



CIVIL AVIATION AUTHORITY OF NEPAL

**SECOND INTERNATIONAL AIRPORT PROJECT, PROJECT DIRECTORATE,
SINAMANGAL KATHMANDU**

Expression of Interest

for

***Preparation of Airport Master Plan and Detail Design of
First Phase Development of Second International Airport.***

January, 2017

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A handwritten signature in black ink, consisting of several loops and a long horizontal stroke at the bottom.

Letter of Invitation

To:

From: Civil Aviation Authority of Nepal
Second International Airport Project Directorate,
Sinamangal, Kathmandu.

Date of Publication of Notice 31st January 2017

Subject: Invitation for Expressions of Interest for Consulting Services: Preparation of Airport Master Plan and Detail Design of First Phase Development of Second International Airport, Bara District, Nepal.

1. Civil Aviation Authority of Nepal (CAAN) intends to prepare master plan for the development of Second International Airport (SIA) at Bara district including detail design of first phase development work. In this regards, CAAN receive fund from Nepal Government for the mentioned consulting service. SIA Project intends to apply part of the proceeds to procure consultancy service from eligible consultants.
2. The Expression of Interest (EOI) is invited from interested, eligible and experienced international consultant in association (Joint Venture/Sub Consultant) with national consultants. The total number of firms including the lead firm should not exceed a maximum of three. Same firm is not allowed to enter into more than one joint venture.
3. Consultant must have completed at least one master plan and detailed design of green field airport. All the copies of certificates shall be notarized by notary office.
4. The EOI document will be freely available during office hours from Procurement Unit of SIA Project or can be downloaded from the website www.caanepal.org.np.
5. Two sets of duly completed hard copy EOI document should be submitted in sealed envelope along with its soft copy to the following address clearly mentioning the name of the project and the consultancy service on or before 12:00 hrs (Nepal Standard Time) within 30th day (1st Mar 2017) of first date of publication of this notice:

Project Director,
Second International Airport Project, Project Directorate
Sinamangal, Kathmandu, Nepal
Tel: 00977-1-4480342,
Fax: 00977-1-4480342
Email: sia@caanepal.org.np

6. If the deadline of EOI submission falls on a government holiday, it will be extended automatically to the next working day at the same time. The EOI documents received after the due date and time shall not be accepted.
7. The completed EOI documents received by due date and within specified time will be opened at 12.30 hrs (NST) on 30th day of first date of publication of this notice in the presence of the applicants or their authorized representative who choose to attend. Absence of the applicant or their authorized representative, however, shall not prevent the opening of the EOI documents.
8. The EOI documents submitted by the applicants shall be evaluated on the basis of the evaluation criteria approved by CAAN. For short-listing purpose, the combined experience of the consultants with its association will be evaluated. The shortlisted consultants will be notified in due course of time for the submission of Technical and



Financial proposals. The Quality and Cost Based Selection (QCBS) procedure will be used for the selection of the consultant.

9. CAAN (SIAP) reserves the right to accept or reject any or all EOI proposals, or to cancel the entire proceedings without giving any reasons whatsoever.
10. Further information can be obtained from above address of SIAP during office hours.



Appendix – 2
Civil Aviation Authority of Nepal
**Second International Airport Project Directorate,
Sinamangal, Kathmandu**

Expression of Interest

for

*Preparation Airport Master Plan and Detail Design for First Phase Development of
Second International Airport, Bara District, Nepal.*

EOI TEMPLATE

Project Name	
Project Country	

I. Consulting Firm Information

Consultant Name:	Country of Incorporation:
Acronym:	Registration, Number:
EOI Submission Authorized by:	Position:

Associations (Joint Venture or Sub-consultant)

Registration, Number	Consultant	Acronym	Country of Incorporation	Association (JV or Sub-consultant)	EOI Authorization By	Position

Present the rationale for and benefits of working in association (JV or Sub-consultant) with others rather than undertaking the assignment independently (as appropriate). Describe the proposed management and coordination approach of the association and the role of each firm.

I confirm that:

- Documentation regarding our corporate structure including beneficial ownership has been attached.
- Documentation regarding our Board of Directors has been attached.
- A written agreement to associate for the purpose of this Expression of Interest has been signed between the consortium partners and has been attached.



II. Assignment Specific Qualifications and Experience

Your EOI shall demonstrate technical competence and geographical experience based on project references provided herein. Please provide relevant project information in Section E below.

