas for ADB through gap analysis and support for country system development in key areas such as (i) land acquisition; (ii) procurement; and (iii) start-up delays.⁵ A TA loan is proposed as the financing modality.

B. Impact and Outcome

9. The Project is aligned with the following impact: infrastructure development accelerated.⁶

³ ADB. 2017. Technical Assistance to Philippines for Strengthening Infrastructure Capacity and Innovation for Inclusive Growth. Manila.

⁴ ADB. 2014. Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific. Manila.

⁵ ADB. 2012. Development Effectiveness Brief—Philippines: A New Horizon for One of Asia's Most Promising Nations. Manila.

⁶ Government of the Philippines, National Economic and Development Authority. 2017. *Philippine Development Plan 2017–2022*. Manila.

The Project will have the following outcome: delivery and quality of public infrastructure projects improved.⁷

C. Outputs

- 10. **Output 1 Road and bridge projects prepared.** Under this output, support will be provided to DPWH in the management and oversight of project planning and preparation for road and bridge projects, including feasibility assessments; project design including engineering, safeguards, project structure, economic analysis, financial assessment and preparation of procurement documents ready for tendering; and due diligence report of feasibility studies and detailed engineering designs.
- 11. **Output 2 Water projects prepared**. Under this output, support will be provided to DPWH in the management and oversight of project planning and preparation of water projects for flood protection, including feasibility assessment; project design including engineering, safeguards, project structure, economic analysis, financial assessment and procurement; project implementation arrangements including preparation of procurement documents ready for tendering; and due diligence reviews of feasibility studies and detailed engineering designs.
- 12. **Output 3 Rail, public transport, port, and airport project prepared**. Under this output, support will be provided to DOTr in the management and oversight of project planning and preparation for rail, public transport, port and airport projects, including feasibility assessment; project design including engineering, safeguards, project structure, economic analysis, financial assessment and procurement plan; implementation arrangements and preparation of procurement documents ready for tendering; and due diligence review of feasibility studies and detailed engineering designs.
- 13. **Output 4 Project development management system improved**. Under this output, documentation and manuals for project preparation activities will be prepared to ensure sustainability in the assistance and to embed management systems in DPWH and DOTr. Training will be provided to key staff in DPWH and DOTr in the management systems for project preparation.
- 14. **Implementation period**. The project is expected to be implemented from December 2017 to December 2021. Advance Action to recruit the consultants will be carried out between May-October 2017. Project preparation activities for prioritized projects will be carried out from loan effectiveness to the end of 2021. The loan closing is on 30 June 2022.
- 15. The Project will support both DPWH and DOTr (implementing agencies under the Project) to undertake project preparation work for the infrastructure projects to be financed under official development assistance (ODA) or by government's internal financing. An indicative list of projects to be supported under the Project is in Appendix 1. The potential projects are subject to change based on government priorities, technical and economic viability, and agreement with the ADB.

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 $^{^{\}rm 7}\,$ The design and monitoring framework is in Appendix 1.

II. IMPLEMENTATION PLAN

A. Project readiness activities

Table 1: Indicative ADB and Government Processing Milestones

Table 1: Indicativ		<u> </u>		<u> </u>		<u>17</u>			j		
Activities	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Responsibility
ADB Processing Milestones								ı			'
Fact-finding mission's wrap-up	Х										ADB, DOF, NEDA, DPWH, DOTr
Advance action on consultant recruitment (on behalf of Government)		Х	Х	Х	Х	X	Х	Х	Х		ADB, DPWH, DOTr
Loan negotiations							X				ADB, DOF, NEDA, DPWH, DOTr
ADB Board consideration								X			ADB
Loan agreement signing									X		ADB, DOF
Loan effectiveness declared										Х	ADB
Government project preparation	mile	eston	es								
Approval of fact-finding mission's Aide Memoire	X	Х									DOF, NEDA, DPWH, DOTr
Advance action on consultant recruitment		Х	Х	Х	X	Х	Х	Х	Х		DPWH, DOTr, ADB
Establishment of steering Committee							Х				DOF (DPWH, DOTr)
Establishment of PMUs in DPWH and DOTr						Х					DPWH, DOTr
Loan negotiation authorization							Χ				DOF, DPWH,
Legal opinion									Х		DOF, DOJ
TA Grant Activities											
TA Approval (TA 9336)				X							ADB, DOF, NEDA, DPWH, DOTr
Advance action on TA consultant recruitment				X	X						ADB, DPWH, DOTr
TA Effectivity						X					ADB, DOF, NEDA, DPWH, DOTr
Consultant mobilization						Х					ADB
Screening of Project lists				Х	Х	X	Х	Х	Х	X	ADB, DOF, NEDA, DPWH, DOTr
Review of implementing agency project management systems				X	X	Х	X	Х	X	X	ADB

ADB = Asian Development Bank; DOF = Department of Finance; DOJ = Department of Justice; DOTr = Department of Transportation; DPWH = Department of Public Works and Highways; NEDA = National Economic Development Authority; PMU = project management unit; TA = technical assistance.

Source: ADB Staff estimates

B. Overall Project Implementation Plan

Table 2: Output-Based Activities and Management Activities

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l																				_		-	_						_
	cative Activities	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Α.	Design and Monitoring																												.
	nework																											Ш	
1.	Output 1: Road and bridge project prepared																												
1.1	Carry out feasibility studies by Q4 2018		Χ	Χ	Х																								
1.2	Conduct surveys conducted by Q4 2019		Χ	Χ	Χ					Χ	Χ	Χ	Χ																
1.3	Complete project design, including engineering, safeguards, project structure economics analysis, financial assessment procurement plan and project implementation arrangements by Q1 2020									X	X	Х	X	Х															
1.4	Prepare procurement documents ready for tendering by Q4 2021					Х	Х	Х	Χ					Х	Χ	Χ	Χ	Х	Х	Χ	Х								
2.	Output 2: Water projects prepared																												
2.1	Carry out feasibility studies by Q4 2018		Χ	Χ	Χ																								
2.2	Conduct surveys by Q4 2019		Χ	Χ	Χ																								
2.3	Complete project design, including engineering, safeguards, project structure, economic analysis, financial assessment, procurement plan and project implementation arrangements by Q1 2020									Х	Х	X	X	Х															
2.4	Prepare procurement documents ready for tendering by Q2 2021					Χ	Х							Χ	Х	Χ	Χ	Χ	Χ										
3.	Output 3: Rail, public transport, port, and airport projects prepared																												

			20	18			20)19			20	20			20	21			20	22			20	23			20	24	
Indi	cative Activities	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
3.1	Carry out feasibility studies by Q4 2018		Х		Χ					Х	Χ	Х	Χ																
3.2	Conduct surveys by Q4 2019																												
3.3	Complete project design, including engineering, safeguards, project structure, economic analysis, financial assessment, procurement plan and project implementation arrangements by Q1 2020									X	Χ	Χ	X	X															
3.4	Prepare procurement documents ready for tendering by Q4 2021					Х	Χ	Х	Х					Х	Х	Χ	Χ	Х	Χ	Х	Х								
4.	Output 4: Project development management system improved																												
4.1	Prepare project preparation manual by Q1 2020				Χ					Х	Χ	Χ	Χ	Х															
4.2	Approve project preparation manual by Q4 2020														Χ	Χ	Χ												
4.3	Conduct training of DPWH and DOTr staff conducted by Q4 2021		Χ	Χ	Χ	Χ	Χ	Х	Х	Χ	Χ	Χ	Χ	Х	Χ	Χ	Χ	Χ	Χ	Χ	Χ								
B.	Management Activities																												
	guards (environment and social) agement capacity building key ities		Χ	Х	Х					Х	Х	Х	Х	Х															
	munication strategy key activities		Χ	Χ	Χ					Χ																			
	ual and/or midterm review			Χ		<u> </u>						Χ			<u> </u>	Χ			<u> </u>				ļ		<u> </u>		<u></u>		
to Q	ect completion report (from Q4 2022 2 2024) - Department of Transportation: DPWH -																				Х	X	Х	Х	Х	Х	Х		

DOTr = Department of Transportation; DPWH = Department of Public Works and Highways, Q = quarter.

III. PROJECT MANAGEMENT ARRANGEMENTS

A. Project Implementation Organizations-Roles and Responsibilities

16. Stakeholders' role and responsibility in the Project are presented below.

Table 3: Agency Roles and Responsibilities

Project implementation	y Noies and Nesponsibilities
organizations	Management Roles and Responsibilities
Department of Finance (DOF), Office of the Secretary	 DOF will be the executing agency for the Project. Administer the Project as the executing agency of the ADB loan; Communicate with ADB for any amendments in the reallocation of the loan amount; Submit consolidated quarterly reports to ADB on the Project. Prepare and submit audited consolidated project
Steering Committee	financial statements of the Project to ADB. The Steering Committee will be chaired by the Under Secretary of DOF. Other members of the Steering Committee will include DPWH, DOTr, NEDA, and the Department of Budget and Management. The roles and responsibilities of the Steering Committee will include the following: Provide overall coordination and guidance during the implementation of the Project; Prioritize public sector infrastructure project Monitor status of individual infrastructure projects and ensure that viable supported projects receive the required capital budget; The steering committee will meet regularly (at least once per quarter); ad-hoc meetings may take place at request of the Chairperson.
National Economic Development Authority(NEDA)	NEDA will provide oversight on the prioritization of project and evaluation of projects through the ICC: ➤ Review project pipeline and assist with initial screening and prioritization; ➤ Review projects submitted to the NEDA-ICC.
Department of Public Works and Highways (DPWH) and Department of Transportation (DOTr)	 DPWH and DOTr will be the implementing agencies for the projects to be prepared for implementation under the Project. DPWH will be responsible for Output 1: road and bridge projects and Output 2: water projects for flood protection. DOTr will be responsible for Output 3: rail, public transport, port and airport projects. Lead communication and reporting on the Project with ADB; Submit quarterly reports for each output to DOF. Establish and maintain a monitoring framework for all supported projects;

Project implementation organizations	Management Roles and Responsibilities
Organizations	Ensure compliance with agreed guidelines and
	procedures;
	Sign contracts with consultant firms
	Review and process payment requests for
	consultants;
	 Maintain project books and accounts and manage financial reporting and accountability aspects (withdrawal applications, financial statements and reports, bank account statements, etc.); Lead financial management per ADB's Loan Disbursement Handbook (2017, as amended from time to time); Contribute to review of consultant outputs and
	quality assurance;
	 Monitor status of project implementation. Contribute to the technical and financial
	evaluation criteria of submitted proposals.
Project Management Units	The PMUs will be headed by the relevant
(PMU) at DPWH and DOTr	undersecretaries, or any other authorized official, and will include necessary staff to smooth implementation of the Project.
	The roles and responsibilities of PMUs will include the following:
	 DPWH will utilize the existing four Unified Project Management Office Clusters (for Roads, Bridges and Flood Control, Roads Management Cluster and Bridge Management Cluster for Output 1: road and bridge projects and Output 2: water projects for flood protection. Establish and maintain a monitoring framework for supported projects; DOTr will establish one PMU for Output 3: rail, public transport, port and airport projects. Provide all relevant information to the consultant teams; Provide all relevant information from any potential ODA assistance for priority projects; Contribute to review of consultant outputs and quality assurance; Monitor status of project preparation and implementation; Contribute to the technical and financial evaluation criteria of submitted proposals; Contribute in the preparation of procurement documentation; Prepare and submit projects to NEDA-ICC for

Project implementation	Management Deleg and Decrepolitities
organizations	 Management Roles and Responsibilities Lead quality assurance of the technical consultants' outputs, including review of consultant's deliverables; Confirm deliverable of the consultants for payment processing by PMU; Lead consultant performance evaluation upon
Asian Development Bank (ADB)	completion of contract. Review and monitor implementation of the Project, including implementation arrangements, disbursement, procurement, and reporting; Assist in advance action including selection of consultants; Monitor schedules of activities, including funds flow; Review compliance with agreed loan covenants; Monitor effectiveness of safeguard procedures; Monitor the outcome of capacity building and
	training programs; > Undertake a periodic review mission and midterm review mission with the Government; and > Coordinate with development partners and other stakeholders on Project implementation.

ADB = Asian Development Bank; DOF = Department of Finance; DOTr = Department of Transportation; DPWH = Department of Public Works and Highways; ICC = Investment Coordinating Committee; NEDA = National Economic Development Authority; ODA = official development assistance; PMU = project management unit; TA = technical assistance.

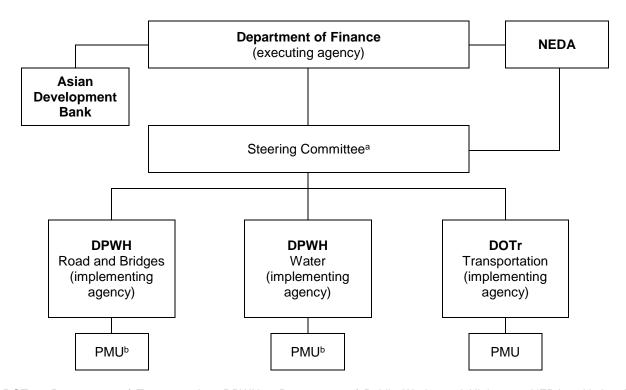
B. Key persons involved in implementation

Executing Agency	
Department of Finance –	Mr. Carlos G. Dominguez
Office of the Secretary	Secretary of Finance
	Telephone: +63 2 523 6051
	Fax: +63 2 523 9216
	Email: cgdominguez@dof.gov.ph
	Address: DOF Building, BSP Complex, Roxas Blvd., 1004, Metro Manila, Philippines
Project Coordination	Ms. Maria Edita Z. Tan
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Assistant Secretary of Finance
	Telephone: +632 526 9990
	Fax: +63 2 523 9216
	Email: meztan@dof.gov.ph
	Address: DOF Building, BSP Complex,
	Roxas Blvd., 1004, Metro Manila, Philippines

Implementing Agencies	
1. Department of Public	Mr. Emil K. Sadain
Works and Highways	Undersecretary for Unified Project Management Office Operations Telephone: +63 2 304 3372 Fax: +63 2 304 3022 Email: sadain.emil@dpwh.gov.ph; sadainekmail@yahoo.com
	Address: Bonifacio Drive, Port Area,
	1018 Metro Manila, Philippines
2. Department of Transportation	Mr. Ruben S. Reinoso Undersecretary for Planning Telephone: +63 2 790-8300 loc. 222 Email: rs.reinoso@dotr.gov.ph
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Asian Development Bank	
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	Address: Asian Development Bank 6 ADB Avenue, Mandaluyong, 1550 Metro Manila, Philippines

C. Project Organization Structure

17. Implementation arrangements are shown below:



DOTr = Department of Transportation; DPWH = Department of Public Works and Highways; NEDA = National Economic and Development Authority; PMU = project management unit.

- ^a The Steering Committee comprises: DOF, DPWH, DOTr, NEDA, and Department of Budget and Management.
- b DPWH will utilize four clusters of the Unified Project Management Office: (i) Road Management Clusters I and II and Bridge Management Cluster for road and bridge projects under Output 1; and (ii) Flood Control Management Cluster for water projects for flood protection under Output 2.

D. Implementation Arrangements

- 18. The Department of Finance (DOF) will be the executing agency and DPWH and DOTr will be the implementing agencies. DOF will establish a steering committee to monitor overall implementation of the Project and ensure supported projects are prioritized for preparation and implementation. DPWH and DOTr will each establish three project management units (PMU), two PMUs under DPWH for road and bridge projects and for water projects, and one under DOTr for public transportation systems projects. Each PMU will be headed by a Director or any authorized official, and supported by administrative staff to lead the preparation of infrastructure projects and oversee the consultant outputs.
- 19. An indicative list of projects to be supported under the Project is provided in Appendix 1. The projects are based on the priorities as agreed with government during Loan Fact Finding. During the implementation of the Project, the list of projects may be amended and/or updated, as mutually agreed between ADB and the Government.
- 20. The projects prepared under the Project will normally cover such aspects as: (i) feasibility study; (ii) detailed design, including engineering, safeguards, project structure, economics

analysis, financial assessment, procurement plan, and implementation arrangements; and (iii) preparation of procurement documents ready for tendering.

21. Timely budgeting for infrastructure investments identified and prepared under the Project will be opened to funding from either government or ODA.

IV. COSTS AND FINANCING

- 22. The Project estimated cost is \$160.00 million, without the financing charges during the implementation period.
- 23. ADB will provide a technical assistance loan of \$100 million from ADB's ordinary capital resources. The government will provide the equivalent of \$60.00 million to finance part of the consulting services and taxes and duties. Financing charges during implementation is estimated to be \$4.06 million, which will be covered by the government through annual budget allocation. The financing plan is shown in Table 4.

Table 4: Financing Plan

(V)	1)	
Source	Amount	Share of Total (%)
Asian Development Bank		
Ordinary capital resources (regular loan)	100.00	60.95
Government ^a	64.06	39.05
Total	164.06	100.0

^a The government financing is inclusive of financing charges during implementation. Source: ADB and government estimates.

A. Cost Estimates Preparation and Revisions

24. The cost estimates were prepared by ADB in consultation with DOF, DPWH, and DOTr. The costs are based on the type of consultants required for the various outputs, taking account of their sector and working experience. Following the screening of projects costs estimates may be revised to reflect the focus of project support required, any such changes will be agreed between DPWH and/or DOTr and ADB.

B. Key Assumptions

- 25. The following key assumptions underpin the cost estimates and financing plan:
 - (i) exchange rate: P49.495 = \$1.00 (as of 28 June 2017);
 - (ii) as the loan will procure consulting services, there are no provisions for price contingencies; and
 - (iii) in-kind contributions were calculated based on the number and type of counterpart staff to be provided by Government.

The Government's administrative costs are estimated at \$2.31 million—\$1.54 million for DPWH and \$0.77 million for DOTr. These include airfares, per diem, and reimbursable expenses. However, this cost is not reflected in the project cost estimates. Only identifiable and quantifiable government costs are reflected in this section.

C. **Detailed Cost Estimates by Expenditure Category**

Table 5: Cost Estimates by Expenditure Category (\$ million)

(+	Cost	% of Total Cost
A. Investment Costs		
1. Consultants		
 a. Roads and bridges 	47.54	28.98
b. Water	31.36	19.13
c. Transportation	35.50	21.63
d. Specialist consultants	3.60	2.19
Subtotal (A)	118.00	71.93
B. Contingencies	24.86	15.15
Subtotal (B)	24.86	15.15
C. Taxes and Duties	17.13	10.44
Subtotal (C)	17.13	10.44
D. Financing Charges During Implementation		
Interest During Implementation	4.06	2.48
Subtotal (D)	4.06	2.48
Total Project Cost (A+B+C+D)	164.06	100.00

Source: ADB and government estimates.

D. Allocation and Withdrawal of Loan Proceeds

Table 6: Allocation and Withdrawal of Loan Proceeds

(\$ million)

		(Ψ	
	ADB Finan	cing (\$ million)	Percentage and basis for withdrawal from
Category	Category	Sub-category	loan account
Consulting services	80.39		
a. Roads and bridges		23.00	48.38% of total expenditure claimed
b. Water		28.25	90.08% of total expenditure claimed
c. Transportation		25.54	71.94% of total expenditure claimed
d. Specialist consultants		3.60	100.00% of total expenditure claimed
2. Unallocated	19.61		·
Total	100.00		

Source: ADB and government estimates.

E. **Cost estimates by Funding Source**

Table 7: Cost Estimates by Fund Source

(\$ million)

•	ADB	•	Governr	nent	Total
_	Amount	%	Amount	%	
	23.00	48.38	24.54	51.62	47.54
	28.25	90.08	3.11	9.92	31.36
	25.54	71.94	9.96	28.06	35.50
	3.60	100.00	0.00	0.00	3.60
ubtotal (A)	80.39	68.13	37.61	31.87	118.00
ubtotal (B)	19.61	78.88	5.25	21.12	24.86
	0.00	0.00	17.13	100.00	17.13
	0.00	0.00	6.12	100.00	6.12
	0.00	0.00	3.82	100.00	3.82
	0.00	0.00	6.74	100.00	6.74
	0.00	0.00	0.45	100.00	0.45
ubtotal (C)	0.00	0.00	17.13	100.00	17.13
ition					
	0.00	0.00	4.06	100.00	4.06
ubtotal (D)					4.06
. ,	100.00	60.95	64.06	39.05	164.06
	ubtotal (B)	23.00 28.25 25.54 3.60 28.btotal (A) 80.39 subtotal (B) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	23.00 48.38 28.25 90.08 25.54 71.94 3.60 100.00 abtotal (A) 80.39 68.13 abtotal (B) 19.61 78.88 0.00	Amount	Amount % Amount % 23.00

Source: ADB and government estimates.

a Net of taxes and duties that will be covered by the Government will be financed by the Government in the form of tax exemption.

F. Cost Estimates by Output/ Component

Table 8: Cost estimates by Output/Component

(\$ million)

	Outp	out 1	Outpu	ıt 2	Outpu	t 3	Outp	ut 4	
Item	Amount	%	Amount	%	Amount	%	Amount	%	Total
A. Consulting services	47.54	76.48	31.36	71.58	35.50	67.02	3.60	70.45	118.00
B. Contingencies	7.34	11.81	7.20	16.43	9.44	17.82	0.88	17.22	24.86
C. Taxes and duties	6.12	9.85	3.82	8.72	6.74	12.72	0.45	8.81	17.13
D. Financing charges	1.16	1.86	1.43	3.26	1.29	2.44	0.18	3.52	4.06
during implementation									
Total	62.16	100.00	43.81	100.00	52.97	100.00	5.11	100.00	164.06

Source: ADB and government estimates.

G. Detailed Cost Estimates by Year

Table 9:Cost Estimates by Year

(\$ million)

		(Ψ			
	2018	2019	2020	2021	Total
A. Consultants					
 Road and bridges 	20.45	8.55	9.98	8.56	47.54
2. Water	13.49	5.64	6.59	5.64	31.36
Transportation	14.21	12.03	5.63	3.63	35.50
 Specialist consultants 	1.34	1.13	0.65	0.48	3.60
B. Contingencies	10.22	6.04	4.78	3.82	24.86
C. Taxes and duties	6.15	5.83	3.00	2.15	17.13
D. Financing charges	0.73	0.85	1.26	1.22	4.06
Total	66.59	40.07	31.89	25.50	164.06

Source: ADB and government estimates

H. Contract Awards and Disbursement S-curve

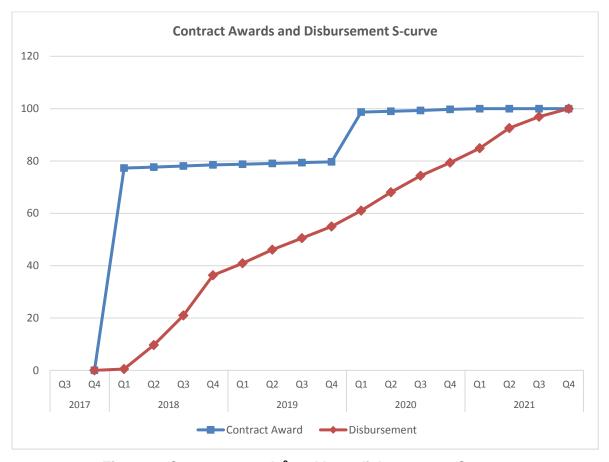


Figure 1: Contract awards⁹ and loan disbursement S curve

Table 10: Estimated quarterly and yearly contract awards and loan disbursements (in \$ thousand)

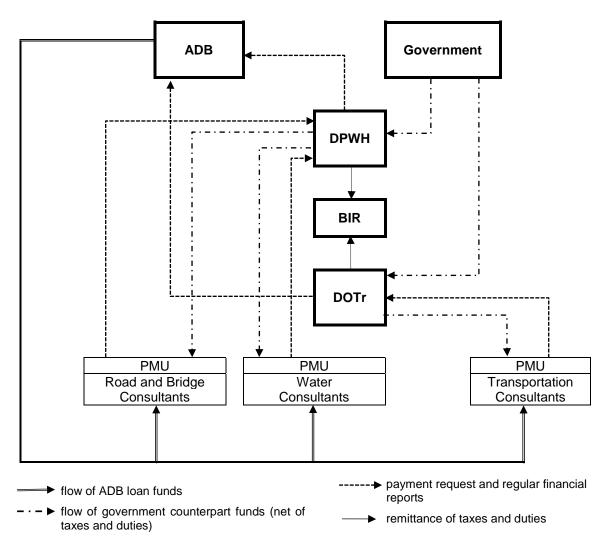
	(π. φ.ποασαπα)										
	Contract Awards (in USD			USD mi	million) Disbursements (in USD r				JSD millio	million)	
Year	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	
2017				0.00	0.00				0.00	0.00	
2018	77.29	0.40	0.40	0.40	78.49	0.50	9.20	11.30	15.34	36.34	
2019	0.30	0.30	0.30	0.30	1.20	4.60	5.20	4.40	4.45	18.65	
2020	19.03	0.30	0.30	0.40	20.03	6.05	7.01	6.30	5.00	24.36	
2021	0.28	0.00			0.28	5.50	7.75	4.30	3.10	20.56	
Total Contract Awards				100.00		Tota	l Disburs	ements	100.00		

^a Exclusive of contingencies

Source: ADB and government estimates.

⁹ Contract awards reflect project costs net of financing charges during implementation.

I. Fund Flow Mechanisms



ADB = Asian Development Bank; BIR = Bureau of Internal Revenue; DOF = Department of Finance; DOTr = Department of Transport; DPWH = Department of Public Works and Highway; PMU = project management unit.

Figure 2: General Fund Flow Diagram

V. FINANCIAL MANAGEMENT

A. Financial Management Assessment

26. The financial management assessment of DPWH and DOTr was conducted in March 2017 in accordance with ADB's Guidelines for the Financial Management and Analysis of Projects and the Financial Due Diligence: A Methodology Note. This included an assessment of the financial management capacity of DPWH and DOTr, including funds-flow arrangements, staffing, accounting and financial reporting systems, financial information systems, and internal and external auditing arrangements.

- 27. Fiduciary risks of the loan are related to the limited experience of DPWH and DOTr with implementation of the technical assistance loan modality, including with financial management arrangements under ADB-funded projects. DOF, which is tasked to coordinate and consolidate the preparation of the project financial statements, has limited capacity to do so and will require assistance for this task. Internal control within the implementing agencies needs to be improved as evidenced by several audit findings reflected in the recent Commission on Audit opinions on the implementing agencies' entity financial statements and project financial statements for ADBfinanced and World Bank-financed projects involving accounting errors and deficiencies. These risks are considered manageable as the Project will finance the engagement of four individual consultants, three of which will be based in the three PMU office, providing support to the PMU and line agencies in undertaking the Project, including assisting with the monitoring and reporting requirements while one consultant will be recruited to undertake the financial monitoring and reporting requirements for the TA loan at the executing agency. In addition, TA 9336 will strengthen the infrastructure preparation and innovation capacity of the implementing agencies to enhance project readiness and effective implementation of the projects prepared under the Project. One output of the TA is that project management capacity of the implementing agencies will be improved. ADB will engage international experts for project management (including procurement, financial management, resettlement and safeguards) to review and asses the existing project management procedures of DPWH and DOTr to advise and work hand in hand with the technical staff. Project management manuals and work flow charts will be developed, using international best practices.
- 28. The Project's implementation arrangement also poses the risk that since several national government agencies will be involved in the project, inadequate coordination among the agencies involved can significantly affect project implementation and reporting. To address this, a Steering Committee will be created to be chaired by an Undersecretary of DOF and will include Undersecretaries of the DPWH, DOTr and the NEDA as members. This will provide a venue for continuous engagement between all the parties involved in the planning, design and implementation of the project.
- 29. The assessment indicates that the overall pre-mitigation financial management risk of the project is moderate-high but with several risk mitigation measures in place, the implementing agencies' financial management system is acceptable for the proposed project. The Project and the nature of project expenditures (i.e. no civil works and no major procurement of goods), the provision of consultant support to the executing agency and implementing agencies involved in the Project, and the provision of the TA to the implementing agencies prior to the Project's effectivity, suggests that DPWH and DOTr can be considered as capable of implementing the Project, with the overall post-mitigation project financial management risk being assessed as low. A summary of the Financial Management and Internal Control Risk Assessment along with the Financial Management Action Plan is in the tables below.

Table 11: Financial Management and Internal Control Risk Assessment

	Risk Description	Risk Assessment Without Mitigation	Mitigation Measures	Risk Assessment With Mitigation
Inł	nerent Risk	<u> </u>		<u> </u>
1.	Country Specific Budget reliability, accounting and reporting and external scrutiny are weak.	Moderate	Continuation of PFM reforms by the Government of the Philippines through the following: (a) PFM Reform Roadmap; (b) Good Governance and Anti-Corruption Cluster Plan and (c) several stand-alone initiatives.	Moderate-Low
2.	Entity-specific Several national government agencies will be involved in the project. Inadequate coordination among the agencies involved can significantly affect project implementation and reporting.	High	A Steering Committee will be created to be chaired by an Undersecretary of DOF and will include Undersecretaries of the DPWH, DOTr and NEDA as members. This will provide a venue for continuous engagement between all the parties involved in the planning, design and implementation of the project.	Moderate
	Overall Inherent Risk	Moderate-High		Moderate
	oject Risk			
1.	Implementing Entity Limited experience of DPWH and DOTr with implementation of the TA loan modality, including with financial management arrangements under ADB-funded projects. DOF, which will coordinate and consolidate the preparation of the project financial statements, have limited capacity to do so and will require assistance for this task.	High	Four individual consultants will be recruited under the Project. Three of the consultants will be based in the three PMU office, providing support to the PMU and line agencies in undertaking the Project, including assisting with the monitoring and reporting requirements. One consultant will be recruited to undertake the financial monitoring and reporting requirements for the TA loan at the executing agency. In addition, ADB will provide training on ADB's disbursement guidelines and procedures to the relevant staff of the DPWH, DOTr and DOF. ADB processed a \$5 million TA of which one output is to review and assess existing project management procedures (including financial management) of the implementing agencies and to develop project manuals prior to the effectiveness of the Project.	Moderate
2.	Funds Flow (DPWH and DOTr) Limited experience with the TA loan modality possibly leading to inaccurate interpretation of ADB guidelines in disbursement and withdrawal of project funds.	High	The disbursements process will be limited to direct payments by the ADB to consultants. In addition, consultants will be based at the PMUs to provide guidance to the executing and implementing agencies.	Low

	Risk Description	Risk Assessment Without Mitigation	Mitigation Measures	Risk Assessment With Mitigation
3.		Moderate	Consultants will be engaged to assist in the financial monitoring and reporting requirements for the TA loan and will be based at the PMUs.	Low
	Staff may not be well-versed in ADB policies and procedures, and reporting requirements.		ADB will provide training on ADB's disbursement guidelines and procedures to the relevant staff of the DPWH, DOTr and DOF.	
	Accounting Policies and Procedures (DPWH and DOTr) The expenditure categories under the chart of account are different from those used in ADB projects. The accounting staff of the DPWH and the DOTr may not be able to prepare the project financial statements according to ADB's expenditure categories unless formally notified and oriented on the need to do so.	Moderate	The Project will only finance consulting services (no civil works or major goods will be procured). ADB will inform DPWH and DOTr on ADB's reporting requirements. A consultant will also be engaged to assist the PMUs in the financial monitoring and reporting function.	Low
5.	Internal Audit (DPWH and DOTr) The internal audit staff members are graduates of any bachelor's degree relevant to the job. They may not have formal training in internal audit. They may not do pre-audit of transactions, only post-audit. There is a possibility that irregularities and fraud may not be detected.	Moderate	COA is familiar with auditing ADB projects and can do the external audit on the project financial statements.	Low

	Risk Description	Risk Assessment Without Mitigation	Mitigation Measures	Risk Assessment With Mitigation
	External Audit (DPWH and DOTr) COA is the external auditor.	Low	COA conducts its audits in accordance with Philippine Public Sector Standards on Auditing. In May 2016, COA issued Resolution No. 2016-007 adopting a revised framework of professional standards based on International Standards of Supreme Audit Institutions and which are in harmony with the International Organization of Supreme Audit Institutions framework of professional standards. COA has sufficient knowledge of ADB's guidelines and procedures, including disbursements guidelines and procedures such as the ADB Loan Disbursement Handbook.	Low
DF 7.1	PWH I. The COA issued adverse opinions on the fairness of the presentation of the consolidated financial statements of the DPWH for the years 2013, 2014, and 2015 due to accounting errors and deficiencies affecting cash and cash equivalents, receivables, inventory, other current assets, property, plant and equipment and liabilities. I. There have been substantial delays in the APFS submission for the RIIDP. I. The APFS presents the consolidated results of the project; it does not present the information on a per financier basis. The accounting system follows the chart of accounts mandated by the COA.	High	The reporting requirements for the Project are straightforward and simple. It will only fund consulting services. The disbursements process will be limited to direct payments by the ADB to consultants. ADB will inform DPWH and the DOTr of the need to report/identify expenditures funded by the ADB loan in the APFS. A consultant will also assist the PMU and DOF in ensuring timely and proper submissions of the APFS.	Low

Risk Description	Risk Assessment Without Mitigation	Mitigation Measures	Risk Assessment With Mitigation
Thus, expenditures categories used are different from those indicated in the ADB loan agreement. Therefore, the expenditures funded by the ADB loan cannot be determined from the APFS as required by the ADB.			
DOTr 7.4. The COA issued qualified opinions on the fairness of the presentation of the consolidated financial statements of the DOTr for the years 2013, 2014 and 2015 due to accounting errors and deficiencies. The recurring issue is the errors in the balance of the property, plant and equipment account with an overstatement of P5.6 billion in 2015.			
7. Information Systems (DPWH and the DOTr) Not all financial reports can be generated from the system. The preparation of the statement of cash flows requires manual intervention and the use of Excel, which may result in errors.	Moderate	The reporting requirements for the Project are straightforward and simple. It will only fund consulting services. A consultant will assist the PMU and DOF in ensuring timely and proper submissions of the APFS.	Low
Overall Project Risk	Moderate-High		Low
Overall (Combined) Risk	Moderate-High		Low

APFS = audited project financial statement; COA = Commission on Audit; DOF = Department of Finance; DOTr = Department of Transportation; DPWH = Department of Public Works and Highways; NEDA = National Economic Development Authority; PFM = public financial management; PMU = project management unit; TRTA = transaction technical assistance.

Table 12: Financial Management Action Plan

Mitigation Actions	Responsible Parties	Timeframe
The creation of a Steering Committee will address the risk of poor	The members of the	Prior to and during the
coordination between the various government agencies involved in the	Project Steering	project implementation
project. The Steering Committee will encourage the agencies to work	Committee composed of	phase.
together in planning, designing and implementing the project.	the DOF, NEDA, DPWH	
	and DOTr	
Given the limited experience of DPWH and DOTr in the implementation of	ADB, PMUs in DPWH and	Prior to and during the
the TA loan modality, including with financial management arrangements	DOTr, DOF and	project implementation
under ADB-funded projects and DOF having limited capacity to prepare	consultants	phase
consolidate project financial statements, four individual consultants will be		
recruited under the Project. Three of these individual consultants will be		
based in the three PMU office and act as the "owners" engineer, providing		
support to the PMU and line agencies in undertaking the Project, including		
assisting with the monitoring and reporting requirements. One individual		
consultant will be recruited to undertake the financial monitoring and		
reporting requirements for the TA loan. In addition, ADB will provide		
training on ADB's disbursement guidelines and procedures to the relevant		
staff of the DPWH, DOTr and DOF.	100 0141 : 001411 I	5:
The risks of accounting errors, reporting deficiencies and late submission	ADB, PMUs in DPWH and	Prior to loan
of the APFS will be mitigated by the fact that the Project will only fund	DOTr, DOF, consultants	effectiveness (the
consulting services and that disbursements process will be limited to		TRTA) and throughout
direct payments by the ADB to consultants. In addition, the Project will		project implementation
finance the engagement of consultants in the PMUs to provide guidance		
on ADB requirements and procedures to the relevant staff of the DPWH,		
DOTr and DOF. A \$5 million TRTA will also be provided to determine		
capacity needs of the executing agency and/or implementing agencies		
prior to the TA loan effectiveness.	DMI Is in DDMI I and	A manually are an hafe ::-
Potential delays in the submission of the project financial statements will	PMUs in DPWH and	Annually, on or before
be addressed through the recruitment of consultants to assist DPWH and	DOTr, DOF, consultants	June 30 of the
DOTR in making timely submissions of the APFS.		succeeding fiscal year

ADB = Asian Development Bank; APFS = audited project financial statement; DOF = Department of Finance; DOTr = Department of Transportation; DPWH = Department of Public Works and Highways; NEDA = National Economic Development Authority; PMU = project management unit; TRTA = transaction technical assistance.

B. Fund Flow/Disbursement Arrangements

1. Disbursement Arrangements for ADB Funds

- 30. The loan proceeds will be disbursed in accordance with *ADB's Loan Disbursement Handbook* (2017, as amended from time to time),¹⁰ and detailed arrangements agreed upon between the Government and ADB in this project administration manual. The DPWH and DOTr will maintain separate accounts and records for the Project. Project staff will avail of the ADB's disbursement training to help ensure efficient disbursement and fiduciary control.¹¹ The general fund flow diagram is in Figure 2.
- 31. The Project will have two budget users: the DPWH and DOTr. Each budget holder will establish a PMU, which will be headed by an Under Secretary or Assistant Secretary or any other authorized official. In the case of DPWH, two PMUs will be established, each for road and water projects groups. The budget users will be responsible for managing the payment for all goods and consultant services procured under the Project. Cost estimates by budget user are in Table 13:

Table 13: Cost Estimates by Budget User (\$ million)

	Cost	% of Total Cost
A. Department of Public Works and Highways	81.30	49.56
B. Department of Transportation	36.70	22.37
C. Contingencies	24.86	15.15
C. Taxes and Duties	17.13	10.44
D. Financing Charges During Implementation		
 Interest During Implementation 	4.06	2.48
Total Project Cost	164.06	100.00

Source: List of Planned Priority Projects.

- 32. **Direct payment procedure**. The Project will use the direct payment procedure of ADB. The payments to the consultants will be made directly by ADB, based on the payment requests of the DPWH and DOTr (in the form of withdrawal applications along with the necessary supporting documents), and submitted through the DOF. The Government will cover some of the consulting services and the tax share of the consultant contracts through payment to the consultants or through other allowed means in line with Philippine's taxation framework.
- 33. Before the submission of the first withdrawal application request, the borrower will submit to ADB sufficient evidence of the authority of the persons who will sign the withdrawal applications on behalf of the borrower, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is set in accordance with *ADB's Loan Disbursement Handbook*. Individual payments below this amount will be paid by the implementing agencies and subsequently claimed to ADB through reimbursement of any such advance payments.
- 34. The PMUs will be responsible for preparing the annual contract awards and disbursement projections; requesting budgetary allocations for counterpart funds, preparing of withdrawal applications, and sending the withdrawal applications to ADB through DOF. The PMUs are

¹⁰ Available at: http://www.adb.org/documents/loan-disbursement-handbook.

¹¹ Online training for project staff on disbursement policies and procedures is available at: http://wpgr4.adb.org/disbursement elearning.

responsible for collecting and maintaining supporting documents for the project expenditures they have incurred. The PMUs shall submit regular financial reports to the executing agency for consolidation and submission to ADB.

35. Sample forms for withdrawal applications of loan proceeds can be downloaded from the ADB website. 12

(i) Disbursement Arrangements for Counterpart Fund

36. The Government will finance part of the consulting services and local taxes and duties under the project.

C. Accounting Policies

37. The DPWH and DOTr will maintain, or cause to be maintained, separate books and records by funding source for all expenditures incurred on the project following accrual-based accounting following the Philippine Public Sector Accounting Standards (PPSAS). The DPWH and DOTr will prepare the respective project financial statements in accordance with PPSAS which are consistent with international accounting principles and practices. DOF will prepare the consolidated project financial statements for submission to ADB.

D. Auditing and Public Disclosure

- 38. The DOF will cause the detailed consolidated project financial statements to be audited in accordance with Philippine Public Sector Standards on Auditing¹³ by the Commission on Audit. The auditor will also review the project books and records at DPWH and DOTr, as part of the audit of the consolidated project financial statements. The audited consolidated project financial statements together with the auditor's opinion will be presented in the English language within six months from the end of the fiscal year by the executing agency.
- 39. The audit report for the project financial statements will include a management letter and auditor's opinions which cover (i) whether the project financial statements present an accurate and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting standards; (ii) whether the loan proceeds were used only for the purposes of the project or not; and (iii) whether the borrower or executing agency was in compliance with the financial covenants contained in the legal agreements (where applicable).
- 40. Compliance with financial reporting and auditing requirements will be monitored by review missions and during normal project supervision, and followed up regularly with all concerned, including the external auditor.
- 41. The Government, DOF, DPWH, and DOTr have been made aware of ADB's approach to delayed submission, and the requirements for satisfactory and acceptable quality of the audited project financial statements.¹⁴ ADB reserves the right to require a change in the auditor (in a

¹² Available at: http://www.adb.org/documents/handbooks/loan_disbursement/default.asp.

¹³ Based on the International Standards of Supreme Audit Institutions.

¹⁴ ADB Policy on delayed submission of audited project financial statements: When audited project financial statements (APFS) 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.

manner consistent with the constitution of the borrower), or for additional support to be provided to the auditor, if the audits required are not conducted in a manner satisfactory to ADB, or if the audits are substantially delayed. ADB reserves the right to verify the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

42. Public disclosure of the project financial statements, including the auditor's opinion on the project financial statements, will be guided by ADB's Public Communications Policy (2011). ¹⁵ After 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 and additional auditor's opinions will not be disclosed. ¹⁶

VI. PROCUREMENT AND CONSULTING SERVICES

A. Advance Procurement

- 43. All advance contracting will be undertaken in conformity with ADB's Guidelines on the Use of Consultants (March 2013, as amended from time to time)¹⁷ and ADB's Procurement Guidelines (April 2015, as amended from time to time).¹⁸This will allow for easier access to international consultants as compared to using Government procurement. This will also facilitate both DOTr and DPWH to access required specific technologies, international expertise, and innovation, complementing and building on nationally available expertise.
- 44. The borrower and DPWH and DOTr have been advised that approval of advance contracting does not commit ADB to finance the Project. ADB financing is subject to the government's compliance of the relevant provisions of the loan agreement and ADB guidelines. The Government was also advised that ADB would not finance expenditures incurred by the government prior to loan effectiveness, even if advance contracting is approved by ADB.
- 45. The government requested ADB to undertake advance action for consultant selection on their behalf. 19 The following steps for the recruitment of consultants can be concluded prior to loan effectiveness: (i) joint government-ADB workshop on procurement; (ii) pre-EOI conference with government, ADB, and prospective bidders; (iii) joint preparation of the terms of reference, cost estimates, and shortlisting evaluation criteria between government and ADB; (iv) advertisement for expression of interests; (v) shortlisting of consulting firms; (vi) issuance of the request for proposals; (vii) evaluation of technical proposals; (viii) evaluation of financial proposals and final ranking; and (ix) implementing agencies will negotiate and sign the contract with the first-ranked consultants for each of the three packages.

⁽i) When the AFPS has 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.

⁽ii) When the APFS has not been received within 12 months after the due date, ADB may suspend the loan.

¹⁵ Available from http://www.adb.org/documents/pcp-2011?ref=site/disclosure/publications.

¹⁶ 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).

¹⁷ Available at: http://www.adb.org/Documents/Guidelines/Consulting/Guidelines-Consultants.pdf.

¹⁸ Available at: http://www.adb.org/Documents/Guidelines/Procurement/Guidelines-Procurement.pdf.

¹⁹ Government request letter was dated 15 June 2017.

46. The ADB will advertise all consulting opportunities in Consulting Services Recruitment Notice at www.adb.org,²⁰ carry out the shortlisting, issue request for proposals, and evaluate proposals in close coordination with government agencies. Government will negotiate and sign the contract with first-ranked consultants for each of the three packages promptly. Since the recruitment of consultants follows ADB's Guidelines on the Use of Consultants (March 2013, as amended from time to time) as specified in the loan agreement, the government agencies (DPWH and DOTr) will use the evaluation carried out by ADB as basis for contract negotiations and award.

B. Procurement of Goods, Works and Consulting Services

- 47. There is no procurement of goods and works under the Project; procurement of office equipment and furniture for the consultants will be carried out by the consultants under their contract in accordance with ADB's Procurement Guidelines (2015, as amended from time to time).
- 48. All consultants will be recruited according to ADB's Guidelines on the Use of Consultants. [20] Consultants will be selected following quality-based selection with full technical proposals to ensure highest possible standard of services. Three retainer contracts will be awarded, one for each of output 1, 2 and 3. Each contract will be awarded to one firm for the entire range of services for priority investments under its respective output. For each assignment, the Consultant will be required to prepare a technical and financial proposition that will be reviewed and agreed with the implementing agencies, possibly with the assistance of consultants under output 4, and approved by ADB. Upon approval of the proposition, the consultant will carry out the services at the agreed price under the retainer contract.
- 49. The Client for the consultancy contracts will be the government through DPWH and DOTr. Payments to the consultants will be from the proceeds of the loan in accordance with the ADB loan disbursement handbook.²¹
- 50. The overall risks associated with the procurement are rated as "low".
- 51. The Project's overall procurement classification is assessed as low risk. The integrated benefits and impacts are expected to outweigh the costs.