A. Technical Competence

Cross-referencing from your profile projects in Section E. Project References, highlight the technical qualifications of your entity/consortium in undertaking similar assignments. Provide details of past experiences working with similar project authorities.

B. Geographical Experience

Cross-referencing from your profile projects in Section E. Project References, present experiences in similar geographic areas.

C. Management Competence (Please answer each question in one paragraph of 3-5 sentences)

1. Describe standard policies, procedures, and practices that your entity has to assure quality interaction with clients and outputs. Please state if your company is ISO certified.

2. How will your firm/consortium handle complaints concerning the performance of experts or quality of the reports submitted for this assignment? What internal controls are in place to address and resolve complaints?

3. How will you ensure the quality of your firm's/consortium's performance over the life of this assignment?



4. Describe standard policies, procedures and practices that your firm has put in place to avoid changes/replacements of personnel and to ensure the continuity of professional services once contracted.

5. Describe what social protection practices you have in place to safeguard the well-being of your proposed experts? Specifically describe arrangements you have in place for medical, accident, and life insurance coverage during the assignment.

D. Other Information (maximum of 500 words)

E. Project References

Please select most relevant projects to demonstrate the firm’s technical qualifications and geographical experience (maximum 10 projects).

SN	Project	Period	Client	Country	Firm
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					



Project Sheets

Indicate up to 10 reference projects from the past 10 years (January 2007-January 2017) that the consultant feels are relevant.

• Project Name			
• Name of Client			
• Country		Project location within Country	
• Participation	<input type="checkbox"/>	As lead firm	
	<input type="checkbox"/>	As associate firm	
• Value of Services		(US\$)	
• Source of Financing			
• Consultancy Services			
(i) No. of staff			
(ii) No. of person months			
• Length of Consultancy Assignment			
• Start Date		(dd/mm/yyyy)	
• Completion Date		(dd/mm/yyyy)	
• Name of Associate Firms (if any)			
• No. of Person-Months of Professional Staff Provided by Associated Firm(s)			
• Name of Senior Staff (Project Director/Coordinator, Team Leader) Involved and Functions Performed			
• Detailed Narrative Description of the Project			
• Detailed Description of the Actual Services Provided by your Firm			

(Please insert more tables as necessary)



III. Comments on Terms of Reference

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IV. Key Considerations in approaching this assignment (no more than 9,000 characters summarizing approach and methodology)

--

V. International Experts

Please provide list of international experts proposed for the assignment. Also attach brief CV of proposed personnel.

SN	Name	Email	Position/Title	Nationality
1				
2				
3				
4				

VI. EOI Attachments

SN	Description
1	Certificate of Incorporation of the lead member
2	Certificate of Incorporation of the JV member (for each member)
3	Certificate of Incorporation of the Sub-Consultant (for each sub-consultant)
4	Letter of Association
5	Firms Registration, VAT, Tax Clearance (in case of national firms)

(Please insert more rows as necessary)

VII. Eligibility Declaration

We, the undersigned, certify to the best of our knowledge and belief:

- We have read the advertisement, including the terms of reference (TOR), for this assignment.
- Neither the consulting firm nor its JV member or sub-consultant or any of its experts prepared the TOR for this activity.
- We confirm that the project references submitted as part of this EOI accurately reflect the experience of the specified firm/consortium.
- We further confirm that, if any of our experts is engaged to prepare the TOR for any ensuing assignment resulting from our work product under this assignment, our firm, JV member or sub-consultant, and the expert(s) will be disqualified from short-listing and participation in the assignment.



- All consulting entities proposed in this EOI are eligible to participate in the EOI.
- The lead entity and JV member or sub-consultant are NOT currently sanctioned by GoN and other Governmental and Non Governmental agencies. Neither the consulting firm nor the JV member or sub-consultant has ever been convicted of an integrity-related offense or crime related to theft, corruption, fraud, collusion or coercion.
- We understand that it is our obligation to notify CAAN should any member of the consortium become ineligible to work with GoN and other Governmental and Non Governmental agencies or be convicted of an integrity-related offense or crime as described above.
- JV member or sub-consultant named in this EOI confirmed their interest in this activity in writing.
- JV member or sub-consultant authorized us in writing to represent them in expressing interest in this activity.
- None of the proposed consortiums are subsidiaries of and/or dependent on Civil Aviation Authority of Nepal or individuals related to them.
- We understand that any misrepresentations that knowingly or recklessly mislead, or attempt to mislead may lead to the automatic rejection of the proposal or cancellation of the contract, if awarded.