C. Procurement Plan

Table 14: Procurement Plan

1. Basic Data

Project Name: Infrastructure Preparation and Innovation Facility								
Project Number:		Approval Number:						
Country: Philippines		Executing Agency : Department of Finance						
Procurement Classification:		Implementing Agencies:						
Procurement Risk: Medium		Department of Public Works and Highways,						
		and Department of Transportation						
Program Financing Amount:	\$164.06 million	Loan Closing Date: 30 June 2022						
ADB Financing:	\$100 million							
Government Financing:	\$64.06 million							

²⁰ CSRN for the three main consulting packages were advertised in adb.org on 30 June 2017.

²¹ Available at: https://www.adb.org/documents/loan-disbursement-handbook

Date of First Procurement Plan	Date of this Procurement Plan:			
{loan approval date}:	{dd/mm/year}			

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

52. An 18-month procurement plan indicating threshold and review procedures, and consulting service contract packages are presented below.

1. Project Procurement Thresholds and Methods

53. Except as the Asian Development Bank (ADB) may otherwise agree, the following process thresholds and methods shall apply to procurement of goods and consultant services under the Project.

Consulting Services					
Method	Comments				
Quality-based selection	To be recruited by ADB				
Individual consultant selection	-				

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

54. There are no such contracts envisaged under the project.

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

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

General Description	Estimated Value [net of taxes]	Estimated Number of Contracts	Recruitment Method	Review (Prior/ Post)	Advertise- ment Date (quarter/ year)	Type of proposal	Comments
Road and bridge consultant firm to support DPWH with project preparation activities	47.54	1	QBS	N/A	2Q 2017	FTP	Selection to be carried out by ADB
Water consultant firm to support DPWH with project preparation activities	31.36	1	QBS	N/A	2Q 2017	FTP	Selection to be carried out by ADB
Transportation consultant firm to support DOTr with project preparation activities	35.50	1	QBS	N/A	2Q 2017	FTP	Selection to be carried out by ADB
Specialist individual consultants	3.60	10	ICS	N/A	3Q 2017	N/A	Selection to be carried out by ADB

FTP= full technical proposal; ICS= individual consultant selection; N/A = not applicable; QBS= quality-based selection;

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

56. There are no such contracts envisaged under the project.

B. Indicative List of Packages Required Under the Project

57. All consulting services contracts are expected to be awarded within the initial year of implementation as listed in section 3 above. There are no other contracts expected to be awarded beyond the current period.

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

- 58. The following tables list the awarded and on-going contracts, and completed contracts.
- 59. **Awarded and On-going Contracts.** None at project preparation stage. The required information will be reflected in the table below during implementation.

	Consulting Services						
Package Number	General Description	Estimated Value	Awarded Contract Value	Recruitment Method	Advertisement Date (quarter/year)	Date of ADB Approval of Contract Award ^a	Comments ^b

Date of ADB Approval of Contract Award is the date of No-Objection letter to the executing agency and/or implementing agency.
 Indicate the Consulting Firm's name and the contract signing date.

Completed Contracts. None at project preparation stage. The required information will be reflected in the table below during 60. ESP implementation.

Consulting Services							
General Description	Estimated Value	Contract Value	Recruitment Method	Advertisement Date (quarter/ year)	Date of ADB Approval of Contract Awarda	Date of Completion ^b	Comments
•				, ,		•	

Date of ADB Approval of Contract Award is the date of No-Objection letter to the executing agency and/or implementing agency.
 Indicate the Consulting Firm's name and the contract signing date.

D. Consultant's Terms of Reference

61. The outline TORs of consultants to be engaged under the Project are presented in Appendix 2.

VII. SAFEGUARDS

A. Environmental Safeguards

62. The environmental safeguards classification for the Project is confirmed as category C as there will be no direct financing for infrastructure project or any type of civil works that may pose environment threat. Therefore, there will be no impact on environment arising from implementation of this Project funded project.

B. Involuntary Resettlement Safeguards

63. The involuntary resettlement safeguards classification for the Project is confirmed as category C as there will be no direct financing for infrastructure projects or any type of civil works. Therefore, there will be no resettlement impact arising from implementation of this Project funded project.

C. Indigenous Peoples

64. The indigenous peoples classification for the Project is confirmed as category C as there will be no impacts on indigenous people arising from implementation of this Project funded project. Indigenous peoples are not specifically targeted and the project neither affects the dignity, human rights, livelihood system or culture of indigenous peoples nor affects the territories or natural or cultural resources that indigenous peoples own, use, occupy, or claim as an ancestral domain or assets.

D. Safeguards support through consultants

- 65. For each investment project, the consultants will conduct a safeguard review as part of its overall due diligence including environmental impact assessment, and social impact assessments, resettlement and land acquisition, gender, and indigenous people impact assessment, and prepare necessary safeguard documentation as part of the feasibility study and detailed design of the project.
- 66. The consultants will also provide on-the-job training and transfer of knowledge to staff of DPWH and DOTr to ensure sustainability in the preparation and implementation of environmental and social safeguard assessment and mitigation measures in accordance with applicable laws, regulations, and procedures. The consultant will provide support and guidance to strengthen and enhance improvement of regulations or procedures for environmental and social safeguards, and strengthening safeguard units, task force, safeguards focal points for coordination and monitoring.

E. Prohibited Investment

67. Pursuant to ADB's Safeguard Policy Statement (2009),²² ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth at Appendix

²² Available at: http://www.adb.org/sites/default/files/pub/2009/Safeguard-Policy-Statement-June2009.pdf

5 of the SPS. All financial institutions will ensure that their investments are in compliance with applicable national laws and regulations and will apply the prohibited investment activities list to subprojects financed by ADB.

VIII. GENDER AND SOCIAL DIMENSIONS

- 68. The Project supports preparation of public investment projects. Hence, there is no direct adverse impact on gender inequality or a negative impact on women. Nevertheless, the Project will ensure gender equality and impact on women will be suitably mainstreamed in the scope of work of consultants that will be engaged for preparation of infrastructure projects.
- 69. The direct beneficiaries of the Project will be DPWH and DOTr staff (in terms of capacity building, institutional strengthening, and know-how transfer). Indirect beneficiaries of the Project will be communities that will have increased access to markets and services through higher standard infrastructure investments to be implemented as a result of the Project.
- 70. The Project will ultimately positively affect the consumers, employees, and the poor in general, as they suffer the most from lack of economic infrastructure. Enterprises will benefit from better competitiveness due to better infrastructure and reduced logistics costs. Consumers will gain from greater domestic competition because it will lower prices and improve services. Employees will gain from easier access to work and increased income opportunities, including the construction and operation of infrastructure facilities and in better-paid jobs such as in manufacturing. The poor, especially in low-income regions, will benefit because improved connectivity allows them to participate in wealthier urban markets.
- 71. Overall, the Project is pro-poor as it will directly support the government to achieve the infrastructure development goals reflected through pro-poor preparation as well as timely and adequate delivery of public infrastructure to the beneficiaries. Improved infrastructure will help reduce the vulnerability of the poor or the likelihood that the near-poor will fall into poverty as a result of shocks, which remains an issue in the Philippines.
- 72. The labor and consumer good markets will be among the most important channels: (i) higher basic infrastructure investments will directly and indirectly create more decent and productive jobs; and (ii) reduced logistics costs will lead to lower consumer prices and a better variety of products.
- 73. Qualified social and environmental safeguards experts of the consultant firms will support the PMUs in supervision of the preparation of the projects. The PMUs will monitor and report to the relevant executing agency on all social and environmental safeguards activities. Adequate analysis of the gender, labor, HIV/AIDs, and other social risks will be mainstreamed in the project preparation documents supported under the Project.²³ The PMUs will be responsible to ensure that relevant sections of the TORs and consultant budgets adequately reflect the social and gender aspects to be assesses and considered in project preparation. The PMUs will also ensure that project preparation consultants properly analyze and incorporate core labor standards and health and environmental conditions at worker camps in relevant project documents.

²³ Briefing Note: Project Gender Action Plans: http://www.adb.org/Documents/Brochures/Project-Gender-Action-Plans/default.asp, and Updated Gender Mainstreaming Categories of ADB Projects: https://lpedgedmz.adb.org/lnadbg1/ocs0178p.nsf/0/37CC7D6E8E3CC57D482576E20083C156?OpenDocument.

- 74. The project will—indirectly and with some lag—contribute to improving gender equity in the Philippines through mainstreaming of gender responsiveness in the preparation and implementation of public investment projects in accordance with the country's legislation and international best practice, including ADB gender guidelines.²⁴
- 75. Consultation and participation will be also mainstreamed in the TORs and budgets of the project preparation consultants that will be financed under the Project. When and where applicable, the consultation and participation during project preparation will draw on ADB's principles on consultation and participation.²⁵ The PMUs, will be responsible to ensure that relevant sections of the TORs and consultant budgets adequately reflect consultation and participation activities during project preparation.
- 76. The PMUs will be primarily responsible for monitoring of incorporation of gender, social and consultation and participation dimensions during implementation during project preparation by the Project-engaged consultants.

IX. PERFORMANCE MONITORING, EVALUATION, REPORTING AND COMMUNICATION

A. Project Design and Monitoring Framework

Impact: Infrastructure development accelerated (Philippine Development Plan 2017–2022).a

impast: iiii asti astars as	impact. Initiastructure development accelerated (Fillippine Development Fian 2017–2022).				
	Performance				
	Indicators with	Data Sources and			
Results Chain	Targets and Baselines	Reporting	Risks		
Outcome					
Delivery and quality of public infrastructure projects improved.	a. Project approval time reduced (in 2016, 18 months for approval;	NEDA approvals and DPWH/DOTr annual performance reports.	Political support declines		
	by 2022, 10 months for approval).	Progress reports	Limited availability of official development assistance funding		
	b. Project start up time shortened (in 2016, 36 months between approval and start up, reduced to 18 months by 2022).				
Outputs					
Road and bridge projects prepared.	1a.Up to five road and bridge projects identified, feasibility studies and detailed	1a–2a. DPWH progress reports	Delayed selection of project preparation consultant firms		
	design completed, project documents prepared ready for tendering		Limited experience with financial management arrangement of ADB-funded projects.		

²⁴ For example, the Philippine experience of mainstreaming gender responsiveness in ODA-funded projects will be considered for appropriate adoption under the project.

²⁵ Staff Guide to Consultation and Participation: http://www.adb.org/participation/toolkit-staff-guide.asp and, CSO Sourcebook: A Staff Guide to Cooperation with Civil Society Organizations: http://www.adb.org/Documents/Books/CSO-Staff-Guide/default.asp.

	Performance		
	Indicators with	Data Sources and	
Results Chain	Targets and Baselines	Reporting	Risks
Water projects prepared.	2a. Up to five flood protection and urban water projects identified, feasibility studies and detailed design completed, project documents prepared ready for tendering		
Rail, public transport, port and airport projects prepared.	3a. Up to five rail, public transport, port, and airports projects identified, feasibility studies and detailed design completed, project documents prepared ready for tendering	3a.DOTr progress reports	
Project development management system improved	4a. Road, bridge, flood protection, urban water, rail, public transport, port, and airport projects identified and include gender design features and gender targets 4b. Project planning and preparation manual prepared and approved, following gender mainstreaming guidelines	4a-b: DPWH and DOTr progress reports	Insufficient qualified counterpart staff
	4c.50 DPWH and DOTr staff trained in project planning and preparation (at least 40% of them women)		

Key Activities with Milestones

- 1. Road and bridge projects prepared
- 1.1 Carry out feasibility studies (Q2 2018 to Q4 2018)
- 1.2 Conduct surveys (Q2 2018 to Q4 2019)
- 1.3 Complete project designs, including engineering, safeguards, project structure, economics analysis, financial assessment, procurement plan, and project implementation arrangements (Q1 2019 to Q1 2020)
- 1.4 Prepare procurement documents ready for tendering (Q1 2020 to Q4 2021)
- 2. Water projects prepared
- 2.1 Carry out feasibility studies (Q2 2018 to Q4 2018)

Key Activities with Milestones

- 2.2 Conduct surveys (Q2 2018 to Q4 2019)
- 2.3 Complete project designs, including engineering, safeguards, project structure, economics analysis, financial assessment, procurement plan, and project implementation arrangements (Q1 2019 to Q1 2020)
- 2.4 Prepare procurement documents ready for tendering (Q1 2020 to Q4 2021)

3. Rail, public transport, port and airport projects prepared

- 3.1 Carry out feasibility studies (Q2 2018 to Q4 2018)
- 3.2 Conduct surveys (Q2 2018 to Q4 2019)
- 3.3 Complete project designs, including engineering, safeguards, project structure, economics analysis, financial assessment, procurement plan, and project implementation arrangements (Q1 2019 to Q1 2020)
- 3.4 Prepare procurement documents ready for tendering (Q1 2020 to Q4 2021)

4. Project development management system improved

- 4.1 Prepare project preparation manual (Q4 2018 to Q1 2020)
- 4.2 Approve project preparation manual (Q2 2020 to Q4 2020)
- 4.3 Conduct training of DPWH and DOTr staff (Q2 2018 to Q4 2021)

Inputs

ADB: \$100,000,000 (loan) Government: \$64.06 million

ADB = Asian Development Bank; DOTr = Department of Transportation; DPWH = Department of Public Works and Highways; NEDA = National Economic Development Authority; Q = quarter.

^a Government of the Philippines, National Economic and Development Authority. 2017. *Philippine Development Plan 2017–2022*. Manila.

Source: Asian Development Bank.

B. Monitoring

- 77. **Project performance monitoring**. The PMUs will be responsible for monitoring and reporting on the performance of the Project against indicators and targets contained in the design and monitoring framework. A monitoring and evaluation (M&E) consultant will be recruited to support the PMUs to set up the M&E system and reporting framework. Progress against the participatory planning, monitoring, and evaluation indicators will be reported quarterly, and annually by DOF to ADB as part of the overall progress reports prepared by the PMUs with assistance from the consultants.²⁶
- 78. **Compliance monitoring**. The Project will be reviewed jointly by government and ADB twice a year during ADB's administration missions that will assess implementation progress and compliance with loan agreement's covenants. Compliance will be also monitored through quarterly progress reports submitted, as well as through review of project accounts and procurement procedures.
- 79. The DPWH and DOTr will ensure that (i) the Project funding is utilized based on procurement and financial management procedures agreed by the Government and ADB, and (ii) all viable Project-prepared projects are prioritized for inclusion in the DPWH and DOTr budget for the year in which the commencement of the civil works is expected to start.

²⁶ The PMUs will submit regular monthly progress reports to their respective agency, who in turn will report to the Steering Committee and DOF. DOF will consolidate and submit quarterly and annual reports to ADB, reporting on the Project as a whole.

80. A midterm review will be carried out by the government and ADB during Q3 2019 to (i) evaluate the scope, design, and implementation arrangements of the project; (ii) evaluate the progress of the institutional development and capacity of the implementing agencies; (iii) identify changes needed in any of the areas mentioned above; (iv) assess the implementation performance against agreed project indicators and targets; (v) review and establish compliance with the loan covenants; and (vi) identify critical issues, problems, constraints, and need for additional finance, and, if necessary, recommend adjustments in Project's design or implementation arrangements.

C. Evaluation

81. Within 6 months of physical completion of the Project (Q2 2021), the executing agency will submit a project completion report to the ADB.²⁷ The consultants will support the DPWH and DOTr in collecting the relevant data and drafting their project completion reports.

D. Reporting

82. The executing agency will provide ADB with (i) consolidated 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 completion report within 6 months of completion of project preparation work for a project. Project accounts together with the associated auditor's report, should be adequately reviewed. The template for the quarterly progress report is in Appendix 3.

E. Stakeholder Communication Strategy

- 83. The primary objective of the Stakeholder Communication Strategy will be ensuring the regular and proactive sharing of information with key stakeholders, and ensuring coordinated information sharing between the steering committee, DPWH and DOTr. Key immediate stakeholders include DPWH and DOTr and the project preparation consultants. On a wider basis, stakeholders will also include development partner financiers, consultants, contractors and suppliers under the public investment projects, civil service organizations interested in infrastructure development, as well as the public, who will benefit from infrastructure investments. Participation of stakeholders during project implementation will be facilitated through interaction during administration missions and Project-associated events. Given the Project's institutional and project preparation support focus, no direct participation by the infrastructure project stakeholders, or end-users is envisaged.
- 84. A designated communication focal point under the steering committee will be appointed to manage and respond to stakeholder inquiries, to ensure regular information sharing with other stakeholders, to ensure two-way information flow between key stakeholders, and to ensure coordinated public dissemination of project progress and achievements. The PMUs of DPWH and DOTr will be responsible for implementing and monitoring information dissemination and disclosure in their respective areas, and both will also identify a communication focal point who will be designated for regular contact and information sharing with interested stakeholders, and with the steering committee's communication focal point. The consultants' support will include

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

providing assistance and guidance on the implementation of the Stakeholder Communication Strategy

- 85. **Delivering information.** Information about the Project will be delivered through a public information booklet (PIB) that describes the project's objectives, components, and activities. The consultants will provide the required inputs to the PIB. Written in English, the PIB, which will be updated annually, will make the project comprehensible to a wide range of stakeholder groups. In addition to the PIB, a Project webpage will be established under the steering committee's communication focal point—within 6 months after loan effectiveness—to disclose the status of Project implementation, and proactively share project information and progress with interested stakeholders. Pursuant to ADB's Public Communications Policy, all requisite project documents will be posted on the ADB website.
- 86. **Obtaining Feedback.** The PIB will indicate where stakeholders can get in touch with Project implementers. Stakeholder meetings will ensure that accurate and sufficient feedback will be received from stakeholder groups. Communication focal points will respond to and register stakeholder inquiries.

X. ANTICORRUPTION POLICY

- 87. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the Project.²⁸ All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing agency and all Project contractors, suppliers, consultants and other service providers. Individuals/entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contracts under the Project.²⁹ To support these efforts, relevant provisions are included in the loan agreement/regulations and the bidding documents for the Project.
- 88. The ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with the DOF, NEDA, DPWH, and DOTr. ADB will require the Borrower to institute, maintain, and comply with internal procedures and controls following international best practice standards in preventing corruption or money laundering activities or the financing of terrorism and covenant with ADB to refrain from engaging in such activities. Consistent with its commitment to good governance, accountability, and transparency, ADB reserves the right to investigate, directly or through its agents, any alleged corrupt, fraudulent, collusive, or coercive practices relating to the Project. All contracts financed by ADB in connection with the Project shall include provisions specifying the right of ADB to audit and examine the records and accounts of the DPWH and DOTr and all contractors, suppliers, consultants, and other service providers as they relate to the Project. Any allegations of corruption can be reported to the PMUs, who will report these to the Project Steering Committee.
- 89. The DPWH and DOTr will ensure that all its staff involved in the Project are fully aware of and comply with the Government's and ADB's procedures, including procedures for implementation, procurement, use of consultants, disbursement, reporting, monitoring, and prevention of fraud and corruption.

²⁸ Available at: http://www.adb.org/Documents/Policies/Anticorruption-Integrity/Policies-Strategies.pdf.

²⁹ ADB's Integrity Office web site is available at: http://www.adb.org/integrity/unit.asp.

90. The DPWH and DOTr will consider options to establish—within 6 months after loan effectiveness—a web-page for the Project that will disclose the implementation status.

XI. ACCOUNTABILITY MECHANISM

91. 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.³⁰

XII. RECORD OF PAM CHANGES

92. All revisions/updates during course of implementation should retain in this Section to provide a chronological history of changes to implemented arrangements recorded in the PAM.

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³⁰ For further information see: http://www.adb.org/Accountability-Mechanism/default.asp.

INDICATIVE LIST OF PROJECTS TO BE PREPARED UNDER THE PROJECT

Department of Public Works and Highways (Roads and Bridges)

		Estimated
Project Name	Required Action	Investment Cost
North Eastern Luzon Expressway	Preparation of FS for 10-km tunnel	PhP18.42 billion
		(~ US\$372.17 million)
Nationwide Island Provinces Link	Preparation of FS for 4 bridges (1.2 km	PhP92.23 billion
Bridges for Sustained Economic	+ 7.0 km + 6.0 km + 4.0 km) between	(~ US\$1.84 billion)
Growth (Sorsogon–Samar)	Sorsogon and Samar	
Laguna Lakeshore Road Network	Preparation of FS	PhP50 billion
		(~ US\$1 billion)
Panay-Guimaras-Negros Island	Preparation of FS	PhP 97.5 billion
Link (Long Span Bridge)		(~. US\$1.95 billion)
Negros-Cebu Link Bridge	Preparation of FS for a long span	PhP27.589 billion
	bridge between Negros and Cebu	(~ US\$557.40 million)
Cebu-Bohol Link Bridge	Preparation of FS for a long span	PhP122.748 billion
	bridge between Cebu and Bohol	(~ US\$2.48 billion)
Samal Island–Davao City	Preparation of FS for a 1 km bridge	PhP17.815 billion
Connector Bridge	over the Pakiputan Strait between	(~ US\$359.94 million)
	Samal and Davao City and	
	approximately 3.4 km approach roads	

FS = feasibility study; km = kilometer; PFS= pre-feasibility Study; PhP=Philippine Pesos.

Department of Public Works and Highways (Water)

Project Name	Required Action	Estimated Investment Cost
Apayao-Abulug River	Preparation of MP, FS and DED of priority	PhP 4.869 billion
Basin	infrastructures for a drainage area of 3,372 km ²	(~ US\$97.4 million)
	and a river length of 175 km	
Abra River Basin	Preparation of MP, FS and DED of priority	PhP4.861 billion
	infrastructures for a drainage area of 5,125 km ²	(~ US\$97.4 million)
	and a river length of 181 km	
Jalaur River Basin	Preparation of MP, FS and DED of priority	PhP5.292 billion
	infrastructures for a drainage area of 1,503 km ²	(~ US\$105.8 million)
	and a river length of 123 km	
Buayan-Malungon River	Preparation of MP, FS and DED of priority	PhP 858 million
Basin	infrastructures for a drainage area 1,435 km ²	(~ US\$ 17.2 million)
	and a river length of 64 km	
Agus River Basin	Preparation of MP, FS and DED of priority	PhP1.109 Billion
	infrastructures for a drainage area of 1,645 km ²	(~ US\$ 22.2 million)
	and a river length of 36 km.	
Tagum-Libuganon River	Preparation of MP, FS and DED of priority	PhP5.729 Billion
Basin	infrastructures for a drainage area of 3,064 km ²	(~ US\$ 114.6 million)
	and a river length of 89 km	

DED = detailed engineering design; FS = feasibility study; km = kilometer; km² = square kilometer; MP = master plan.