**OUTLINE TERMS OF REFERENCE
FOR
PREPARATION AIRPORT MASTER PLAN AND DETAIL DESIGN OF FIRST PHASE
DEVELOPMENT OF SECOND INTERNATIONAL AIRPORT, BARA DISTRICT,
NEPAL.**

A. Background

The Government of Nepal (GoN) has allocated fund for the consultancy service to the preparation of master plan and detail design of first phase development of second international airport at Bara district. The objective of this Project is to enhance the air transport connectivity between Nepal and the rest of the world as a international hub airport including transit facilities. The consulting service will comprise detail study of project planning, design and implementation framework. The Government intends to apply a portion of proceeds to engage a firm of international consultants (the Consultant) to assist the Civil Aviation Authority of Nepal - CAAN (the Employer) to undertake master plan preparation, phase wise construction/development framework, detailed design, investment and implementation modality of the project.

B. Objectives of the Assignment

The main objective of the consulting services (the Services or Assignment) is to prepare the master plan; Identification of different alternatives of the airport development plan and selection of best alternative; Identification of different development phases of airport development compatible with the cost effective investment; carry out detail engineering design and preparation of bidding documents for procurement of works and equipment in the initial /first phase of airport development; and to assist CAAN to undertake efficient capital expenditure mechanism for the sustainable development of the project.

C. Scope of Services

Component 1: Master Plan Preparation:

1. Existing Conditions: Consultant should review the existing documents and studies related to the Second International Airport. demographic and socio-economic condition of development area, regional setting and land use patterns, existing air space, air route and current air operation procedures. consultant should review national transport plan, regional airport networks, national aviation policy, national long term plan in aviation sector and other relevant documents for identification of the national requirement for proposed airport development.
2. Environmental Considerations in Airport Master Planning; Consultant should review the ESIA report and should incorporate the environmental issues into planning of facilities and it's design to mitigate any critical environmental and social problems. Consultant should analyze environmental consequences and control measures such as noise abatement, air pollution control, water pollution control, energy management, waste management etc.



3. Public Involvement Program; consultation with stakeholders including governmental and nongovernmental organizations; Collection of general public (local and regional level) feedbacks; Consensus in controversial matter; allowing them early comments and collection of optimum information for best outcomes including CAAN Comments for the best project plan and implementation requirements.

4. Aviation Forecasts: Consultant should evaluate the elements of forecast according to the aviation activity. In general, forecasts should be realistic, based upon the latest available data, be supported by information in the study, and provide an adequate justification for airport planning and development. Planners should prepare a reliable activity baseline, select an appropriate forecast methodology, develop a forecast, compare it to other forecasts for reasonableness, and submit the forecasts to the CAAN for approval. The Consultant should use appropriate statistical techniques to estimate activity where actual operations counts are not available.

Forecast should be prepared for short, medium and long term period and also evaluate peak period forecast.

Consultant may use the simulation models and other valid tools during the process of aviation forecast. all forecast tools and method should be valid, authenticated and tested.

5. Facility Requirements: Based on the aviation forecast, consultant should prepare the facilities requirement of airport development considering the safety and security requirements and provisions related to national regulation and ICAO standards and recommended practices (SARPs).

Consultant should identify different landside, airside, terminal, cargo, rescue and fire fighting, maintenance hangers and other required facilities i.e. in ground and air including communication and navigational facilities which are fully compatible with national/ICAO Standards and other international practices. Airside facilities includes but not limited to Runways, taxiways, Aprons, Holding bays, Remote Aircraft Parking, Drainage Structures, service roads, etc. Landside facilities includes but not limited to Ground Access System, Circulation, Curb Side, Parking, tunnels etc. Terminal Buildings includes but not limited to international Passenger terminal, domestic passenger terminal, Air Traffic Control Tower, Fire Watch Tower etc.

6. Airport Layout Plans: Based on various studies and evaluation mentioned in previous sections, consultant should finalize Airport Layout Master Plan corresponding to the best alternative. Layout plan should cover but not limited to following; Airport Boundary, Airside Infrastructures/Facilities /Utilities, Terminal Buildings/Facilities/Utilities, Control Tower, Other Landside Infrastructure/Facilities/Utilities, Off-site Transportation/Access Facilities, On-site and Off-site Land Use Plan, Business Areas, Recreational Areas, MRO and FBO Space Allocation, Fuel Farm and other support facilities etc.