Department of Transportation

Project Name	Required Action	Estimated Investment Cost
PNR South Commuter	Due diligence review of FS, preparation of Design-Build BD, for the reconstruction of a 72-km standard gauge, dual-track, electrified railway between Manila and Los Baños, Laguna	PhP133.7 billion (~ US\$2.7 billion)
PNR South Long Haul	Due diligence review of FS, preparation of Design-Build BD for a 581-km standard gauge, single-track, non-electrified railway between (a) Los Baños and Legazpi, Albay, (b) Calamba and Batangas, and (c) Legazpi and Matnog, Sorsogon	PhP151 billion (~ US\$ 3.0 billion)
Mindanao Railway: Tagum-Davao City-Digos Segment	Due diligence review of MP, FS, preparation of Design-Build BD for a 102-km standard gauge, single-track, non-electrified railway between Tagum, Davao City, and Digos	PhP36 billion (~ US\$640 million)
Central Mindanao Airport	Airport location study, due diligence review of existing FS, and preparation of DED and BD for the optimum development of existing airport facilities	For Turbo Prop Operation – PhP1.50 billion (~ US\$30 million) For Jet Operation – PhP2.5 billion (~ US\$50 million) (final scope and cost of project subject to result of FS/MP Study)
National Greenways and Non-Motorized Transport Development Project	Due diligence review and preparation of FS, DED and BD to develop regulations for open space, pedestrian access, and non-motorized transport infrastructure in Metro Manila, Metro Cebu, Metro Davao, and selected secondary cities.	PhP10 billion (~ US\$200 million)
National Intelligent Transport System	Preparation of Nationwide Multi-modal ITS Master Plan; preparation of FS and Design-Build BD for the NITC and its components.	PhP19.3 billion (~ US\$ 386 million)

BD = bidding documents; DED = detailed engineering design; FS = feasibility study; ITS = Intelligent Transport System; km = kilometer; MP = master plan; NITC = National Intelligence Transportation Center; PNR = Philippines National Railways; TEU = twenty-foot equivalent units.

OUTLINE TERMS OF REFERENCES FOR CONSULTING SERVICES

A. Consulting Teams

- 1. Three consultant teams will be recruited under the Project to support the project preparation activities, one for each of the three Project outputs, namely project preparation support for: (i) road and bridge, (ii) water, and (iii) transportation.
- 2. The consultants will be recruited under advance action. The government has requested the Asian Development Bank (ADB) to undertake the recruitment of the consultants on their behalf and to use the ADB recruitment procedures and ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). The consultant recruitment will be undertaken between May and November 2017 with the contract to be signed upon effectiveness of the Project. The contract will be signed between the government and the consultant.
- 3. The consultant teams will work directly with the PMUs for each of the outputs; two based in the Department of Public Works and Highways (DPWH, for road and bridges, and water) and one in the Department of Transportation (DOTr, transportation). DPWH and DOTr will assign relevant counterpart staff on a permanent basis as part of the project management unit (PMU) for project preparation. The PMU office and assignment of staff is a critical aspect of the capacity development and technology transfer; under the premise of learning by doing as part of the project preparation teams.
- 4. Consultancy services will be provided by a firm or a consortium. The consultant teams should have a mix of international and national experts. The experts will cover all required skills for project preparation.
- 5. The consultant firms will undertake the following work:
 - (i) Screen project pipeline for each of the three Project outputs. The screening will include an initial assessment of suitability to meet requirement, technical approach and option analysis, engineering innovation and buildability, cost estimates, benefit analysis (preliminary economic internal rate of return), preliminary safeguard requirement review, indicative project preparation timeframe, indicative project implementation timeframe, budget allocation, and suitable financing sources. The screening work will be used to prioritize project pipelines and will be submitted to the steering committee established for the Project. The steering committee will review the work and decide on which projects will be taken forward for further preparation activities.
 - (ii) Feasibility studies. For prioritized projects the consultant teams will support the PMUs and line agencies in the project preparation activities. The feasibility work will differ for those projects that have identified official development assistance (ODA) finance and those to be, or already, prepared by the government. For ODA supported projects, the feasibility studies will be a due diligence review of project studies carried out by the potential financiers. For those projects to be financed by the government the consultant team will assist the government in the review or preparation of full feasibility studies. The feasibility studies will include detailed assessment (or due diligence review) of all technical, economic, financial, legal, safeguard, and social aspects of the project. The feasibility study will also prepare a timeframe for project implementation, financial arrangements, and operational requirements for both implementation and operational phases. The feasibility

- studies will also ensure that all documents required for approval by government agencies, such as NEDA-Investment Coordination Committee, are prepared.
- (iii) Detailed engineering design. Detailed engineering design (DED) will be undertaken once the prioritized projects have completed feasibility studies and received approval from government and/or ODA financiers. For ODA supported projects, the DED will be a due diligence review of designs carried out by the potential financiers. For those projects to be financed by the government, the consultant team will assist the government in the review or preparation of design work. DED work incorporates all information required to move projects from the preparation stage to the implementation. The work will include engineering design to a level that will allow specifications for civil works bidding, detailed assessment of all safeguard requirements, detailed project structure including financing arrangements, procurement plan and project implementation arrangements.
- (iv) The consultants will provide the PMU with tender assistance, which shall include tender or bid management, market sounding or market studies, preparation or revision of bid documents, and bid evaluation.
- (v) <u>Financial arrangements</u>. The consultant team will assist the PMU and line agencies with all necessary requirements for finance be they from ODA or government sources.
- (vi) <u>Capacity Building for Safeguards Due Diligence</u>. The consultants will provide onthe-job training and transfer of knowledge to staff of DPWH and DOTr to ensure sustainability in the preparation and implementation of environmental and social safeguard assessment and mitigation measures in accordance with applicable laws, regulations, and procedures.

B. Specialist Individual Consultants

6. Four main individual consultants will be recruited under the Project. Three of these individual consultants will be based in the three PMU office and act as the "owners" engineer, providing support to the PMU and line agencies in undertaking the Project, including assisting with the monitoring and reporting requirements. One individual consultant will be recruited to undertake the financial monitoring and reporting requirements for the Project. Other consultants will be identified to support the Project's Output 4 objectives, which is the preparation of project management system.

TERMS OF REFERENCE FOR ROADS AND BRIDGES CONSULTANTS¹

A. Project Background

- 1. The Government of the Philippines (the Government) has requested the Asian Development Bank (ADB) assistance for a technical assistance loan (the Project) for Infrastructure Preparation and Innovation Facility (IPIF). The Project will support the two key agencies responsible for national public infrastructure investments, namely the Department of Public Works and Highways (DPWH) and the Department of Transportation (DOTr). Specifically, the Project will assist the two implementing agencies in (i) making sound and objective investment decisions; (ii) providing robust project pipelines; and (iii) helping fill the infrastructure gap of the country. The Project is estimated to cost \$160 million; of which \$100 million will be financed by ADB. The Government will finance \$60 million to finance part of the consulting services as well as taxes and duties during implementation. The major expenditure items, representing approximately 87% of the total cost (including taxes and duties), will comprise consulting services to support the Government project preparation and implementation activities for public sector investments.
- 2. **Status of the Infrastructure in the Philippines.** Despite steady economic improvement, the quality of infrastructure of the Philippines continues to lag significantly behind other emerging Southeast Asian countries. In 2016–2017, the Philippines ranked 112th out of 138 countries in terms of quality of its infrastructure. Less than optimal infrastructure leads to higher economic cost, which in turn, undermines business potential and economic opportunities, especially in rapidly growing urban areas.
- 3. The poor state of the Philippines infrastructure is attributed to a number of factors including: (i) inadequate infrastructure investment; (ii) lack of inter-agency coordination; (iii) inadequate or incomplete infrastructure plans and implementation programs; (iv) restricted access to international expertise and constrained technical and management know-how in project preparation and implementation; and (v) reduced sustainability due to lack of resources for operation and maintenance. Complex government approval process, and limited and difficult coordination between the two main agencies responsible for infrastructure (DPWH and DOTr) and other key agencies also impedes project preparation and implementation. As a result, infrastructure projects are often not delivered as planned due to either poor project formulation or poor project implementation, or both. Delays in safeguard compliance, procurement, and land acquisition, as well as inadequate project management systems also contribute significantly to delays and higher cost of infrastructure projects.
- 4. **Rationale.** Against this backdrop, the Project is expected to enable DPWH and DOTr to plan, execute and implement public infrastructure projects more efficiently and effectively by addressing some of the key constraints to infrastructure planning, design, and implementation, and by providing access to international sources of innovation, expertise, advice, and best practices. The project will support both DPWH and DOTr to undertake project preparation work for priority infrastructure projects to be financed by official development assistance (ODA) or through the Government's internal resources.
- 5. The Government's socioeconomic agenda aims to increase public infrastructure spending from 2.6% of gross domestic product in 2015 to 7% by 2022 representing approximately \$14.5 billion annually. Priority infrastructure investments identified by the government for preparation

¹ The TOR may change up to the Request for Proposal stage.

under the Project include national expressways, inter-island bridges, flood control structures, airports, subways, urban transportation and railways. Recent large ODA programs of assistance have been pledged from the governments of the People's Republic of China, Japan, and the Republic of Korea, in support of the government priority investments to accelerate public infrastructure development as well as to expand its public private partnership (PPP) project program.

6. To more effectively use the pool of ODA and domestic funds pledged and budgeted, and to realize the goal of improving the efficiency of infrastructure pre-investment activities the Project will provide financing for consulting services to accelerate progress in infrastructure delivery for inclusive and sustainable socioeconomic development through improved preparation of public infrastructure projects. The Project comprises four outputs:

1. Output 1: Preparation of Roads and Bridges Projects

7. Under this output, support will be provided to DPWH in planning and preparation of roads and bridges investment projects, including: (i) preparation of prefeasibility and feasibility studies, including economic and financial analysis; (ii) preparation of preliminary engineering studies; (iii) preparation of detailed engineering design; (iv) preparation of procurement documents and assistance in the tendering process; and v) preparation of social and environmental safeguard assessment studies. An indicative list of roads and bridges investment projects to be the object of preparation under this output is provided in Table 1 below. While all projects in Table 1 are considered priority investments, the Government may substitute any or all of the listed project with other roads and bridges projects within or outside the initial regions. Additional details of each project are available through the ADB Consultant Management System. This terms of reference (TOR) and request for proposal (RFP) are for the recruitment of consultants for Output 1 only.

Table 1 - Indicative List of Roads and Bridges Projects

Project Name	Required Action	Estimated Investment Cost
North Eastern Luzon	Preparation of FS for 10-km tunnel	PhP18.42 billion
Expressway		(~ US\$372.17 million)
Nationwide Island Provinces	Preparation of FS for 4 bridges (1.2	PhP92.23 billion
Link Bridges for Sustained	km + 7.0 km + 6.0 km + 4.0 km)	(~ US\$1.84 billion)
Economic Growth (Sorsogon-	between Sorsogon and Samar	
Samar)		
Laguna Lakeshore Road	Preparation of FS	PhP50 billion
Network		(~. US\$1 billion)
Panay-Guimaras-Negros	Preparation of FS	PhP 97.5 billion
Island Link (Long Span Bridge)		(~. US\$1.95 billion)
Negros-Cebu Link Bridge	Preparation of FS for a long span	PhP27.589 billion
	bridge between Negros and Cebu	(~ US\$557.40 million)
Cebu-Bohol Link Bridge	Preparation of FS for a long span	PhP122.748 billion
	bridge between Cebu and Bohol	(~ US\$2.48 billion)
Samal Island–Davao City	Preparation of FS for a 1 km bridge	PhP17.815 billion
Connector Bridge	over the Pakiputan Strait between	(~ US\$359.94 million)
	Samal and Davao City and	
	approximately 3.4 km approach	
	roads	

DED = detailed engineering design; FS = feasibility study; km = kilometer; PFS = Pre-feasibility Study; PhP = Philippine peso.

2. Output 2: Preparation of Water Projects

8. Under this output, support will be provided to DPWH in planning and preparation for flood control investment projects including (i) preparation of river basin master plans including identification of priority flood control structures; (ii) preparation of feasibility study, including economic and financial analysis; (iii) preparation of preliminary design studies; (iv) preparation of detailed engineering design of priority infrastructures; (v) preparation of procurement documents and assistance in the tendering process; and (vi) preparation of social and environmental safeguard assessment studies. Selection of consultants for Output 2 is the object of a separate RFP.

3. Output 3: Preparation of Transportation Projects

9. Under this output, support will be provided to DOTr in the planning and preparation of rail, public transport, and port and airport investment projects, including: (i) preparation of prefeasibility and feasibility studies including economic and financial analysis; (ii) preparation of preliminary design studies; (iii) preparation of detailed engineering design; (iii) preparation of procurement documents and assistance in the tendering process; and (iv) preparation of social and environmental safeguards assessment studies. Selection of consultants for Output 3 is the object of a separate RFP.

4. Output 4: Improvement of Project Development Management System

10. Under this output, assistance will be provided to DPWH, DOTr and the National Economic and Development Authority (NEDA) for development and implementation of project management and monitoring systems. The project will also support capacity building of the agencies through preparation of documentation and manuals for project preparation activities to ensure sustainability of knowledge transfer and to embed project management systems in NEDA, DPWH and DOTr. Additional expertise may also be recruited under Output 4 to review work carried out by the consultants under Outputs 1, 2, and 3, particularly when the assignment consists or requires advanced technologies and expertise which are not currently available from within the client's organization. Selection of consultants for Output 4 will be the object of separate recruitment and is not covered by this TOR and RFP.

B. Consulting Assignment

11. The Government recognizes the need for consultants to be mobilized as soon as possible after loan effectiveness and to expedite the recruitment process and ensure prompt implementation of the priority infrastructure investments. For this reason, the government has requested ADB to carry out the consultant selection on its behalf under advance action. The government also wishes to ensure that world class consultants with experience and qualifications in advanced technologies be recruited to provide appropriate innovative technologies, and help build high quality climate resilience infrastructures more efficiently. In line with this objective, a consulting firm will be recruited for Output 1 with a contract valued at approximately US\$47.54 million (exclusive of taxes and contingencies).

1. Implementation Arrangements

12. DPWH will be the implementing agency responsible for Output 1 and will establish a project management unit (PMU) within its Unified PMU (UPMU) to be responsible for the planning and preparation of roads and bridges projects and will oversee the outputs of the consultants.

- 13. The recruitment of the consulting firm (the Consultant) is being undertaken by ADB in accordance with the ADB Guidelines on the Use of Consultants (2013, as amended from time to time) and it is planned that the contract will be signed with DPWH upon effectiveness of the technical assistance loan expected on January 2018.
- 14. The Consultant will be recruited following quality based selection procedures with full technical proposal. The successful proposal will constitute the basis for a retainer contract to be signed between DPWH and the Consultant for the entirety of the works to be carried out under Output 1. Detailed TORs will be prepared by the PMU for each assignment under the contract and the Consultant will be requested to submit detailed technical and financial propositions for each assignment. The propositions including proposed approach and methodology, work plan and technical and financial information, will be reviewed by the implementing agencies and, if satisfactory, the Consultant will be requested to carry out the assignment at an agreed price generally on a lump sum basis. This process has been chosen to ensure expeditious implementation of the Project by reducing the number of consultants to be selected and therefore eliminating the repetitive and lengthy selection process for each assignment.

2. Consulting Services

15. The key objective of the consulting services is to assist the government in planning and preparation of public sector priority infrastructure investments. For each priority investment subproject the Consultant may be required to carry out the following activities: (i) pre-feasibility studies (which may include preparation of master plans or other studies); (ii) feasibility studies; (iii) preliminary design studies and surveys; (iv) detailed engineering design; (v) preparation of bidding documents and assistance to the implementing agencies in the tendering process; and (vi) preparation of consultant selection documents and assistance in the recruitment of construction supervision consultants. The Consultant may be required to carry out any or all of those activities for each sub-project, or in cases where some or all of the activities have been completed or partly completed by a third party, the Consultant may be required to perform a due diligence review for the activities that have been carried out to ensure that the outputs meet the highest technical standards as well as conformance to norms and regulations of the government and the financing institution including social and environmental safeguards. The exact scope of each assignment as well as the required outputs will be described in the detailed TORs and request for proposition for each assignment.

3. Outputs

16. Under each assignment, the Consultant will be required to deliver specific outputs. The outputs will be described in the detailed TORs for each assignment and will depend on whether the Consultant will be required to carry out the activity or carry out due diligence review of the output of a third party. For each type of activity, the typical required outputs may be as follows:

a. Pre-feasibility Study

17. The Consultant may be required to carry out pre-feasibility study for inter-island bridge projects, or if the pre-feasibility study has been carried out by a third party (such as for the Panay–Guimaras–Negros Islands bridges under EXIM bank financing) the Consultant will be required to carry a due diligence review of the pre-feasibility study carried out by the third party. If the due diligence review reveals insufficient or inadequate analysis, the Consultant will be required to carry out additional studies and analysis and update and/or upgrade the pre-feasibility study to

meet the highest standards as well as the norms and regulations of the Government and the financing institution including social and environmental safeguards. The pre-feasibility study will include but shall not be limited to:

- Preparation of Traffic Demand Forecast;
- Establishment of Design Criteria;
- Road and Bridge Planning and Outline Design;
- Environmental and Social Consideration;
- Preparation of Construction Planning and Cost Estimation;
- Economic and Financial Analysis; and
- Preparation of Project Implementation Schedule.

b. Feasibility Study

- 18. The Consultant will be required to carry out the feasibility study or, if the feasibility study has been carried out by a third party, the Consultant will carry a due diligence review of the feasibility study. If the due diligence review reveals insufficient or inadequate analysis, the Consultant will be required to carry out additional analysis and studies and update/upgrade the feasibility study to meet the highest technical standards as well as the norms and regulations of the Government and the financing institutions including social and environmental safeguards. The feasibility study will include but shall not be limited to the following:
 - Inventory and Condition assessment;
 - Traffic Study including traffic counts and origin-destination studies, and traffic projections related to the national, regional and sectoral plan for other mode of transportation;
 - Population growth projections including projected changes in rural and urban population distribution:
 - Actual and projected national and regional economic growth and projected per capita income growth;
 - Actual and projected growth in tourism, agriculture, and manufacturing and processing industries;
 - Actual and projected vehicle operating cost;
 - Formulation of design options with comparison of cost-benefits analysis;
 - Evaluation of social benefits both quantifiable and non-quantifiable;
 - Determination of socio-economic characteristics of the beneficiaries and pattern of distribution of benefits:
 - Quantitative financial risk analysis;
 - Projected cost of operations and maintenance (O&M) and sustainability analysis;
 - Identification of environmental impacts;
 - Climate change impact assessment:
 - Identification of social impact on vulnerable groups, women and children, and minorities:
 - Estimation of land acquisition and resettlement costs;
 - Estimated cost of the project; and
 - Financial and economic analysis (FIRR and EIRR).

c. Preliminary Engineering Design Studies

19. Prior to detailed engineering design, the Consultant may be required to carry out and/or contract for carrying out all necessary surveys and studies that have been identified by the

Feasibility Study and are required for the detailed design of the project, including but not limited to:

- Preliminary survey and studies/assessment;
- Preliminary engineering design including geometric alignment, pavement design, rehabilitation, and/or widening of bridges;
- GPS survey;
- Topographic surveys;
- Geological and Geotechnical investigations;
- Detailed geological studies (for tunneling);
- Seismic evaluation studies;
- Marine survey (for long span bridges);
- Wave action study and simulation (for long span bridges);
- Wind action study (for long span bridges);
- Erosion and accretion studies (for long span bridges);
- Right-of-way survey;
- Parcellary survey;
- Right-of-way monumentation;
- Land acquisition and resettlement framework;
- Initial environmental examination;
- Social impact assessment;
- Indigenous people assessment; and
- Gender impact assessment.

d. Detailed Engineering Design

- 20. For road projects (that may include short bridges) the Consultant may be required to carry out, detailed engineering design including, but not limited to the following:
 - Identification of material sources;
 - Geometric engineering design:
 - Road typical cross-section and intersections;
 - Pavement detailed design;
 - Small bridge structure detailed design;
 - Hydrology and drainage design;
 - Design parameters for seismic conditions;
 - Road safety audit;
 - Value engineering studies;
 - Environmental impact assessment;
 - Environmental management plan;
 - Resettlement action plan;
 - Gender action plan;
 - Preparation of road O&M manual; and
 - Preparation of cost estimates.
- 21. For long span bridge projects (which may include approach roads), the Consultant may be required to carry out, detailed engineering design including, but not limited to the following:
 - Identification of material sources;
 - Bridge structural design;
 - Bridge elevation and design;

- Pile and foundation design;
- Pier and header design;
- Abutment design;
- Road and bridge safety audit;
- Deck, substructure and superstructure design;
- Design of wave action protection works;
- Design of wind action protection systems;
- Design parameters for seismic conditions;
- Environmental impact assessment;
- Marine environmental impact assessment;
- Environmental management plan;
- Resettlement action plan;
- Gender action plan;
- Preparation of bridge O&M manual; and
- Preparation of cost estimates.
- 22. **Design-Build Contracts.** For long span bridges, it may prove more economical and expeditious to carry out each project on design-build basis. In such case, the detailed engineering design will be carried out by the design-build contractor. The Consultant however, may be required to prepare conceptual design and design-build bidding documents (see below) related to such contracts.

e. Preparation of Bidding Documents

- 23. **Civil Works Contracts.** Following detailed engineering design, the Consultant will be required to prepare bidding documents ready for tendering, and assist the implementing agency in the bidding process and evaluation of tenders. Bidding will be carried out following international competitive bidding or national competitive bidding procedures for construction of civil works. Preparation of bidding documents may include but not be limited to the following:
 - Invitation to bid;
 - Detailed design drawings;
 - Detailed contract drawings;
 - Complete technical specifications;
 - Bill of Quantities;
 - Bidding documents;
 - Assistance in post-qualification of bidders;
 - Bid evaluation report for submission to the Bids and Award Committee (BAC);
 - Resolution of award and notice of award;
 - Evaluation of traffic management plan during construction; and
 - Other pertinent documents related to pre-construction activities.
- 24. **Design-Build Contracts.** In case it is determined that a contract is to be awarded on a design-build basis, the Consultant will be required to prepare bidding documents for a design build contract and provide assistance to the implementing agencies in the evaluation of tenders and award of contract.

f. Selection of Construction Supervision Consultants

- 25. In parallel to the preparation of bidding documents and the bidding of civil works contracts, the Consultant may be required to assist the implementing agencies in the selection of consultants for construction supervision. This may include but not be limited to the following:
 - Preparation of criteria for evaluation of expressions of interest (EOIs);
 - Guidance in the evaluation of EOIs and preparation of shortlist;
 - Preparation of TORs for construction supervision consultants;
 - Preparation of Request for Proposals (RFPs);
 - Preparation of criteria for technical evaluation:
 - Guidance in the evaluation of technical and financial proposals; and
 - Guidance during contract negotiations.

g. Training and Transfer of Knowledge

26. In parallel to the other outputs, the Consultant may be required to prepare curricula and conduct trainings on the foregoing outputs and related topics upon the request of the implementing agency.

C. Key Required Expertise

27. It is expected that the Consultant will be required to provide the following key expertise at various times during the assignment. Other expertise may also be required and will be determined as individual assignments or projects will become more clearly defined.