Layout plan should also cover potential airport expansion areas, extent of noise contours, environmental impact areas and approach area's property mapping in separate sheet. similarly GIS map, Contour map should be submitted in hard and soft copy format.

7. Alternatives Development and Evaluation: consultant should determine the most efficient and economic development plan among various alternatives developments. During development, consultant should consider the aviation forecast, social and environmental consideration, facilities requirements, airport system planning, different elements and their rankings. during evaluation process the consultant should consider capacity and delay, airspace, procedure design, safety, security and other operational requirements. Various meetings and workshops should be conducted during alternatives evaluation and selection process to incorporate the suggestion and comments from various stakeholders including client.

8. Facilities Implementation Plan: After finalizing the Airport layout master plan, consultant should prepare phased construction plan; Phased construction plan of airport should be developed in such a way that development of each facilities should balance the investment and corresponding aviation demand. Construction or implementation of each phase should be planned in such a way that complete repayment of investment is achieved before starting next phase of development.

First phase of airport development plan should be justifiable to cope initial (about 10 years) aviation demand. Initial development plan should be planned in such a way that optimum airside, landside, terminal buildings facilities should be provided to fulfill initial national demand for intended period of projection from the aviation demand study. First phase plan should be flexible to provide room for future expansion and rationally selected for the optimum use of facilities which are compatible with the suggested master plan.

Component 2: Business Study and Analysis.

9. Data Analysis and study: Analyze the air traffic growth trends and subsequent projections on the demand & supply scenario for Full fledged International Airport (Transit Hub), Aviation hub & FBO facilities, MRO, fuelling and cargo facilities and other airport related developments.

Regulatory framework overview (National/International) and recommendation for approval/clearances required for development, Fiscal & other Government incentives. Similarly potential demand expected to be generated for the Project.

10. Infrastructure Support: Existing condition of the site, Approach roads and local connectivity (existing and proposed), Availability of basic and support infrastructure facilities (water, power etc.), Ongoing and proposed significant infrastructure in the region



11. Case Study & Best Practices to oversight Airports Business Opportunities: Identification of similar/ comparable projects and developments across benchmark countries - across business aviation, parking, cargo and MRO/ FBO hub. Study of major parameters including
 - Project size and location
 - Infrastructure/ facilities offered
 - Target markets – Primary & Secondary Catchment areas
 - Project Structure
 - Critical risk & success factors

12. Project Concept Plan: Based on the analysis conducted in the previous steps, the Consultant would evaluate the suitability of the project for the envisioned components: Fully fledged transit hub for the international air carrier, Aviation Hub & FBO facilities, MRO, Fuelling and Cargo facilities, Other Airport related developments.

13. Economic and Financial assessment of Proposed development: The Consultant shall conduct financial assessment for the preferred development option and include the following components:
 - i. Financial Modelling
 1. Revenue Projections
 2. Cost Estimates
 3. Operational cost
 - ii. Attractiveness of the Project
 1. Project IRR/ROI
 2. Break-even & Sensitivity analysis
 - iii. Funding Structure for the Project
 - iv. Capital budget and additional capex in projection period
 - v. Proposed capital structure

Component 3: Detail Engineering Design For First Phase Development:

Consultant shall prepare the detailed design of all Airport Infrastructure/Facilities/Utilities for the first phase of Airport Development.

Detail Engineering Design and Cost Estimate

14. Engineering surveys and geotechnical investigation, identify and carryout additional detail surveys and investigation required for the each component design. Carry out options study, preliminary design and assessment to select optimum solutions of the proposed development works.

15. Carry out detailed Air Space Analysis and flight procedure design considering existing air route and proposed new route for efficient and optimum air flight operation and if it is required to modify existing air route, proposal of any new flight route suitable for optimum flight time and operation.



16. Carry out detail design for all development works and equipment in accordance with best applicable international standards – including preparation of detail design drawings in sufficient details for accurate determination of quantities and cost. Design will include, but not be limited to, the following:

- Site plan for all works within and outside the airport property including Location plan for airport security fencing;
- Runway configuration and physical characteristics i.e. numbers, orientation and length requirement;
- Taxiways, Aprons, and other airside layout plan and design including grading plans for runway strip grading;
- Engineering design for earthworks, pavement for Runways, taxiways and aprons;
- Engineering design of visual aids including airfield lighting system for Runways, aprons and taxiways;
- Engineering design for drainage works and storm water management system related to the proposed airside and landside development works, river training works, flood management works;
- Engineering design for perimeter roads, access road, bridge, flyovers and car parks for access to Terminal Buildings and other facilities;
- Engineering design of water supply system including fire hydrants for airside and landside facilities including different buildings within airport;
- Engineering design of sewage system including treatment plant;
- Engineering design of fuel hydrant system for international apron and remote parking apron;
- Engineering design of electrical and mechanical system i.e. power supply equipment and installations for Primary and secondary power augmentation; Similarly, Engineering design for installation of CNS/ATM equipment;
- Architectural, interior, structural, mechanical, electrical, IT system, utilities design, for terminal buildings, including layout plan for placement of interior furnishings, fittings, airline operational equipment, automated baggage handling system, gates and air bridges for passenger boarding, visual docking guidance system, airport operation control centre in combination with airport emergency centre, security control system, access control between various terminal areas, CCTV, fire fighting/sprinkler system, etc. Appropriate interface among all the systems including flexibility will be required. Most of the special airport systems will be designed up to a performance specification level in order to allow good completion between manufactures and suppliers. Special consideration will be given for smooth/efficient passengers



processing, allocation of maximum terminal areas for concessionaires in order to generate maximum non-aeronautical revenues;

- Architectural, interior, structural, mechanical, electrical, IT system, utilities design, for cargo terminal building, including layout plan for placement of interior furnishings, fittings, CCTV, fire fighting/sprinkler system, etc.,
 - Architectural, interior, structural, mechanical, electrical, utilities design for Airline hangars, Rescue and Fire Fighting Building, VVIP Buildings and other support facilities buildings;
 - Engineering design for dedicated surface transportation system to Airport including necessary interface between Terminal buildings and future development;
 - Engineering design for landscaping at airside and landside area.
17. Prepare technical specifications for each work item, taking into account relevant technical specifications in use in the country and major international standards for similar works. Particular consideration will be given to a performance specification level of the special airport systems to enable good completion among the manufacturers and suppliers. The specifications shall integrate operational costs, maintenance criteria, testing and commissioning process, etc:
18. Prepare estimated quantities and cost of all proposed development works and equipment with best possible accuracy.
19. Prepare 3D physical model (1:2000) of Airport Master Plan including 3D audio-visual (movie, 10 minutes duration) presentation of Airport facilities.

Contract Packaging, Implementation Schedules and Bidding Documents

20. Prepare contract packages, taking into account to optimize contract administration, construction coordination, and competitive pricing and Procurement.
21. Prepare project implementation schedules showing anticipated progress of works and expenditures for each contract package;
22. Based on the type of bidding procedures and contracts packaging, prepare bidding documents for works and equipment packages. The bidding documents shall be prepared in accordance with latest applicable Standard Bidding Documents (SBD). In preparation of bidding/contract documents appropriate consideration will be given on environment impact mitigation and management of the works.



D. Team Composition

- The consulting services will be implemented over about 21 calendar months from the commencement date.
- The consulting services will be implemented by a firm of international consultants. An association or direct engagement of suitable national consultants is encouraged to compliment consultant's local knowledge and experience. It is anticipated that the following international and local staff will be required:

International Staff:

S.N.	Position	Qualification Requirement	Experience Requirement	Nos.	No. of P-M
1	Team Leader/Chief Airport Engineer	B.E/B.Sc. Civil Eng. (Post graduate/Diploma in Airport Eng. – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 15 Yrs. ▪ As a Team Leader/Project Manager for 3 Projects of min 6 months inputs ▪ Overseas Experience 3 projects of min 3 months inputs 	1	21
2	Master Plan Expert	B.E/B.Sc. Civil Eng. (Post graduate/Diploma in Airport Eng. or specialized training in Airport Planning – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As a Master Plan Expert for 2 Projects ▪ Overseas Experience 2 projects 	1	5
3	Traffic Analyst	B.E or B.Sc. or Bachelor in Social Sciences (Specialized training in Air Traffic Forecast - Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As a Traffic Analyst for 2 Projects ▪ Overseas Experience 2 projects 	1	2
4	Multimodal Transportation Planner/Engineer	B.E./B.Sc. in Civil Engineering. (Post graduate/Diploma in Transportation Engineering - Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As a Multimodal Transportation Planner/Engineer for 2 Projects of min 2 months inputs ▪ Overseas Experience 2 projects . 	1	4
6	Financial Analyst	B.A/ BBA (Training in Finance/or Economics – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As a Financial Analyst for 2 Projects ▪ Overseas Experience 2 projects 	1	2