Table 2 - Key Required Expertise

Minimum Minimum					
Consultant	Experience	Consultant	Experience		
Senior Economist	15 years	Senior Geodetic/Survey Engineer	15 years		
Senior Transport Planner	15 years	Senior Hydraulic Engineer	15 years		
Senior Transport Economist	15 years	Senior Seismic Design Engineer	15 years		
Senior Highway Engineer	15 years	Senior Foundation Engineer	15 years		
Senior Tunnel Planner	15 years	(Bridge)			
Senior Bridge Engineer	15 years	Senior Safety Engineer	15 years		
Senior Hydrologist	15 years	Senior Current and Wave Expert	15 years		
Senior Drainage Engineer	15 years	Senior Marine Biologist	15 years		
Senior Quantity/Cost Engineer	15 years	Senior Value Engineering Expert	15 years		
Senior Structural Engineer (bridge)	15 years	Senior Geotechnical/Soil Engineer	15 years		
Senior Geotechnical Engineer	15 years	Senior Environmental Specialist	15 years		
Senior Geologist	15 years	Senior Climate Change Specialist	15 years		
Senior Pavement Engineer	15 years	Senior Gender Specialist	15 years		
Senior Geotechnical Tunnel	15 years	Senior Sociologist	15 years		
Engineer		Senior Land Acquisition/	15 years		
Senior Geologist (Seismic)	15 years	Resettlement Specialist			
Senior Tunnel Engineer (Electro-	15 years	Senior Material Engineer	15 years		
Mechanical)		Senior Procurement Specialist	15 years		
Senior Tunnel Engineer	15 years	Senior Electrical Engineer	15 years		
(Communication)		Senior Mechanical Engineer	15 years		
Senior Tunnel Engineer (O&M)	15 years	Senior Slope Protection Engineer	15 years		

O&M = operation and maintenance.

28. These key experts will not necessarily be part of the core team (as defined under para. 30) but will be expected to lead or be responsible to oversee the work of sub-team of experts during the various assignments. During the assignments, it may be necessary for the Consultant to bring additional external expertise required with prior approval of the client.

D. Proposal Preparation

- 29. The shortlisted consulting firms are requested to prepare a detailed description of how they propose to deliver the outputs of the contract in the section of their proposal called "Approach and Methodology." In this narrative, firms should clearly explain how they will achieve the outputs and defined deliverables, and include detailed information on key and non-key experts that will comprise the core project team and their proposed input. The Consultant must also describe the experience of the firm or joint venture (JV), and core team key experts in the Philippines or similar geopolitical environment.
- 30. **Core team of experts.** The Consultant must provide a minimum of 54 person months of key experts (Core Team) to be posted at the PMU for the duration of the contract. The Core Team, including a Project Management Specialist/Team Leader, a Senior Highway Engineer, and a Senior Bridge Engineer which will be constituted preferably with permanent employees of the consulting firm or experts working exclusively for the firm or JV member, with significant experience with the firm in relevant field of activities. The team will be based at the implementing agencies office in Manila but may be required to travel to project sites frequently. Only one curriculum vitae (CV) must be submitted for each key and non-key expert included in the proposal. Only the CVs of key experts will be scored as part of the technical evaluation of proposals. The CVs of non-key experts will not be scored, however ADB will review the individual CVs and may reject the CVs of non-key experts if the experience and qualification of the experts are considered inadequate or substandard. The overall composition of the Core Team, the credentials of non-key experts, and the design of the team as a whole including the appropriateness of the level of inputs (home, field, total) will be taken into consideration in the evaluation of Quality of Approach and Work Plan and Personnel Schedule criteria.
- 31. All positions under the contract, both key and non-key experts for the Core Team, must be included and budgeted for in the financial proposal in accordance with the person-month allocation required for each as defined by the Consultant's proposed approach and methodology and work plan. The budget for the key and non-key experts to be appointed for individual assignments/sub-projects will be the object of separate propositions during implementation and will be paid from the unallocated fund category reserved under the contract for those assignments/subprojects. Likewise, travel costs of the Core Team to cover expenses of travel between the implementing agencies headquarters and the project sites, which cannot be determined until the project sites are selected, will be allocated from unallocated funds during implementation.
- 32. The proposal should also include a confirmation of availability of key experts listed in Table 2 above that may be assigned senior positions in various sub-project assignments. The qualifications and expertise of those key experts will be a key consideration in the evaluation of the qualification of the firm or JV.

1. Key Experts (Core Team)

33. The Consultant has full discretion over the composition and structure of the proposed core team of experts, and is responsible to provide all necessary expertise and qualifications to deliver

the required output of the assignment. However, as a minimum requirement, the team must comprise 54 person months of input for 3 key positions including: (i) Project Management Specialist/Team Leader (42 person-months); (ii) Senior Highway Engineer (6 person-months); and (iii) Senior Bridge Engineer (6 person-months) (see Table 3 below). The person-months indicated in the table below are strict minimum and the Consultant may propose longer inputs if it is deemed necessary to meet the objectives of the approach and methodology.

Table 3 – Key Expert Qualifications

Position	Minimum Person Months	Requirements
Project Management Specialist / Team Leader	42	 Bachelor Degree in Civil Engineering, Post Graduate Degree preferred; Minimum of 20 years of Professional experience related to Feasibility Study and Detailed Engineering Design complex Road and Bridge projects.
Senior Highway Engineer	6	 Bachelor degree in civil engineering, post-graduate degree preferred; Minimum 20 years of professional experience related to the design of major highways; Minimum 15 years in feasibility studies, planning, and engineering design of major highway projects.
Senior Bridge Engineer	6	 Advanced degree Civil Engineering; post-graduate degree preferred; Minimum 20 years of professional experience related to the design of major bridges; Minimum 15 years' experience in feasibility studies, planning and engineering design of long span bridges (deep sea locations).

- 34. **Non-Key Experts**. In addition to the mandatory key experts described in Table 3 above, shortlisted Consultant is expected to provide non-key experts for the Core Team to ensure all aspects of the work can be undertaken and all deliverables and reports are completed in accordance with the implementation schedule. All non-key experts must have adequate qualifications and experience in a relevant field with a minimum of 5 years of experience.
- 35. In addition, the Consultant is required to provide technical and administrative staff necessary for the Core Team to achieve its role and objectives. The proposal must provide a list of technical and administrative personnel to be provided. The Consultant is responsible to ensure that the technical and administrative personnel is sufficient to effectively carry out its functions. The cost of technical and administrative staff may be included in the financial proposal, but it is understood that if additional staff is required during implementation of the contract to meet its objective and schedule, the cost of such additional staff will be borne by the Consultant and will not be compensated.
- 36. The project list in Table 1 above is indicative. While all projects listed are considered priority investments, the Government may substitute any of the listed projects with other roads and bridges projects within or outside the initial regions.

2. Specific Tasks of Key Experts

a. Project Management Specialist/ Team Leader

- 37. The Project Management Specialist/Team Leader will be responsible for:
 - (i) overall liaison with the implementing agencies;
 - (ii) preparation of propositions for each individual assignment and negotiations with the implementing agencies;
 - (iii) coordination of the input and output of the sub-teams of consultants (both in the field and home based) involved in the individual assignments;
 - (iv) quality control of work carried out and output delivered by the sub-teams;
 - (v) overall management and administration of the contract; and
 - (vi) reporting to the implementing agencies on progress of work being carried out by the Core Team and the sub-teams.
- 38. The Project Management Specialist/Team Leader must have an advanced degree from a recognized institution in Engineering or other relevant field, and have at least 20 years of professional experience including 15 years in management of roads and bridges projects. Experience in the Philippines or similar geopolitical environment would be considered an asset.

b. Senior Highway Engineer

- 39. The Senior Highway Engineer will be responsible for:
 - (i) advising the Team Leader in the preparation of propositions for roads/highway subprojects;
 - (ii) monitoring the work and output of the sub-teams involved in carrying out roads/highway subprojects;
 - (iii) advising the Team Leader and the implementing agencies on matters related to roads/highway design and construction.
- 40. The Senior Highway Engineer will have an advanced degree from a recognized institution in Civil Engineering or other relevant field, and have at least 20 years of professional experience including 15 years in feasibility studies, planning, and engineering design of major highway projects, including experience with tunneling. Experience in the Philippines or similar geopolitical environment would be considered an asset.

c. Senior Bridge Engineer

- 41. The Senior Bridge Engineer will be responsible for:
 - (i) advising the Team Leader in the preparation of propositions for long span bridge subprojects:
 - (ii) monitoring the work and output of the sub-teams involved in carrying out long span bridge subprojects; and
 - (iii) advising the Team Leader and the implementing agencies on matters related to long span bridge design and construction.

42. The Senior Bridge Engineer will have an advanced degree from a recognized institution in Civil Engineering or other relevant field, and have at least 20 years of professional experience including 15 years in feasibility studies, planning, and engineering design of long span bridge or similar structures. Experience in the Philippines or similar geopolitical environment would be considered an asset.

3. Services Provided by the Employer

- 43. DPWH will assign relevant counterpart staff to the project on a full-time basis. DPWH will provide furnished office accommodation in Manila, office communications (local calls and internet connection), and other in-kind contributions. DPWH shall assist in obtaining the necessary permits, visas and other documents necessary by the Consultant to carry out the services under contract. DPWH will facilitate field visits and arrange meetings with relevant authorities and agencies. In addition, DPWH shall assist with the respective authorities responsible for maintenance of peace and order along project location when and if necessary upon request of the Consultant. Any other office requirements, facilities (equipment and consumables) and transport requirements should be provided by the Consultant. The Government will pay, or cover through other allowed means in line with the Philippine's taxation framework, the applicable Philippine taxes and duties on the contract on behalf of the Consultant. Additional information regarding the tax law in the Philippines can be found at the Government of the Philippines website (https://www.bir.gov.ph/index.PhP/tax-code.html).
- 44. The Core Team will be based at DPWH project office in Manila. DPWH shall provide the Consultant with office space which shall be renovated and/or repaired and the price of such renovation and/or repair will be paid from unallocated funds from the Consultant's contract. While the office is being repaired, an office shall be rented by the Consultant for a period of approximately three months to be used by the Consultant in the interim period. The cost of rental will also be paid from the Consultant's contract provided it is specified in the financial proposal.

4. Equipment

45. The Consultant shall provide, operate and maintain a service vehicle for the Core Team. The proposal should identify the critical element of equipment, furniture and supplies that will be required by the Core Team. In addition, the Consultant will be requested to procure equipment to assist the implementing agency and the sub-project teams in their assignments. The equipment and supplies for the sub-project teams will be the object of propositions for each sub-project and should not be included in the Core Team requirements. All equipment and assets purchased under the Project and paid by the Project will adhere to ADB's Procurement Guidelines (2015, as amended from time to time), and shall remain in the possession of the Government. Upon completion of the Project, these assets will be turned over to the Government. The equipment to be purchased by the Consultant may include but not be limited to: IT Equipment such as computer, printer, photocopy machine, as well as office furniture and equipment.

E. Request for Proposition

46. As part of its proposal, the Consultant is required to prepare the first proposition for a sub-project. The proposition should contain both technical and financial components. This will allow for early mobilization, not only of the Core Team, but also of the first sub-project team, towards meeting the objective of expediting implementation of the Project. The technical component shall include the detailed approach and methodology for the proposition, CVs of key and non-key

experts, as well as proposed work plan and personnel schedule for the sub-project. The financial component shall include all costs associated with the sub-project.

47. For each of the sub-projects where a Request for Proposition will be issued during contract implementation, the Consultant shall include a minimum of two and maximum of three CVs of experts that may be deployed as team leader for the sub-projects.

F. Evaluation of Proposals

48. The evaluation of proposals will follow the evaluation criteria provided in the RFP. The approach and methodology will consider both how the Consultant envisages the use of the Core Team as well as the response to the proposition/sub-project included in this RFP. Furthermore, in the evaluation of the Quality of Methodology, Work Program and Personnel Schedule, consideration will be given on whether the overall team composition (key and non-key experts) is appropriate to meet the TOR and how it matches the proposed methodology. The extent by which the proposed key and non-key experts are full time staff of the Consultant will also influence the evaluation of the Quality of Methodology, Work Program and Personnel Schedule. The qualification of the firm will, in addition to previous experiences on similar projects, take into consideration the CVs provided for potential team leaders of subsequent sub-projects.

TERMS OF REFERENCE FOR WATER (FLOOD CONTROL) CONSULTANTS

A. Project Background

- 1. The Government of the Philippines (the Government) has requested Asian Development Bank (ADB) assistance for a technical assistance loan (the Project) for Infrastructure Preparation and Innovation Facility (IPIF). The Project will support the two key agencies responsible for national public infrastructure investments, namely the Department of Public Works and Highways (DPWH) and Department of Transportation (DOTr). Specifically, the Project will assist the two implementing agencies (implementing agencies) in (i) making sound and objective investment decisions; (ii) providing robust project pipelines; and (iii) helping fill the infrastructure gap of the country. The Project is estimated to cost \$160 million; of which \$100 million will be financed by ADB. The Government will finance \$60 million to finance part of the consulting services as well as taxes and duties during implementation. The major expenditure items, representing approximately 87% of the total cost (including taxes and duties), will comprise consulting services to support the Government project preparation and implementation activities for public sector investments.
- 2. **Status of the Infrastructure in the Philippines.** Despite steady economic improvement, the quality of infrastructure of the Philippines continues to lag significantly behind other emerging Southeast Asian countries. In 2016–2017, the Philippines ranked 112th out of 138 countries in terms of quality of its infrastructure. Less than optimal infrastructure leads to higher economic cost, which in turn, undermines business potential and economic opportunities, especially in rapidly growing urban areas.
- 3. The poor state of the Philippines infrastructure is attributed to a number of factors including: (i) inadequate infrastructure investment; (ii) lack of inter-agency coordination; (iii) inadequate or incomplete infrastructure plans and implementation programs; (iv) restricted access to international expertise and constrained technical and management know-how in project preparation and implementation; and (v) reduced sustainability due to lack of resources for operation and maintenance. Complex government approval process, and limited and difficult coordination between the two main agencies responsible for infrastructure (DPWH and DOTr) and other key agencies also impedes project preparation and implementation. As a result, infrastructure projects are often not delivered as planned due to either poor project formulation or inadequate project implementation, or both. Delays in safeguard compliance, procurement, and land acquisition, as well as poor project management systems also contribute significantly to delays and higher cost of infrastructure projects.
- 4. **Rationale.** Against this backdrop, the Project is expected to enable DPWH and DOTr to plan, execute and implement public infrastructure projects more efficiently and effectively by addressing some of the key constraints to infrastructure planning, design, and implementation, and by providing access to international sources of innovation, expertise, advice, and best practices. The project will support both DPWH and DOTr to undertake project preparation work for priority infrastructure projects to be financed by official development assistance (ODA) or through the Government's internal resources.
- 5. The Government's socioeconomic agenda aims to increase public infrastructure spending from 2.6% of gross domestic product in 2015 to 7% by 2022 representing approximately \$14.5 billion annually. Priority infrastructure investments identified by the government for preparation under the Project include national expressways, inter-island bridges, flood control structures, airports, subways, urban transportation and railways. Recent large ODA programs of assistance

have been pledged from the governments of the People's Republic of China, Japan, and the Republic of Korea, in support of the government priority investments to accelerate public infrastructure development as well as to expand its public private partnership (PPP) project program.

6. To more effectively use the pool of ODA and domestic funds pledged and budgeted, and to realize the goal of improving the efficiency of infrastructure pre-investment activities the Project will provide financing for consulting services to accelerate progress in infrastructure delivery for inclusive and sustainable socioeconomic development through improved preparation of public infrastructure projects. The Project comprises four outputs:

1. Output 1: Preparation of Roads and Bridges Projects

7. Under this output, support will be provided to DPWH in planning and preparation of roads and bridges investment projects, including: (i) preparation of prefeasibility and feasibility studies, including economic and financial analysis; (ii) preparation of preliminary engineering studies; (iii) preparation of detailed engineering design; (iv) preparation of procurement documents and assistance in the tendering process; and v) preparation of social and environmental safeguard assessment studies. Selection of consultants for Output 1 is the object of a separate request for proposal (RFP).

2. Output 2: Preparation of Water Projects

8. Under this output, support will be provided to DPWH in planning and preparation for flood control investment projects including (i) preparation of river basin master plans including identification of priority flood control and drainage improvement works; (ii) preparation of feasibility study, including economic and financial analysis; (iii) preparation of preliminary design studies; (iv) preparation of detailed engineering design of priority infrastructures; (v) preparation of procurement documents and assistance in the tendering process; and (vi) preparation of social and environmental safeguard assessment studies. An indicative list of water investment projects to be the object of preparation under this output is provided in Table 2 below. While all projects in Table 2 are considered priority investments, the Government may substitute any or all of the listed project with other water or flood protection projects within or outside the initial regions. Additional details of each project are available through the ADB CMS. This Terms of Reference (TOR) and RFP are for the recruitment of consultants for Output 2 only.

Table 1 - Indicative List of Water Projects

Table 1 malean to let of tracel 1 reject						
Project Name	Required Action	Estimated Investment Cost				
Apayao-Abulug River	Preparation of MP, FS and DED of priority	PhP 4.869 billion				
Basin	infrastructures for a drainage area of 3,372	(~ US\$97.4 million)				
	km ² and a river length of 175 km					
Abra River Basin	Preparation of MP, FS and DED of priority	PhP4.861 billion				
	infrastructures for a drainage area of 5,125	(~ US\$97.4 million)				
	km ² and a river length of 181 km					
Jalaur River Basin	Preparation of MP, FS and DED of priority	PhP5.292 billion				
	infrastructures for a drainage area of 1,503	(~ US\$105.8 million)				
	km ² and a river length of 123 km					
Buayan-Malungon	Preparation of MP, FS and DED of priority	PhP858 million				
River Basin	infrastructures for a drainage area 1,435 km ²	(~ US\$ 17.2 million)				
	and a river length of 64 km	·				

Project Name	Required Action	Estimated Investment Cost
Agus River Basin	Preparation of MP, FS and DED of priority	PhP1.109 Billion
	infrastructures for a drainage area of 1,645	(~ US\$ 22.2 million)
	km ² and a river length of 36 km.	
Tagum-Libuganon	Preparation of MP, FS and DED of priority	PhP5.729 Billion
River Basin	infrastructures for a drainage area of 3,064	(~ US\$ 114.6 million)
	km ² and a river length of 89 km	

DED = detailed engineering design; FS = feasibility study; km = kilometer; km² = square kilometer; MP = master plan;

3. Output 3: Preparation of Transportation Projects

9. Under this output, support will be provided to DOTr in the planning and preparation of rail, public transport, and port and airport investment projects, including: (i) preparation of prefeasibility and feasibility studies including economic and financial analysis; (ii) preparation of preliminary design studies; (iii) preparation of detailed engineering design; (iii) preparation of procurement documents and assistance in the tendering process; and (iv) preparation of social and environmental safeguards assessment studies. Selection of consultants for Output 3 is the object of a separate RFP.

4. Output 4: Improvement of Project Development Management System

10. Under this output, assistance will be provided to DPWH, DOTr and the National Economic Development Authority (NEDA) for development and implementation of project management and monitoring systems. The Project will also support capacity building of the agencies through preparation of documentation and manuals for project preparation activities to ensure sustainability of knowledge transfer and to embed project management systems in NEDA, DPWH and DOTr. Additional expertise may also be recruited under Output 4 to review work carried out by the Consultants under Outputs 1, 2 and 3, particularly when the assignment consists or requires advanced technologies and expertise which are not currently available from within the client's organization. Selection of consultants for Output 4 will be the object of separate recruitment and is not covered by this TOR and RFP.

B. Consulting Assignment

11. The Government recognizes the need for consultants to be mobilized as soon as possible after loan effectiveness and to expedite the recruitment process and ensure prompt implementation of the priority infrastructure investments. For this reason, the government has requested ADB to carry out the consultant selection on its behalf under advance action. The government also wishes to ensure that world class consultants with experience and qualifications in advanced technologies be recruited to provide appropriate innovative technologies, and help build high quality climate resilience infrastructures more efficiently. In line with this objective, a consulting firm will be recruited for Output 2 with a contract valued at approximately US\$31.36 million (exclusive of taxes and contingencies).

1. Implementation Arrangements

12. DPWH thru its UPMO Flood Control Management Cluster will be the implementing agency responsible for the day-to-day management of the project outputs of the Consultant under Output 2.

- 13. The recruitment of the consulting firms (the Consultant) is being undertaken by ADB in accordance with the ADB Guidelines on the Use of Consultants (2013, as amended from time to time) and it is planned that the contract will be signed with DPWH upon effectiveness of the technical assistance loan expected on January 2018.
- 14. The Consultant will be recruited following Quality Based Selection procedures with full technical proposal. The successful proposal will constitute the basis for a retainer contract to be signed between DPWH and the Consultant for the entirety of the works to be carried out under Output 2. Detailed TORs will be prepared by the DPWH UPMO-Flood Control Management Cluster for each assignment under the contract and the Consultant will be requested to submit detailed technical and financial propositions for each assignment. The propositions including proposed approach and methodology, work plan and technical and financial information, will be reviewed by the implementing agencies and, if satisfactory, the Consultant will be requested to carry out the assignment at an agreed price generally on a lump sum basis. This process has been chosen to ensure expeditious implementation of the Project by reducing the number of consultants to be selected and therefore eliminating the repetitive and lengthy selection process for each assignment.

2. Consulting Services

15. The key objective of the consulting services is to assist the government in planning and preparation of public sector priority infrastructure investments. For each priority investment subproject the Consultant may be required to carry out the following activities: (i) pre-feasibility studies (which may include preparation of master plans or other studies); (ii) feasibility studies; (iii) preliminary design studies and surveys; (iv) detailed engineering design; (v) preparation of bidding documents and assistance to the implementing agencies in the tendering process; and vi) preparation of consultant selection documents and assistance in the recruitment of construction supervision consultants. The Consultant may be required to carry out any or all of those activities for each sub-project, or in cases where some or all of the activities have been completed or partly completed by a third party, the Consultant may be required to perform a due diligence review for the activities that have been carried out to ensure that the outputs meet the highest technical standards as well as conformance to norms and regulations of the government and the financing institution including social and environmental safeguards. The exact scope of each assignment as well as the required outputs will be described in the detailed TORs and request for proposition for each assignment.

3. Outputs

16. Under each assignment, the Consultants will be required to deliver specific outputs. The outputs will be described in the detailed TORs for each assignment and will depend on whether the Consultants will be required to carry out the activity or carry out due diligence review of the output of a third party. For each type of activity, the typical required outputs may be as follows:

a. Pre-feasibility Study (Master Plan)

17. The Consultant will prepare a master plan for flood control and drainage investments in the identified river basins. In cases where the Master Plan has already been carried out by a third party, the Consultant will carry a due diligence review of the master plan prepared by the third party. If the due diligence review reveals insufficient or inadequate analysis, the Consultant will be required to carry out additional studies and analysis and update/upgrade the master plan to meet the highest standards as well as the norms and regulations of the Government and the

financing institution including social and environmental safeguards. The master plan will include but shall not be limited to:

- Hydro-topographic survey (Master Plan level);
- Hydrologic and hydraulic analysis;
- Sediment transport analysis;
- Formulation of river improvement plan (sabo, coastal protection works and multipurpose dams, if necessary):
- Establishment of alternative structural measures
- Identification of key flood control and urban drainage infrastructures;
- Social gender analysis
- General Environmental Impact Assessment;
- Preliminary design concept of key flood control and urban drainage infrastructures;
 and
- Preliminary cost estimates of key flood control infrastructures.

b. Feasibility Study

- 18. The Consultant will prepare a feasibility study report for flood control and drainage investments in the identified river basins. In cases where the feasibility study has already been carried out by a third party, the Consultant will carry out a due diligence review of the feasibility study carried out by the third party. If the due diligence review reveals insufficient or inadequate analysis, the Consultants will be required to carry out additional studies and analysis and update/upgrade the feasibility study to meet the highest standards as well as the norms and regulations of the Government and the financing institution including social and environmental safeguards. The feasibility study should contain a detailed assessment of the technical as well as economic and financial viability of infrastructures identified in the master plan. Specifically, the feasibility study will include but shall not be limited to the following:
 - Hydro-topographic survey (FS level)
 - Flood inundation and damage assessment;
 - Population growth projections including projected changes in rural and urban population distribution;
 - Determination of socio-economic characteristics of the beneficiaries and pattern of distribution of benefits:
 - Value engineering;
 - Projected cost of O&M;
 - Environmental, social and economic analysis;
 - Land Acquisition Plan and Resettlement Action Plan;
 - Identification of social impact on vulnerable groups, women and children, and minorities:
 - Estimation of land acquisition and resettlement costs;
 - Estimation of cost of the project;
 - Financial and economic analysis (FIRR and EIRR);
 - Implementing arrangement and
 - Funding source

c. Preliminary Engineering Design Studies

19. Prior to detailed engineering design, the Consultant may be required to carry out and/or contract for carrying out all necessary surveys and studies that have been identified by the

Feasibility Study and are required for the detailed design of the project, including but not limited to:

- Preliminary survey and studies/assessment;
- Preliminary engineering design;
- Hydro-topographic survey;
- Geological and geotechnical investigations;
- Initial environmental examination;
- Social impact assessment:
- Indigenous people assessment; and
- Gender impact assessment.

d. Detailed Engineering Design

- 20. The Consultant may be required to carry out, detailed engineering design including but not limited to the following tasks:
 - Hydrologic assessment;
 - Hydraulic design;
 - Seismic evaluation studies;
 - Slope stability analysis;
 - Seepage analysis;
 - Sediment transport analysis;
 - Geological and geotechnical analysis;
 - Design analysis report;
 - Structural and earthwork design;
 - Design parameters for seismic conditions;
 - Environmental Impact Assessment;
 - Environmental Management Plan;
 - Resettlement action plan;
 - Gender action plan; and
 - Land acquisition plan.
- 21. **Design-Build Contracts.** In some cases, it may prove more economical and expeditious to carry out a sub-project on a design-build basis. In such cases, the detailed engineering design will be carried out by the design-build contractors. The Consultant however may be required to prepare conceptual design and design-build bidding documents and assist the implementing agencies in the evaluation of the tenders (see below) related to such contracts.

e. Preparation of Bidding Documents

- 22. Following detailed engineering design, the Consultants will be required to prepare bidding documents ready for tendering of flood control and drainage investment structures, and assist the implementing agencies in the bidding process and evaluation of tenders. Bidding will be carried out following international competitive bidding or national competitive bidding procedures for construction of civil works. Preparation of bidding documents may include but not be limited to the following:
 - Invitation to bid;
 - Detailed design drawings:
 - Detailed bidding drawings;
 - Technical specifications;

- Bidding documents;
- Assistance in post-qualification of bidders;
- Assistance in preparation of bid evaluation report for submission to the BAC;
- Assistance in resolution of award and notice of award; and
- Other pertinent documents related to pre-construction activities.
- 23. **Design-Build Contracts.** In case it is determined that a contract is to be awarded on a design-build basis, the Consultant will be required to prepare bidding documents for a design build contract and provide assistance to the implementing agencies in the evaluation of tenders and award of contract.

f. Selection of Construction Supervision Consultants

- 24. In parallel to the preparation of bidding documents and the bidding of civil works contracts, the Consultant may be required to assist the implementing agencies in the selection of consultants for construction supervision. This may include but not be limited to the following:
 - Preparation of criteria for evaluation of expressions of interest (EOIs);
 - Guidance in the evaluation of EOIs and preparation of shortlist;
 - Preparation of TORs for construction supervision consultants;
 - Preparation of Request for Proposals;
 - Preparation of technical evaluation criteria;
 - Guidance in the evaluation of technical and financial proposals; and
 - Guidance during contract negotiations.

g. Training and Transfer of Knowledge

- 25. In parallel to the other outputs, the Consultant may be required to prepare curricula and conduct trainings and technology transfer upon the request of the implementing agency on, but not limited to the following:
 - Flood control master planning;
 - Sabo engineering;
 - Coastal engineering;
 - Dam engineering;
 - Water resources engineering;
 - Integrated water resources management;
 - Value engineering: and
 - Recent technological developments in the field of flood control, urban drainage, sabo, coastal engineering and dam engineering.

C. Key Required Expertise

26. It is expected that the Consultant will be required to provide the following key expertise at various times during the assignment. Other expertise may also be required and will be determined as individual assignments or projects will become more clearly defined.

Table 2 – Key Required Expertise

Oppositions	Minimum	O a saultant	Minimum
Consultant	Qualifications	Consultant	Qualifications
Senior Integrated Water	15 years	Senior River Structural Engineer	15 years
Resources Management		Senior Mechanical Engineer	15 years
Specialist		Senior Electrical Engineer	15 years
Senior Hydrologist	15 years	Senior Material Engineer	15 years
Senior Flood Control	15 years	Senior Foundation Engineer	15 years
Engineer		Senior Geotechnical/Soil Engineer	15 years
Senior Drainage Engineer	15 years	Senior Environmental Specialist	15 years
Senior Economist	15 years	Senior Climate Change Adaptation	15 years
Senior Dam and Flood	15 years	Specialist	
Control Engineer		Senior Sociologist	10 years
Senior Geologist/ Geologist	15 years	Senior Gender Specialist	10 years
Seismic		Senior Land Acquisition/	10 years
Senior Geodetic Engineer	15 years	Resettlement Specialist	
Senior Geotechnical	15 years	Senior Procurement Specialist	10 years
Engineer		Senior Seismic Design Engineer	15 years

27. These key experts will not necessarily be part of the core team (as defined under para. 29) but will be expected to lead or be responsible to oversee the work of sub-team of experts during the various assignments. During the assignments, it may be necessary for the Consultant to bring additional external expertise required with prior approval of the client.

D. Proposal Preparation

- 28. The shortlisted consulting firms are requested to prepare a detailed description of how they propose to deliver the outputs of the contract in the section of their proposal called "Approach and Methodology." In this narrative, firms should clearly explain how they will achieve the outputs and defined deliverable, and include detailed information on key and non-key experts that will comprise the core project team and their proposed input. The Consultant must also describe the experience of the firm or joint venture (JV), and core team key experts in the Philippines or similar geopolitical environment.
- 29. Core team of experts. The Consultant must provide a minimum of 54 person months of key experts (Core Team) to be posted at the PMU for the duration of the contract. The Core Team, including a full-time Project Management Specialist/Team Leader, a Senior Flood Control Engineer, and Senior Drainage Engineer, which will be constituted preferably with permanent employees of the consulting firm or JV or experts working exclusively for the firm or JV member, with significant experience with the firm in relevant field of activities. The team will be based at the implementing agencies office in Pasig, but may be required to travel to project sites frequently. Only one curriculum vitae (CV) must be submitted for each key and non-key expert included in the proposal. Only the CVs of key experts will be scored as part of the technical evaluation of proposals. The CVs of non-key experts will not be scored, however ADB will review the individual CVs and may reject the CVs of non-key experts if the experience and qualification of the experts are considered inadequate or substandard. The overall composition of the Core Team, the credentials of non-key experts, and the design of the team as a whole - including the appropriateness of the level of inputs (home, field, total) - will be taken into consideration in the evaluation of Quality of Approach and Work Plan and Personnel Schedule criteria.
- 30. All positions under the contract, both key and non-key experts for the Core Team, must be included and budgeted for in the financial proposal in accordance with the person-month

allocation required for each as defined by the Consultant's proposed approach and methodology and work plan. The budget for the key and non-key experts to be appointed for each individual sub-project assignments will be the object of separate propositions during implementation and will be paid from the unallocated funds category reserved under the contract for those sub-project assignments. Likewise, travel costs of the Core Team to cover expenses of travel between the implementing agencies headquarters and the project sites, which cannot be determined until the project sites are selected, will be allocated from unallocated funds during implementation.

31. The proposal should also include a confirmation of availability of key experts listed in Table 2 above that may be assigned senior positions in various sub-project assignments. The qualifications and expertise of those key experts will be a key consideration in the evaluation of the qualification of the firm or JV.

1. Key Experts (Core Team)

32. The Consultant has full discretion over the composition and structure of the proposed core team of experts, and is responsible to provide all necessary expertise and qualifications to deliver the required output of the assignment. However, as a minimum requirement, the team must comprise 54 person months of input for 3 key positions including: (i) Project Management Specialist/Team Leader (42 person-months); (ii) Senior Flood Control Engineer (6 personmonths); and (iii) Senior Drainage Engineer (6 person-months) (see Table 3 below). The personmonths indicated in the table below are strict minimum and the Consultant may propose longer inputs if it is deemed necessary to meet the objectives of the approach and methodology.

Table 3 - Key Expert Qualifications

Table 5 - Ney Expert Qualifications			
	Minimum		
Position	Person-Months	Requirements	
Project Management Specialist/Team Leader	42	 Advanced degree in engineering or other relevant field: 	
Opecialist Team Leader		 Minimum 20 years of professional experience related to preparation of master plans/feasibility studies/detailed engineering design of various infrastructures; Minimum 15 years in professional experience as Project Manager/Team Leader of development studies in flood control and/or other water infrastructures 	
Senior Flood Control Engineer	6	 Advanced degree in engineering or other relevant field; Minimum 15 years in professional experience related to planning and designing major flood control projects 	
Senior Drainage Engineer	6	 Advanced degree in engineering or other relevant field; Minimum 15 years of professional experience related to planning and designing major urban drainage projects 	

33. **Non-Key Experts**. In addition to the mandatory key experts described in Table 3 above, the Consultant is expected to provide non-key experts for the Core Team to ensure all aspects of the work can be undertaken and all deliverables and reports are completed in accordance with the implementation schedule. All non-key experts must have adequate qualifications and experience in a relevant field with a minimum of 5 years of experience.

- 34. In addition, the Consultant is required to provide technical and administrative staff necessary for the Core Team to achieve its role and objectives. The proposal must provide a list of technical and administrative personnel to be provided. The Consultant is responsible to ensure that the technical and administrative personnel is sufficient to effectively carry out its functions. The cost of technical and administrative staff may be included in the financial proposal, but it is understood that if additional staff is required during implementation of the contract to meet its objective and schedule, the cost of such additional staff will be borne by the Consultant and will not be compensated.
- 35. The project list in Table 1 above is indicative. While all projects listed are considered priority investments, the Government may substitute any of the listed projects with other flood control projects within or outside the initial regions.

2. Specific Tasks of Key Experts

a. Project Management Specialist/ Team Leader

- 36. The Project Management Specialist/Team Leader will be responsible for:
 - (i) overall liaison with the implementing agencies;
 - (ii) preparation of propositions for each individual assignment and negotiations with the implementing agencies;
 - (iii) coordination of the input and output of the sub-teams of consultants (both in the field and home based) involved in the individual assignments;
 - (iv) quality control of work carried out and output delivered by the sub-teams;
 - (v) overall management and administration of the contract; and
 - (vi) reporting to the implementing agencies on progress of work being carried out by the Core Team and the sub-teams.
- 37. The Project Management Specialist/Team Leader must have an advanced degree from a recognized institution in Engineering or other relevant field, and have at least 20 years of professional experience including 15 years in management of development studies and projects in flood control and/or other water infrastructures. Experience in the Philippines or similar geopolitical environment would be considered an asset.

b. Senior Flood Control Engineer

- 38. The Senior Flood Control Engineer will be responsible for:
 - (i) advising the Team Leader in the preparation of propositions for flood control subprojects;
 - (ii) monitoring the work and output of the sub-teams involved in carrying out flood control subprojects; and
 - (iii) advising the Team Leader and the implementing agencies on matters related to flood control design and construction.
- 39. The Senior Flood Control Engineer will have an advanced degree from a recognized institution in Engineering or other relevant field, and have at least 20 years of professional experience including 15 years in feasibility studies, planning, and engineering design of major

flood control or other water structures. Experience in the Philippines or similar geopolitical environment would be considered an asset.

c. Senior Drainage Engineer

- 40. The Senior Drainage Engineer will be responsible for:
 - (i) advising the Team Leader in the preparation of propositions for drainage subprojects;
 - (ii) monitoring the work and output of the sub-teams involved in carrying out drainage subprojects; and
 - (iii) advising the Team Leader and the implementing agencies on matters related to drainage design and construction.
- 41. The Senior Drainage Engineer will have an advanced degree from a recognized institution in Engineering or other relevant field, and have at least 20 years of professional experience including 15 years in feasibility studies, planning, and engineering design of drainage structures. Experience in the Philippines or similar geopolitical environment would be considered an asset.

3. Services Provided by the Employer

42. DPWH will assign relevant counterpart staff to the project on a full-time basis. The Government will provide office space in Pasig City for the Core Team. DPWH shall assist in obtaining the necessary permits, visas and other documents necessary by the Consultant to carry out the services under the contract. DPWH will facilitate field visits and arrange meetings with relevant authorities and agencies. In addition, DPWH shall coordinate with the respective authorities responsible for maintenance of peace and order along project location when and if necessary upon request of the Consultant. Any other office requirements including telephone connection, internet connection, equipment and consumables, and transport will be provided or arranged by the Consultant. The Government will pay, or cover through other allowed means in line with the Philippine's taxation framework, the applicable Philippine taxes and duties on the contract on behalf of the Consultant. Additional information regarding the tax law in the Philippines can be found at the Government of the Philippines website (https://www.bir.gov.ph/index.PhP/taxcode.html).

4. Equipment

43. The proposal should identify the critical element of equipment that will be required by the Core Team. In addition, the Consultant will be requested to procure equipment to assist the implementing agency and the sub-project teams in their assignments. The equipment and supplies for the sub-project teams will be the object of propositions for each sub-project and should not be included in the Core Team requirements. All equipment and assets purchased under the Project and paid by the Project work will adhere to ADB's Procurement Guidelines (2015, as amended from time to time), and shall remain in the possession of the Government. Upon completion of the project, these assets will be turned over to the Government.

E. Request for Proposition

44. As part of its proposal, the Consultant is required to prepare propositions for the attached sub-projects. Each proposition should contain both technical and financial components. This will allow for early mobilization, not only of the Core Team, but also the sub-project teams towards

meeting the objective of expediting implementation of the Project. The technical component shall include the detailed approach and methodology, CVs of key and non-key experts, as well as proposed work plan and personnel schedule for the sub-project. The financial component shall include all costs associated with the sub-project.

45. For each of the sub-projects where a Request for Proposition will be issued during contract implementation, the Consultant shall include a minimum of two and maximum of three CVs of experts that may be deployed as team leader for the sub-project(s).

F. Evaluation of Proposals

46. The evaluation of proposals will follow the evaluation criteria provided in the RFP. The approach and methodology will consider both how the Consultant envisages the use of the Core Team as well as the responses to the propositions/sub-projects included in this RFP. Furthermore, in the evaluation of the Quality of Methodology, Work Program and Personnel Schedule, consideration will be given on whether the overall team composition (key and non-key experts) is appropriate to meet the TOR and how it matches the proposed methodology. The extent by which proposed key and non-key experts are full time staff of the Consultant will also influence the evaluation of the Quality of Methodology, Work Program and Personnel Schedule. The qualification of the firm will, in addition to previous experiences on similar projects, take into consideration the CVs provided for potential team leader/s of subsequent sub-project/s.

TERMS OF REFERENCE FOR TRANSPORTATION CONSULTANTS

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6. To more effectively use the pool of ODA and domestic funds pledged and budgeted, and to realize the goal of improving the efficiency of infrastructure pre-investment activities the Project will provide financing for consulting services to accelerate progress in infrastructure delivery for inclusive and sustainable socioeconomic development through improved preparation of public infrastructure projects. The Project comprises four outputs:

1. Output 1: Preparation of Roads and Bridges Projects:

7. Under this output, support will be provided to DPWH in planning and preparation of roads and bridges investment projects, including: (i) preparation of pre-feasibility and feasibility studies, including economic and financial analysis; (ii) preparation of preliminary engineering studies; (iii) preparation of detailed engineering design; (iv) preparation of procurement documents and assistance in the tendering process; and v) preparation of social and environmental safeguard assessment studies. Selection of consultants for Output 1 is the object of a separate request for proposal (RFP).

2. Output 2: Preparation of Water Projects:

8. Under this output, support will be provided to DPWH in planning and preparation for flood control investment projects including (i) preparation of river basin master plans including identification of priority flood control structures; (ii) preparation of feasibility study, including economic and financial analysis; (iii) preparation of preliminary design studies; (iv) preparation of detailed engineering design of priority infrastructures; (v) preparation of procurement documents and assistance in the tendering process; and (vi) preparation of social and environmental safeguard assessment studies. Selection of consultants for Output 2 is the object of a separate RFP.

3. Output 3: Preparation of Transportation Projects

9. Under this output, support will be provided to DOTr in the planning and preparation of rail, public transport, and port and airport investment projects, including: (i) preparation of prefeasibility and feasibility studies including economic and financial analysis; (ii) preparation of preliminary design studies; (iii) preparation of detailed engineering design; (iii) preparation of procurement documents and assistance in the tendering process; and (iv) preparation of social and environmental safeguards assessment studies. The indicative list of transportation projects to be the object of this output is provided in Table 3 below. While all projects in Table 3 are considered priority investments, the Government may substitute any or all of the listed project with other transportation projects within or outside the initial regions. Additional details of each project are available through the ADB CMS. This Terms of Reference (TOR) and RFP is for the recruitment of consultants for Output 3 only.

Table 1 - Indicative List of Transportation Projects

PNR South Commuter Due diligence review of FS, preparation of Design-Build BD, for the reconstruction of a 72-km standard gauge, dual-track, electrified railway between Manila and Los Baños, Laguna PNR South Long Haul PNR South Long Haul Due diligence review of FS, preparation of Design-Build BD for a 581-km standard gauge, single-track, non-electrified railway between (a) Los Baños and Legazpi, Albay, (b) Calamba and Batangas, and (c) Legazpi and Matnog, Sorsogon Mindanao Railway: Tagum-Davao City-Digos Segment Due diligence review of MP, FS, preparation of Design-Build BD for a 102-km standard gauge, single-track, non-electrified railway between Tagum, Davao City, and Digos Central Mindanao Airport Airport location study, due diligence review of existing FS, and preparation of DED and BD for the optimum development of existing airport facilities Por Turbo Prop Operation — PhP1.50 billion (~ US\$30 million) For Jet Operation — PhP2.5 billion (~ US\$50 million) (inal scope and cost of project subject to result of FS/MP Study) National Greenways and Non-Motorized Transport Development Project Due diligence review and preparation of FS, DED and BD to develop regulations for open space, pedestrian access, and non-motorized transport infrastructure in Metro Manila, Metro Cebu, Metro Davao,	Table 1 – Indicative List of Transportation Projects				
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Design-Build BD for the NITC and its		Design-Build BD for the NITC and its			
components.		components.			

BD = bidding documents; DED = detailed engineering design; FS = feasibility study; ITS = Intelligent Transport System; km = kilometer; MP = master plan; NITC = National Intelligence Transportation Center; PNR = Philippines National Railways; TEU = twenty-foot equivalent units;

4. Output 4: Improvement of Project Development Management System

10. Under this output, assistance will be provided to DPWH, DOTr and the National Economic Development Authority (NEDA) for development and implementation of project management and monitoring systems. The Project will also support capacity building of the agencies through preparation of documentation and manuals for project preparation activities to ensure sustainability of knowledge transfer and to embed project management systems in NEDA, DPWH and DOTr. Additional expertise may also be recruited under Output 4 to review work carried out by the consultants under Outputs 1, 2 and 3, particularly when the assignment consists or requires advanced technologies and expertise which are not currently available within the client's organization. Selection of consultants for Output 4 will be the object of separate recruitment and is not covered by this TOR and RFP.

B. Consulting Assignment

11. The Government recognizes the need for consultants to be mobilized as soon as possible after loan effectiveness and to expedite the recruitment process and ensure prompt implementation of the priority infrastructure investments. For this reason, the government has requested ADB to carry out the consultant selection on its behalf under advance action. The government also wishes to ensure that world class consultants with experience and qualifications in advanced technologies be recruited to provide appropriate innovative technologies, and help build high quality climate resilience infrastructures more efficiently. In line with this objective, a consulting firm will be recruited for Output 3 with a contract valued at approximately US\$35.5 million (exclusive of taxes and contingencies).

1. Implementation Arrangements

- 12. DOTr will be the implementing agency for Output 3 and will establish a Project Management Unit (PMU) to be responsible for planning, and preparation of infrastructure projects will oversee the outputs of their respective consultants.
- 13. The recruitment of the consulting firm (the Consultant) is being undertaken by ADB in accordance with the ADB Guidelines on the Use of Consultants (2013, as amended from time to time) and it is planned that the contract will be signed with DOTr upon effectiveness of the technical assistance loan expected on January 2018.
- 14. The Consultant will be recruited following Quality Based Selection procedures with full technical proposal. The successful proposal will constitute the basis for a retainer contract to be signed between DOTr and the Consultant for the entirety of the works to be carried out under Output 3. Detailed TORs will be prepared by the PMU for each assignment under the contract and the Consultant will be requested to submit detailed technical and financial propositions for each assignment. The propositions including proposed approach and methodology, work plan and technical and financial information, will be reviewed by the implementing agencies and, if satisfactory, the Consultant will be requested to carry out the assignment at an agreed price generally on a lump sum basis. This process has been chosen to ensure expeditious implementation of the Project by reducing the number of consultants to be selected and therefore eliminating the repetitive and lengthy selection process for each assignment.

2. Consulting Services

15. The key objective of the consulting services is to assist the government in planning and preparation of public sector priority infrastructure investments. For each priority investment subproject the Consultant may be required to carry out the following activities: (i) pre-feasibility studies (which may include preparation of master plans or other studies); (ii) feasibility studies; (iii) preliminary design studies and surveys; (iv) detailed engineering design; (v) preparation of bidding documents and assistance to the implementing agencies in the tendering process; and vi) preparation of consultant selection documents and assistance in the recruitment of construction supervision consultants. The Consultant may be required to carry out any or all of those activities for each sub-project, or in cases where some or all of the activities have been completed or partly completed by a third party, the Consultant may be required to perform a due diligence review for the activities that have been carried out to ensure that the outputs meet the highest technical standards as well as conformance to norms and regulations of the government and the financing institution including social and environmental safeguards. The exact scope of

each assignment as well as the required outputs will be described in the detailed TORs and request for proposition for each assignment.

3. Outputs

16. Under each assignment, the Consultant will be required to deliver specific outputs. These outputs will be listed and described in the detailed TORs for each assignment and will depend on whether the Consultant will be required to carry out the activity or carry out due diligence review of the output of a third party. For each type of activity, the typical required outputs may be as follows:

a. Pre-feasibility Study

17. **Urban Transport.** The Consultant will prepare master plans / pre-feasibility studies for urban transport investment projects. If the master plan/ pre-feasibility study has already been carried out by a third party, the Consultant will be required to carry out due diligence review of the said master plan/ pre-feasibility study including a review of social and environmental safeguard issues. If the due diligence review of the master plan/ feasibility study reveals insufficient or inadequate analysis, the Consultant will be required to carry out additional analysis and studies, and to update/upgrade the master plan/ pre-feasibility study to meet the highest technical standards as well as the norms and regulations of the Government and the financing institution including social and environmental safeguards. The master plan will include but shall not be limited to:

i. For National Greenways and Non-Motorized Transport (NGNMT) Development

- Review of existing national policies, legislation and proposals for promoting greenways and non-motorized transport (NMT) development in the Philippines;
- Identification of good examples of greenways and NMT development in the Philippines, assessment of key success factors and impediments to their expansion, and determine the best approach for supporting local government units (LGU) development of greenways and NMT;
- Identification of two LGUs that will serve as the sub-project pilots, based on an objective set of selection criteria, and solicit LGU's formal agreement to participate in the project preparation process;
- Consultation with relevant agencies of the Government including Department of Interior and Local Government, DOF, NEDA, and selected LGUs, on alternative project designs and financing mechanisms, and prepare draft project guidelines, procedures and manual that can be used to promote LGU development of greenways and NMT; and
- Design and conduct of workshops to help the pilot LGUs/cities prepare their sub-project conceptual plans and grant applications. The workshops should also highlight the importance of creating mechanisms for sustainable financing for maintenance of the new infrastructure.

ii. For National Intelligence Transportation Center (NITC)

Intelligence Transportation System (ITS) vision report;

- Enumeration and definition of ITS subsystems, which should include but not limited to: Road Transport Information and Management System, Passenger Information System, Automatic Fare Collection System, Traffic Signal Management System, Automated Enforcement System (implemented through Automatic License Plate Recognition), Parking Management and Information System, Electronic Traffic Signs, Traffic Data Collection System, Electronic Toll Collection System, and Road Congestion Charging;
- Conceptualization of a multi-modal National Intelligent Transport Center (Road, Rail, Aviation, Maritime);
- Existing ITS subsystems inventory and assessment;
- Due diligence review of the PTIMC project, Metro Manila ITS proposals, and rail and BRT transportation management system;
- Institutional rearrangement or creation plan;
- ITS Policy Framework;
- General system architecture;
- Interoperability standards;
- Alignment with the e-Government Master Plan of the Department of Information and Communications Technology;
- Alignment with ISO/TC 204 standards;
- General timeline and execution plan; and
- Estimation of overall project cost.

b. Feasibility Study

- 18. **Rail.** The Consultant will conduct a due diligence review of the feasibility studies for the identified railway projects. These feasibility studies have been conducted by third parties and include assessments of the technical, economic, financial viability, social and economic impacts of the proposed projects. If the due diligence reviews of the feasibilities studies reveal insufficient or inadequate analysis, the Consultant will be required to carry out additional analysis and update the feasibility study to (i) ensure that the projects are ready and marketable for tendering and (ii) meet the international best practices and norms and regulations of the Government and the financing institution, including social and environmental safeguards. The feasibility studies shall include but not be limited to the following:
 - Demand Forecast:
 - Commercial Assessment:
 - Financial Assessment:
 - Economic Assessment:
 - Technical Assessment;
 - Environmental Impact Assessment;
 - Land Acquisition and Resettlement Framework;
 - Social and Poverty Assessment:
 - Gender Impact Assessment;
 - Legal-Regulatory Assessment;
 - Rolling Stock Specifications;
 - Operation simulation and operations plan;
 - Maintenance Plan;
 - Railway Management Plan;
 - Cost Estimation;
 - Construction and Implementation Schedule;

- Transport Oriented Development potential assessment:
- Non-railway revenue and alternative financing assessment;
- Procurement Strategy;
- Concept Drawings and Designs;
- Cost Benefit/Value Engineering Analyses;
- Traffic impact assessment;
- Utilities relocation/conflict plan; and
- Depot Plan.
- 19. **Airport.** The Consultant will be required to carry out a due diligence review of the feasibility study, including review and assessment of the technical as well as economic and financial viability of the proposed project and social and environment safeguard review. If the due diligence review of the feasibility study reveals insufficient or inadequate analysis, the Consultant will be required to carry out additional analysis and studies, and to update/upgrade the feasibility study to meet the highest standards as well as the norms and regulations of the Government and the financing institution including social and environmental safeguards. Specifically, the feasibility study shall include but not be limited to the following:
 - Demand Forecast:
 - Commercial Assessment;
 - Financial Assessment (FIRR);
 - Economic Assessment (EIRR);
 - Technical Assessment;
 - Inventory and Condition Assessment;
 - Population growth projections including projected changes in rural and urban population distribution;
 - Formulation of design options with comparison of cost-benefits analysis;
 - Evaluation of social benefits both quantifiable and non-quantifiable;
 - Determination of socio-economic characteristics of the beneficiaries and pattern of distribution of benefits;
 - Quantitative financial risk analysis;
 - Projected cost of O&M and sustainability analysis;
 - Identification of environmental impacts;
 - Environmental, social and economic analysis;
 - Identification of social impact on vulnerable groups, women and children, and minorities:
 - Estimation of land acquisition and resettlement costs;
 - Updates on the topographical, geotechnical and aeronautical survey;
 - Estimated cost of the project; and
 - Implementing Arrangement.
- 20. **Maritime Port.** The Consultant may be required to carry out a full feasibility study or due diligence review of existing feasibility studies of identified port projects with respect to the technical, as well as economic and financial viability and social and environment safeguards. If the due diligence review of the feasibility study reveals insufficient or inadequate analysis, the Consultant will be required to carry out additional analysis and studies and update/upgrade the feasibility study to meet the highest standards as well as the norms and regulations of the Government and the financing institution. Specifically, the feasibility study /due diligence review shall include but not be limited to the following:
 - Formulation of design options with comparison of cost-benefits analysis;

- Evaluation of social benefits both quantifiable and non-quantifiable;
- Determination of socio-economic characteristics of the beneficiaries and pattern of distribution of benefits;
- Quantitative financial risk analysis;
- Projected cost of O&M and sustainability analysis;
- Identification of environmental impacts;
- Environmental, social and economic analysis;
- Identification of social impact on vulnerable groups, women and children, and minorities;
- Estimation of land acquisition and resettlement costs;
- Estimated cost of the project;
- Financial and economic analysis (FIRR and EIRR);
- Implementing Arrangement;
- Port traffic flow planning, engineering and management (internal/external) system analysis; and
- Strategic resettlement mechanism for formal and informal settlers.
- 21. **Urban Transport.** The feasibility study for projects for construction of ITS and Greenway projects should contain a detailed assessment of the technical as well as economic and financial viability of the proposed project as well as social and environment safeguards. Specifically, the feasibility study shall include but not be limited to the following:

i. For **NGNMT Development**

- Preparation of, in each of the two LGUs identified for pilot implementation, a Greenways/NMT sub-project conceptual study, technical feasibility analysis and cost estimates plus bidding documents for "Design and Build" contracts;
- Refinement of the draft project guidelines, procedures and manual based on the experience with sub-project preparation in the two pilot LGUs; and
- Based on the experience with the two pilot LGU pilot sub-projects, preparation of a full feasibility study covering the financial, social, technical, legal, and economic feasibility of the Project, in sufficient detail for submission to NEDA Investment Coordination Committee for approval.

ii. For NITC

- Enumeration and identification of components for the ITS center subsystem;
- NITC Subsystem specification;
- NITC Subsystem capacity estimation;
- Migration, adoption, or integration plans for other existing ITS subsystems;
- Formulation of design options with comparison of cost-benefits analysis;
- Quantitative financial risk analysis;
- Projected cost of O&M and sustainability analysis;
- Estimated cost of the project;
- Financial and economic analysis (FIRR and EIRR);
- Implementing arrangement;
- Institutional and policy framework; and
- NITC Structure including site identification and structure requirements.

c. Preliminary Engineering Design Studies

- 22. **Rail.** The Consultant may be required to carry out and/or contract for carrying out additional surveys and studies that have been identified in the feasibility study and are required for a design-build tender to ensure an adequate and fair level of risk distribution to the contractor and the implementing agencies. This will include but shall not be limited to:
 - Preliminary survey and studies/assessment;
 - Engineering design sufficient for a Design-Build tender;
 - Utilities survey and relocation/conflict plan;
 - Existing infrastructure survey;
 - Land Parcellary Survey;
 - Traffic impact assessment;
 - Topographic surveys;
 - Hydro-topographic survey;
 - Hydrologic survey;
 - Geological and Geotechnical investigations; and
 - Seismic hazard assessment.
- 23. **Airport.** Prior to detailed engineering design, the Consultant may be required to carry out and/or contract for carrying out all necessary surveys and studies that have been identified in the feasibility study and are required for the detailed design of the project, including but not limited to:
 - Preliminary survey and studies/assessment;
 - Preliminary engineering design;
 - Topographic surveys;
 - Hydrological survey
 - Geological and Geotechnical investigations;
 - Aeronautical survey;
 - Land acquisition and resettlement framework;
 - Initial environmental examination;
 - Social impact assessment;
 - Indigenous people assessment; and
 - Gender impact assessment.
- 24. **Maritime Port.** Prior to detailed engineering design, the Consultant may be required to carry out and/or contract for carrying out all necessary surveys and studies required for the detailed design of the project, including but not limited to:
 - Due diligence review of existing master plans for identified port projects including site layout/site development with the designed port facilities, incorporating port operations/processes that ensure the most optimal flow of cargo in and out of the port and back up area;
 - Site analysis plans;
 - Soil investigations;
 - Geological and geotechnical analysis;
 - Hydrographic surveys (pre-dredging survey, progress survey, post-dredging survey) to quantify the requirements of dredging and requirements for the reclamation site
 - Accretion and erosion simulation studies;
 - Environmental impact assessment;

- Resettlement action plan;
- Gender action plan;
- Internal/external port traffic flow/circulation plan;
- Determination of appropriate vessel design, together with wave height, wave force and current flow/directional analysis;
- Indicative preliminary qualitative/quantitative analysis for port expansion potential; and
- Cost estimates.
- 25. **Urban Transport.** Prior to detailed engineering design, the Consultant may be required to carry out and/or contract for carrying out all necessary surveys and studies that have been identified in the Feasibility Study and are required for the detailed design of the project, including but not limited to:

i. For **NGNMT Development**

- Preliminary survey and studies/assessment of the pilot sites;
- Survey of land uses, activities, and street network of the pilot sites;
- Survey of NMT networks;
- Topographic surveys;
- Hydro-topographic survey;
- Geological and Geotechnical investigations;
- Land acquisition and resettlement framework;
- Initial environmental examination;
- Social impact assessment;
- Concept Greenways Proposal for the pilot sites;
- Preliminary engineering design for the pilot sites; and
- Conceptual 3D Models and renderings for the pilot sites.
- ii. For **NITC**: A structure needs to be built to house the NITC, the Consultant may be required to carry out and/or contract for carrying out additional surveys and studies that have been identified in the feasibility study and are required to prepare the design-build bidding documents. This will include but shall not be limited to:
 - Preliminary site survey and studies/assessment
 - Preliminary building architecture
 - Traffic impact study

d. Detailed Engineering Design

26. **Detailed Engineering Design.** For projects not to be awarded as design-build contracts, the Consultant may be required to carry out detailed engineering design. In case where a detailed engineering design has been carried out by a third party, the Consultant may be required to carry out due diligence review of the detailed design and bidding documents. If the due diligence review reveals inadequate or incomplete detailed design, the Consultant may be required to update/upgrade the detailed design and documents to meet the highest standards as well as the norms and regulations of the Government and the financing institution including social and environmental safeguards. This will include but shall not be limited to the following tasks:

Appendix 2

i. For Airport Projects:

- Detailed design report;
- Conceptual design of landside and airside facilities to comply with ICAO,
 FAA and CAAP-MOSA requirements;
- Hydrologic assessment;
- Hydraulic design;
- Aeronautical survey map;
- Seepage analysis;
- Sediment transport analysis;
- Geological and geotechnical analysis:
- Structural, and earthwork design;
- Design parameters for seismic conditions;
- Environmental impact assessment;
- Environmental management plan;
- Resettlement action plan; and
- Gender action plan.

ii. For Maritime Port Projects:

- Review/Analysis/Necessary Enhancement (where applicable) of Related Studies/ Literatures Re: Development of the Study Area and Review/Assessment/Necessary Enhancement (where applicable) of New Cebu International Container Port Feasibility Study;
- Traffic Study;
- Site Inspection;
- Detailed Topographic and Hydrographic Survey;
- Detailed Geologic and Hydrologic Survey;
- Detailed Geo-Technical Survey and Soil/Material Investigation/Testing;
- Detailed Design of Drainage/Utility System, etc.;
- Detailed Design of Deck Slab/Main Girder/Girder (main girder/girder arrangement, rebar specs/arrangement, cross-beam, etc.);
- Detailed Design of Port/Quay/Causeway/Pier/Embankment/Breakwater and Port Structures' Protection;
- Miscellaneous work activities/Safety Audit Design;
- Costings/Material Pricing;
- Construction Plan and Execution Plan;
- Tender Documents Preparation; and
- Project Implementation Program.

iii. For NGNMT Development:

- Detailed design report;
- Hydrologic assessment;
- Hydraulic design;
- Seepage analysis;
- Sediment transport analysis;
- Geological and geotechnical analysis;
- Structural, and earthwork design;
- Design parameters for seismic conditions;
- Environmental and Social Assessment Reports;

- Resettlement action plan;
- Gender action plan; and
- Greenways Management Plan.
- 27. **Design-Build Contracts.** For projects to be carried out under design-build contracts, the detailed engineering design will be carried out by the design-build contractors. The Consultant however may be required to prepare conceptual design and design-build bidding documents and assist the implementing agencies in the evaluation of the tenders (see below).

e. Preparation of Bidding Documents

- 28. **Civil Works Contracts.** For projects other than design-build contracts, the Consultant may be required to prepare bidding documents for civil works contracts, and assist the implementing agencies in the bidding process and the evaluation of bids. Bidding will be carried out following international competitive bidding procedures or national competitive procedures for construction of civil works. Preparation of bidding documents will include but shall not be limited to the following:
 - Invitation to bid;
 - Detailed design drawings;
 - Detailed bidding drawings;
 - Complete specifications;
 - Bidding documents;
 - Preparation of bid evaluation criteria;
 - Post-qualification report of bidders;
 - Assistance in bid evaluation;
 - Bid evaluation report for submission to the Bids and Awards Committee (BAC);
 - Resolution of award and notice of award; and
 - Other pertinent documents related to pre-construction activities.
- 29. **Design-Build Contracts.** For projects to be carried out under design-build contracts, the Consultant will be required to prepare conceptual design and bidding documents for design-build contracts and provide assistance to the implementing agencies in the evaluation of tenders and award of contract. Preparation of bidding documents shall include but not be limited to the following:
 - i. For Rail projects,
 - Detailed bid implementation plan;
 - Market-sounding;
 - Bidding documents;
 - Information Memorandum;
 - Bid Bulletins;
 - Bid Forms;
 - Execution copies of the contracts;
 - Pre-bid Conferences:
 - Virtual Data Room;
 - Prepare draft responses to bidder's queries;
 - Bid-related notices/requests and supplemental notices;
 - Necessary presentations to BAC and stakeholders;
 - Engineering designs for design-build tenders;

- Concept Designs and Renders;
- Detailed bidding drawings;
- Complete specifications;
- Minimum performance standards and specifications and key performance indicators:
- Post-qualification report;
- Bid evaluation support to the BAC and Technical Working Group;
- Bid evaluation report for submission to the BAC;
- Resolution of award and notice of award; and
- Other pertinent documents related to pre-construction activities
- ii. For **Maritime Port** projects in addition to relevant items above:
 - Assistance with pre-qualification documents;
 - Assistance with pre-bid conference;
 - Assistance with bid opening and evaluation;
 - Assistance with bid award; and
 - Preparation of construction contract.
- 30. For **NITC**, if there is a need to construct a structure for the NITC, the project will be carried-out under a design-build contract. The Consultant will be required to prepare conceptual design and bidding documents for the design-build contracts and provide assistance to the implementing agencies in the evaluation of tenders and award of contract.

f. Selection of Construction Supervision Consultants

- 31. In parallel to the preparation of bidding documents and the bidding of civil works contracts or design-build contracts, the Consultant may be required to assist the implementing agencies in the selection of consultants for construction supervision. This will include but shall not be limited to the following:
 - Preparation of criteria for evaluation of expressions of interest (EOI);
 - Guidance in the evaluation of EOIs and preparation of shortlist;
 - Preparation of TORs for construction supervision consultants;
 - Preparation of RFPs;
 - Preparation of selection criteria;
 - Guidance in the evaluation of technical and financial proposals;
 - Preparation of draft contract documents: and
 - Guidance during contract negotiations.

g. Training and Transfer of Knowledge

- 32. In parallel to the other outputs, the Consultant may be required to prepare curricula and conduct trainings upon the request of the implementing agency on, but not limited to, the following topics:
 - Transport master planning;
 - Urban master planning;
 - Logistics network planning;
 - Automated fare collection systems;
 - Climate change resilient design;

- Sustainable transport facility design;
- Port management;
- Demand studies;
- Land reclamation;
- Recent technological developments in road, railway, aviation, maritime transportation;
- Best practices in operations and maintenance of road, railway, aviation, maritime transport systems;
- Cable car systems;
- Transit oriented developments; and
- Procurement strategy.

C. Key Required Expertise

33. It is expected that the Consultant will be required to provide the following key expertise at various times during the assignment. Other expertise may also be required and will be determined as individual assignments or projects will become more clearly defined.

Table 2a – Key Required Expertise Rail Projects

		Projects	
	Minimum Qualifications		Minimum Qualifications
Consultant	(years)	Consultant	(years)
Senior Urban Planner	15	Senior Mechanical Engineer	15
Senior Transportation Planner	15	Senior Electrical Engineer	15
Senior Financial Analyst	15	Senior Communications and	15
Senior Transport Economist	15	Control System Engineer	
Senior Railway Business	15	Senior Railway Signaling Engineer	15
Development Specialist		Senior Land Acquisition and	15
Senior Train Operations	15	Resettlement Specialist	
Planner		Senior Railway Track Engineer	15
Senior Change Manager	10	Senior Rolling Stock Engineer	15
Senior Transportation	15	Senior Rolling Stock Designer	10
Engineer		Senior Architect (Stations)	10
Senior Structural/Civil	15	Senior Landscape Architect	10
Engineer		Senior Graphic Designer	10
Senior Construction Engineer	10	Senior Surveying and Remote	10
Senior Earthquake Engineer	15	Sensing	
Senior Environmental	10	Senior Land Surveyor	10
Engineer		Senior Cartographer	10
Senior Geotechnical Engineer	10	Senior Estimator/Quantity	10
Senior Geodetic Engineer	10	Surveyor	
Senior Sanitary Engineer	10	Senior Construction Surveyor	10
Senior Safety Engineer	10	Senior Gender Specialist	10
Senior Project Risk Analyst	10	Senior Social Development	10
Senior Procurement Specialist	15	Specialist	
Senior Legal Expert	15	Senior Automated Fare Collection	10
(Transport Law)		Specialist	
Senior Climate Change	10	Senior Private Public Partnership	10
Adaptation Specialist		Specialist	
Sr Tunnel Engineer	15		

Table 2b – Key Required Expertise
Airport Projects

		it i rojecta	,
	Minimum		Minimum
	Qualifications		Qualifications
Consultant	(years)	Consultant	(years)
Senior Transport Planner	15	Senior Nav. Aids Specialist	15
Senior Transport Economist	15	Senior Aerospace planner	15
Senior Financial Analyst	15	Senior Environmental Specialist	10*
Senior Airport Engineer	15	Senior Climate Change Adaptation	15
Senior Geodetic Engineer	15	Specialist	
Senior Structural/Civil	15	Senior Environmental Planner	15
Engineer		Senior Social Development	15
Senior Geotechnical Engineer	15	Specialist	
Senior Architect (Airport)	15	Senior Gender Specialist	10
Senior Landscape Architect	15	Senior Land Acquisition/	10
Senior Sanitary Engineer	15	Resettlement Specialist	
Senior Mechanical Engineer	15	Senior Procurement Specialist	15
Senior Electrical Engineer	15	Senior Legal Expert (Transport	10
Senior Private Public	15	Law)	
Partnership Specialist			

^{*} Must have Instrument Flight Procedure Organization Certificate by the CAAP or equivalent and demonstrated experience in the design instrument approach procedures in accordance with ICAO PANS OPS

Table 2c – Key Required Expertise Maritime Port Projects

	Minimum Qualifications	•	Minimum Qualifications
Consultant	(years)	Consultant	(years)
Senior Transport Planner	15	Senior Environmental Specialist	15
Senior Transport Economist	15	Senior Environmental Planner	15
Senior Financial Analyst	15	Senior Climate Change Adaptation	15
Senior Port Engineer	15	Specialist	
Senior Geodetic Engineer	15	Senior Social Development	10
Senior Structural/Civil	15	Specialist	
Engineer		Senior Gender Specialist	10
Senior Marine Engineer	15	Senior Land Acquisition/	10
Senior Geotechnical Engineer	15	Resettlement Specialist	
Senior Sanitary Engineer	15	Senior Procurement Specialist	10
Senior Mechanical Engineer	15	Senior Legal Expert (Transport	15
Senior Electrical Engineer	15	Law)	
Senior Nav. Aids Specialist	15	Senior Private Public Partnership Specialist	15

Table 2d – Key Required Expertise National Greenway Project

			B. d. i. i. a.
	Minimum		Minimum
	Qualifications		Qualifications
Consultant	(years)	Consultant	(years)
Senior Urban Transport	20	Senior Graphic Designer	15
Planner / Team Leader (for		Senior Social Development	15
National Greenways)		Specialist	
Senior Architect	20	Senior Economist	15
Senior Landscape Architect	20	Senior Project Manager	15

Consultant	Minimum Qualifications (years)	Consultant	Minimum Qualifications (years)	
Senior Communication Specialist	20	Senior Environmental Specialist	20	

Table 2e – Key Required Expertise NITC Project

Consultant	Minimum Qualifications (vears)
Consultant	(years)
Senior Intelligent Transport System Specialist	15

34. The key experts listed in Tables 2a to 2e above will not necessarily be part of the Core Team (as defined under par. 35) but will be expected to lead or be responsible to oversee the work of sub-team of experts during the various assignments. During the assignments, it may be necessary for the Consultant to bring additional external expertise required with prior approval of the client.

D. Proposal Preparation

- 35. The shortlisted consulting firms are requested to prepare a detailed description of how they propose to deliver the outputs of the contract in the section of their proposal called "Approach and Methodology." In this narrative, firms should clearly explain how they will achieve the outputs and defined deliverable, and include detailed information on key and non-key experts that will comprise the core project team and their proposed input. The Consultants must also describe the experience of the firm or joint venture (JV), and core team key experts in the Philippines or similar geopolitical environment.
- 36. Core team of experts. The Consultant must provide a minimum of 42 person-months of key experts (Core Team) to be posted at the PMU for the duration of the contract. The core team, including a Project Management Specialist/Team Leader, which will be constituted preferably by permanent employees of the consulting firm or JV or experts working exclusively for the firm or JV member, the team will be based at the implementing agencies office in Clark but may be required to travel to project sites frequently. Only one curriculum vitae (CV) must be submitted for each key and non-key expert included in the proposal. Only the CVs of key experts will be scored as part of the technical evaluation of proposals. The CVs of non-key experts will not be scored, however ADB will review the individual CVs and may reject the CVs of non-key experts if the experience and qualification of the experts is considered inadequate or substandard. The overall composition of the Core Team, the credentials of non-key experts, and the design of the team as a whole including the appropriateness of the level of inputs (home, field, total) will be taken into consideration in the evaluation of Quality of Approach and Work Plan and Personnel Schedule criteria.
- 37. All positions under the contract, both key and non-key experts for the Core Team, must be included and budgeted for in the financial proposal in accordance with the person-month allocation required for each as defined by the Consultant's proposed approach and methodology and work plan. The budget for the key and non-key experts to be appointed for each individual sub-project assignments will be the object of separate propositions during implementation and will be paid from the unallocated fund category reserved under the contract for those subproject assignments. Likewise, travel costs of the Core Team to cover expenses of travel between the

implementing agencies headquarters and the project sites, which cannot be determined until the project sites are selected, will be allocated from unallocated funds during implementation.

38. The proposal should also include a confirmation of availability of key experts listed in Table 2a to 2e above that may be assigned senior positions in various sub-project assignments. The qualifications and expertise of those key experts will be a key consideration in the evaluation of the qualification of the firm or JV.

1. Key Experts (Core Team)

39. The Consultant has full discretion over the composition and structure of the proposed core team of experts, and is responsible to provide all necessary expertise and qualifications to deliver the required output of the assignment. However, as a minimum requirement, the team must comprise 42 person months of input for a project management specialist/team leader (See Table 3 below). The person-months indicated in the table below are strict minimum and the Consultant may propose longer inputs if it is deemed necessary to meet the objectives of the approach and methodology.

Table 3 – Key Core Expert Qualifications

Position	Minimum Person Months	Requirements
Project Management Specialist/Team Leader	42	 Advanced degree in engineering, or other relevant field; Minimum 20 years of professional experience; Minimum 15 years of experience in project management, including ADB or ODA financed projects

ADB = Asian Development Bank; ODA = official development assistance.

- 40. **Non-Key Experts**. In addition to the mandatory key expert described in Table 3 above, the Consultant is expected to provide non-key experts for the Core Team to ensure all aspects of the work can be undertaken, and all deliverables and reports are completed, in accordance with the implementation schedule. All non-key experts must have adequate qualifications and experience in a relevant field with a minimum of 5 years of experience.
- 41. In addition, the Consultant is required to provide technical and administrative staff necessary for the Core Team to achieve its role and objectives. The proposal must provide a list of technical and administrative personnel to be provided. The Consultant is responsible to ensure that the technical and administrative personnel is sufficient to effectively carry out its functions. The cost of technical and administrative staff may be included in the financial proposal, but it is understood that if additional staff is required during implementation of the contract to meet its objective and schedule, the cost of such additional staff will be borne by the Consultant and will not be compensated.
- 42. The project list in Table 1 above is indicative. While all projects listed are considered priority investments, the Government may substitute any of the listed projects with other transportation projects within or outside the initial regions.

2. Specific Tasks of the Project Management Specialist /Team Leader

- 43. The Project Management Specialist/Team Leader will be responsible for:
 - (i) overall liaison with the implementing agencies;

- (ii) preparation of propositions for each individual assignment and negotiations with the implementing agencies;
- (iii) coordination of the input and output of the sub-teams of consultants (both in the field and home based) involved in the individual assignments;
- (iv) quality control of work carried out and output delivered by the sub-teams;
- (v) overall management and administration of the contract; and
- (vi) reporting to the implementing agencies on progress of work being carried out by the Core Team and the sub-teams.
- 44. The Project Management Specialist/Team Leader must have an advanced degree from a recognized institution in Engineering, Urban Planning, Transport or other relevant field, and have at least 20 years of professional experience including 15 years in management of transport projects. Experience in the Philippines or similar geopolitical environment would be considered an asset.

3. Services Provided by the Employer

45. DOTr will assign relevant counterpart staff to the project on a full-time basis, and will provide office space, furniture, fixtures, and other assistance in Clark that may be required for the Core Team to carry out its duties and responsibilities for the successful completion of the Project. In addition, DOTr shall assist in obtaining the necessary permits, visas and other documents necessary by the Consultant to carry out the services under contract. DOTr will facilitate field visits and arrange meetings with relevant authorities and agencies when necessary. In addition, DOTr shall coordinate with the respective authorities responsible for maintenance of peace and order at project locations when and if necessary upon request of the Consultant. Any other office requirements, facilities (equipment and consumables) and transport requirements should be provided by the Consultant. The Government will pay, or cover through other allowed means in line with the Philippine's taxation framework, the applicable Philippine taxes and duties on the contract on behalf of the Consultant. Additional information regarding the tax law in the Philippines can be found at the Government of the Philippines website (https://www.bir.gov.ph/index.PhP/tax-code.html).

4. Equipment

- 46. The proposal should identify the critical element of equipment that will be required by the Core Team. In addition, the Consultant will be requested to procure equipment to assist the implementing agency and the sub-project teams in their assignments. The equipment and supplies for the sub-project teams will be the object of propositions for each sub-project and should not be included in the Core Team requirements. All equipment and assets purchased under the Project and paid by the Project will adhere to ADB's Procurement Guidelines (2015, as amended from time to time), and upon completion of the Project, these assets will be turned over to the Government. The equipment may include but not limited to:
 - Geographic Information System Software and associated hardware;
 - Railway Operations Simulation Software and associated hardware; and
 - Transport Planning/Modelling Software and associated hardware.

E. Request for Proposition

47. As part of its proposal, the Consultant is required to prepare the first proposition for a subproject. The proposition should contain both technical and financial components. This will allow for early mobilization, not only of the Core Team, but also the first sub-project team, towards meeting the objective of expediting implementation of the Project. The technical component shall include the detailed approach and methodology for the proposition, CVs of key and non-key experts, as well as proposed work plan and personnel schedule for the sub-project. The financial component shall include all costs associated with the sub-project.

48. For each of the sub-projects where a Request for Proposition will be issued during contract implementation, the Consultant shall include a minimum of two and maximum of three CVs of experts that may be deployed as team leader for the sub-project(s).

F. Evaluation of Proposals

49. The evaluation of proposals will follow the evaluation criteria provided in the RFP. The approach and methodology will consider both how the Consultant envisages the use of the Core Team as well as the response to the proposition/sub-project included in this RFP. Furthermore, in the evaluation of the Quality of Methodology, Work Program and Personnel Schedule, consideration will be given on whether the overall team composition (key and non-key experts) is appropriate to meet the TOR and how it matches the proposed methodology. The extent by which proposed key and non-key experts are full time staff of the Consultant will also influence the evaluation of the Quality of Methodology, Work Program and Personnel Schedule. The qualification of the firm will, in addition to previous experiences on similar projects, take into consideration the CVs provided for potential team leader/s of subsequent sub-project/s.

Appendix 3

TEMPLATE OF ANNUAL/QUARTERLY PROGRESS REPORT

1. Quarterly reports will include: (i) a narrative description of progress made by each project component and the Project during the reporting period; (ii) modifications to the implementation schedule; (iii) major project activities by the executing agency, project management unit (PMU); (iv) financial and procurement-related information; (v) problems experienced and remedial actions proposed; and (vi) the work plan for the following period. All data shall be sex-disaggregated, where relevant. The second and fourth quarter progress reports will also include findings of initial assessments of project impact on the targeted beneficiaries

A. Introduction and Basic Data

- 2. Provide the following:
 - (i) ADB loan number, project title, borrower, executing agencies, implementing agencies;
 - (ii) total estimated project cost and financing plan;
 - (iii) status of project financing including availability of counterpart funds and cofinancing:
 - (iv) original and revised (if applicable) ADB loan closing date and elapsed loan period based on original and revised (if applicable) loan closing dates; and
 - (v) date of last ADB review mission.

B. Utilization of Funds (ADB Loan, and Counterpart Funds)

- 3. Provide the following:
 - cumulative contract awards financed by the ADB loan, cofinancing, and counterpart funds (commitment of funds to date), and comparison with time-bound projections (targets);
 - (ii) cumulative disbursements from the ADB loan, cofinancing, and counterpart funds (expenditure to date), and comparison with time-bound projections (targets); and
 - (iii) re-estimated costs to completion, need for reallocation within ADB loan categories, and whether an overall project cost overrun is likely.

C. Project Purpose

- 4. Provide the following:
 - (i) status of project scope/implementation arrangements compared with those in the report and recommendation of the President (RRP), and whether major changes have occurred or will need to be made:
 - (ii) an assessment of the likelihood that the immediate development objectives (project purpose) will be met in part or in full, and whether remedial measures are required based on the current project scope and implementation arrangements;
 - (iii) an assessment of changes to the key assumptions and risks that affect attainment of the development objectives; and
 - (iv) other project developments, including monitoring and reporting on environmental and social requirements that might adversely affect the project's viability or accomplishment of immediate objectives.

D. Implementation Progress

5. Provide the following:

- (i) assessment of project implementation arrangements such as establishment, staffing, and funding of the PMU;
- (ii) information relating to other aspects of the executing agency's internal operations that may impact on the implementation arrangements or project progress;
- (iii) progress or achievements in implementation since the last progress report;
- (iv) assessment of the progress of each project component, such as, (a) recruitment of consultants and their performance; (b) procurement of goods and works (from preparation of detailed designs and bidding documents to contract awards); and (c) the performance of suppliers, manufacturers, and contractors for goods and works contracts:
- (v) assessment of progress in implementing the overall project to date in comparison with the original implementation schedule (include actual progress in comparison with the original schedules and budgets, the reference framework for calculating the project progress will be provided by ADB); and
- (vi) an assessment of the validity of key assumptions and risks in achieving the project's quantifiable implementation targets.

E. Compliance with Covenants

- 6. Provide the following:
 - (i) the borrower's compliance with policy loan covenants such as sector reform initiatives and executing agency reforms, and the reasons for any noncompliance or delay in compliance;
 - (ii) the borrower's and executing agency's compliance with financial loan covenants including the executing agency's financial management, and the provision of audited project accounts or audited agency financial statements; and
 - (iii) the borrower's and executing agency's compliance with project-specific loan covenants associated with implementation, environment, and social dimensions.

F. Major Project Issues and Problems

7. Summarize the major problems and issues affecting or likely to affect implementation progress, compliance with covenants, and achievement of immediate development objectives. Recommend actions to overcome these problems and issues (e.g., changes in scope, changes in implementation arrangements, and reallocation of loan proceeds).

Appendix 4

DRAFT TERMS OF REFERENCE OF EXTERNAL AUDITOR

I. INTRODUCTION

1. A description of the project will be provided with a focus on the purpose for which the funds are intended consistent with broad project objectives and budget. A description of the executing and implementing agencies will be included along with the related accounting and financial management practices, loan amount, financial reporting periods to be audited, and other relevant information that should be brought to the attention of the auditors.

II. MANAGEMENT RESPONSIBILITY FOR PREPARING PROJECT FINANCIAL STATEMENTS

- 2. Management is responsible for preparing and fairly presenting the project financial statements, and for maintaining sufficient internal controls to ensure that the financial statements are free from material misstatement, whether due to fraud or error. In addition, management is responsible for ensuring that funds were used only for the purpose of the project, for compliance with financial covenants (where applicable), and for ensuring that effective internal controls, including over the procurement process, are maintained. In this regard, management must:
 - (i) Prepare and sign the Audited Project Financial Statements.
 - (ii) Prepare and sign a Statement of Compliance.
- 3. Management must include the following in the Statement of Compliance:
 - (i) That project financial statements are free from material misstatements including omissions and errors, and are fairly presented;
 - (ii) That the borrower or executing agency has utilized the proceeds of the loan only for the purpose(s) of the project;
 - (iii) That the borrower or executing agency was in compliance with the financial covenants of the legal agreement(s) (where applicable);
 - (iv) That the imprest fund procedure, where applicable, has been operated in accordance with the ADB's Loan Disbursement Handbook;
 - (v) That adequate supporting documentation has been maintained to authenticate claims stated on the statement of expenditures (SOE), where applicable, for reimbursement of eligible expenditures incurred and liquidation of advances provided to the imprest account; and
 - (vi) That effective internal control, including over the procurement process, was maintained.

III. OBJECTIVES

4. The objectives of the audit of the project financial statements is to enable the auditor to (i) express an independent and objective opinion as to whether the project financial statements present fairly, in all material respects, or give a true and fair view of the project's financial position, its financial performance and cash flows, and (ii) provide a reasonable assurance opinion over certain specific representations made in the Statement of Compliance (please refer to para. 10).

IV. AUDITING STANDARDS

5. The [statutory] audit is required to be conducted in accordance with [specify the relevant auditing standards]. These standards require that the auditor comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the project financial

statements are free from material misstatement. An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the project financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the project financial statements whether due to fraud or error. In making those risk assessments, the auditor considers the internal control relevant to the entity's preparation and fair presentation of the project financial statements to design audit procedures that are appropriate in the circumstances, but not to expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the project financial statements.

6. The standards to be applied will be documented in the project/loan documents, and will include:

Option A: Standards promulgated by the International Auditing and Assurance Standards Board:

- 1. International Standards on Auditing (ISA); and
- 2. International Standards on Assurance Engagements (ISAE).

Option B: Standards promulgated by the International Organization of Supreme Audit Institutions:

1. International Standards of Supreme Audit Institutions (ISSAI)

Option C: National Auditing Standards:

- 1. The auditing standards promulgated by {national authority}.
- 2. In complying with ISA, the auditor will pay attention to the following standards:
 - ISA 800/ISSAI 1800 Special Considerations Audits of Financial Statements Prepared in Accordance with Special Purpose Frameworks.
 - ISA 240/ISSAI 1240 The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements.
 - ISA 250/ISSAI 1250 Consideration of Laws and Regulations in an Audit of Financial Statements.
 - ISA 260/ISSAI 1260 Communication with Those Charged with Governance.
 - ISA 265/ISSAI 1265 Communicating Deficiencies in Internal Control to Those Charged with Governance and Management.
 - ISA 330/ISSAI 1330 The Auditor's Responses to Assessed Risks.

V. PROJECT FINANCIAL REPORTING FRAMEWORK

7. The auditor will verify that the project financial statements have been prepared in accordance with [International Financial Reporting Standards issued by the International Accounting Standards Board, International Public Sector Accounting Standards promulgated by the International Public Sector Accounting Standards Board, or national equivalents]. The executing agency and/or implementing agency are responsible for preparing the project financial statements, not the auditor.

VI. AUDIT DELIVERABLES

A. Audited Project Financial Statements

8. An auditor's opinion providing reasonable assurance over the project financial statements, and project financial statements comprising the following:

Table 1: Content of the Project Financial Statements

	For Cash-Based Financial Statements		For Accrual-Based Financial Statements		
1.	A statement of cash receipts and payments	1.	A statement of financial position (balance sheet)		
2.	A statement of budgeted versus actual expenditures	2.	A statement of financial performance (income statement)		
3.	A statement of imprest account (where	3.	A statement of cash flows		
	applicable)	4.	A statement of changes in net		
4.	A summary statement of expenditures		assets/equity (where applicable)		
	(where applicable)	5.	A statement of imprest account (where		
5.	Significant accounting policies and		applicable)		
	explanatory notes	6.	Significant accounting policies and		
6.	Any additional schedules agreed (e.g., a		explanatory notes		
	summary of assets)	7.	Statement of budgeted versus actual expenditures		
		8.	Summary statement of expenditures		
			(where applicable)		
		9.	Any additional schedules agreed		

B. Reasonable Assurance Opinion over the Use of Loan Proceeds and Compliance with Financial Covenants

- 9. The auditor will provide a reasonable assurance opinion following [ISAE 3000 "Assurance Engagements other than Audits or Reviews of Historical Financial Information" or ISSAI 4200 "Compliance Audit Related to the Audit of Financial Statements"] for the following confirmations provided by Management in the Statement of Compliance:
 - (i) That the proceeds of the loan were used only for the purpose(s) of the project; and
 - (ii) That the borrower or executing agency was in compliance with the financial covenants of the legal agreement(s), where applicable.
- 10. The auditor will outline the degree of compliance for each of the financial covenants in the loan agreement.

C. Management Letter

- 11. The auditor will provide a management letter containing, at a minimum, the following:
 - (i) Any weaknesses in the accounting and internal control systems that were identified during the audit, including any irregularity in the use of the imprest fund and SOE procedures (where applicable);
 - (ii) Any identified internal control weaknesses related to the procurement process such as, over the bidding, evaluation and contract management domains;
 - (iii) Recommendations to rectify identified weaknesses;
 - (iv) Management's comments on the audit recommendations along with the timeframe for implementation;

- (v) The status of significant matters raised in previous management letters;
- (vi) Any other matters that the auditor considers should be brought to the attention of the project's management; and
- (vii) Details of any ineligible expenditure¹ identified during the audit. Expenditure is considered ineligible if it refers to (i) expenditures incurred for purposes other than the ones intended under the legal agreement(s); (ii) expenditures not allowed under the terms of the legal/financing agreements; and (iii) expenditures incurred in violation of applicable government regulations.

D. Specific Considerations

- 12. The auditor will, during the audit, pay particular attention to the following:
 - (i) The use of external funds in accordance with the relevant legal and financing agreements;
 - (ii) The provision of counterpart funds in accordance with the relevant agreements and their use only for the purposes intended;
 - (iii) The maintenance of proper books and records;
 - (iv) The existence of project fixed assets and internal controls related thereto;
 - (v) Where the audit report has been issued under ISA 800 or ISSAI 1800, it shall include the mandatory Emphasis of Matter paragraph alerting users of the audit report that the project financial statements are prepared in accordance with a special purpose framework and that, as a result, the project financial statements may not be suitable for another purpose. The auditor shall include this paragraph under an appropriate heading;
 - (vi) Where reasonable assurance has been provided using ISAE 3000 or ISSAI 4200, the assurance report must contain, among others:
 - A statement that the engagement was performed in accordance with ISAE 3000 or ISSAI 4200;
 - Subject matter;
 - Criteria for measurement;
 - A summary of the work performed; and
 - The auditor's conclusion.
 - (vii) On the imprest fund procedure (where applicable), audit procedures are planned and performed to ensure (a) the imprest account (and any sub-accounts) has been managed in accordance with *ADB's Loan Disbursement Handbook*, (b) the cash balance of the imprest account (and any sub-accounts) is supported by evidence, (c) the expenditures paid from the imprest account (and any sub-accounts) comply with the approved project purpose and cost categories stipulated in the loan agreement, and (d) the amount of expenditures paid from the imprest account (and any sub-accounts) comply with disbursement percentages stipulated in the loan agreement;
 - (viii) Adequate supporting documentation has been maintained to authenticate claims stated in the SOE for reimbursement of eligible expenditures incurred and liquidation of advances provided to the imprest account (where applicable);
 - (ix) On the SOE procedure (where applicable), audit procedures are planned and performed to ensure that (a) the SOEs have been prepared in accordance with ADB's Loan Disbursement Handbook, (b) the individual payments for expenditures stated in the SOE are supported by evidence, (c) the expenditures stated in the

¹ If the auditor reports any ineligible expenditure in the management letter, the details of the findings should include the funding source to which the observation relates.

- SOEs comply with the approved project purpose and cost categories stipulated in loan agreement, and (d) the amount of expenditures stated in the SOEs comply with disbursement percentages stipulated in the loan agreement; and
- (x) Any weaknesses in internal controls over the procurement process.
- 13. All reports must be presented in the English language within 6 months following the end of the fiscal year.
- 14. Public disclosure of the project financial statements, including the auditor's opinion on the audited project financial statements, will be guided by ADB's Public Communications Policy (2011). After review, ADB will disclose the audited project financial statements and the opinion of the auditor on the audited project financial statements no later than 14 calendar days of ADB's confirmation of their acceptability by posting them on ADB's website. The management letter and the additional auditor's opinions will not be disclosed².

VII. OTHER MATTERS

A. Statement of Access

- 15. The auditor will have full and complete access, at all reasonable times, to all records and documents including books of account, legal agreement(s), bank records, invoices and any other information associated with the project and deemed necessary by the auditor.
- 16. The auditor will be provided with full cooperation by all employees of [XYZ] and the project implementing units, whose activities involve, or may be reflected in, the annual project financial statements. The auditor will be assured rights of access to banks and depositories, consultants, contractors and other persons or firms hired by the employer.

B. Independence

17. The auditor will be impartial and independent from any aspects of management or financial interest in the entity or project under audit. The auditor should be independent of the control of the entity. The auditor should not, during the period covered by the audit, be employed by, or serve as director for, or have any financial or close business relationship with the entity. The auditor should not have any close personal relationships with any senior participant in the management of the entity. The auditor must disclose any issues or relationships that might compromise their independence.

C. Auditor Experience

18. The auditor must be authorized to practice in the country and can apply the agreed auditing standards. The auditor should have adequate staff, with appropriate professional qualifications and suitable experience, including experience in auditing the accounts of projects or entities comparable in nature, size and complexity to the project or entity whose audit they are to undertake. To this end, the auditor is required to provide curriculum vitae of the personnel who will provide the opinions and reports, together with the curriculum vitae of managers, supervisors and key personnel likely to be involved in the audit work. These curriculum vitae should include details of audits carried out by these staff, including ongoing assignments.

² 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).