S.N.	Position	Qualification Requirement	Experience Requirement	Nos.	No. of P-M
7	Environmental Specialist	B.E/B.Sc. in any Eng. or Bachelor in Relevant Sciences (Post Graduate in Environmental Sciences/Management – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As an Environmental Specialist for 2 Projects of min 2 month input. ▪ Experience in Intl. Firms or Intl. Organizations 1 project 	1	6
8	Aerodrome Safety Expert	B.E/B.Sc.civil Eng. Or Pilot or ATC with specialized training in safety Management System (post graduate/diploma in Airport Eng. or specialized training in SMS – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 years ▪ As an Aerodrome Safety Expert for 2 projects ▪ Overseas Experience 2 projects 	1	2
9	Programme Engineer	B.E/B.Sc. Civil Eng. (Post graduate/Diploma in Airport Eng. And specialized training in Programming– Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 years ▪ As a Programme Engineer for 2 projects ▪ Overseas Experience 2 projects 	1	3
10	Principal Airport Architect	B.Arch. (Specialized training in Airport Terminal Design – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 15 Yrs. ▪ As a Airport Terminal Architect for 3 Projects of min 4 months inputs ▪ Overseas Experience 3 projects of min 3 months inputs 	1	10
11	Architect (Hangars, Cargo Terminal and other Buildings)	B.Arch. (Specialized training in Airport Terminal/Other Building Design –Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As a Airport Infrastructure Architect for 3 Projects of min 4 months inputs ▪ Overseas Experience 3 projects of min 3 months inputs 	1	10
12	Terminal Interior Designer	B.Arch. or Diploma in Interior Design (Training in Airport Terminal Interior – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 7 Yrs. ▪ As a Terminal Interior Designer for 2 Projects ▪ Overseas Experience 1 project of min 3 months inputs 	1	3
13	Landscape Planner	B.Arch. or Diploma in Landscaping (Training in Airport/ Hotel/Resort/City landscaping – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 7 Yrs. ▪ As a Landscape Designer for 2 Projects ▪ Overseas Experience 1 project of min 2 months inputs 	1	6



S.N.	Position	Qualification Requirement	Experience Requirement	Nos.	No. of P-M
14	Structural Engineer	B.E./B.Sc. in Civil Eng. (M.Sc./Post Graduate Diploma in Structural Engineering – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As a Structural Engineer for 3 Projects of min 3 months inputs ▪ Overseas Experience 2 projects of min 3 months inputs 	1	8
15	Mechanical Engineer	B.E./B.Sc. in Mechanical Eng.	<ul style="list-style-type: none"> ▪ Overall Experience 10Yrs. ▪ As a Mechanical Engineer for 2 Projects of min 4 months inputs ▪ Overseas Experience 2 projects of min 3 months inputs 	1	8
16	Baggage Handling System (BHS) Engineer	B.E./B.Sc. in Mechanical Eng. (Specialized training in BHS Design/ Manufacturing – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As a BHS Engineer for 2 Projects of min 3 months inputs ▪ Overseas Experience 2 projects of min 3 months inputs 	1	4
17	Electrical Engineer (Power Supply, VDGS, SMGS and Airfield Lighting)	B.E./B.Sc. in Electrical Eng. (Specialized training in Power Supply, VDGS, SMGS and Airfield Lighting - Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As a Electrical Engineer for 2 Projects of min 2 months inputs ▪ Overseas Experience 1 projects of min 2 months inputs 	1	4
18	Electrical Engineer (Terminal Equipment, Buildings and Airport Services)	B.E./B.Sc. in Electrical Eng. (Specialized training in Terminal Equipment, Buildings and Airport Services - Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As a Electrical Engineer for 2 Projects of min 3 months inputs ▪ Overseas Experience 2 projects of min 3 months inputs 	1	5
19	Airport IT System Engineer	B.E./B.Sc. in IT. (Specialized training in Airport IT Systems - Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As an Airport IT System Engineer for 2 Projects of min 3 months inputs ▪ Overseas Experience 2 projects of min 3 months inputs 	1	4
20	Utility Engineer (Water Supply, Sanitary, Sewerage & Drainage)	B.E./B.Sc. in Civil or Mechanical Eng. (Post graduate/Diploma in Water Supply/Sanitary or Specialized training in Airport Utilities Systems - Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As an Utility Engineer for 2 Projects of min 5 months inputs ▪ Overseas Experience 2 projects of min 3 months inputs 	1	6



S.N.	Position	Qualification Requirement	Experience Requirement	Nos.	No. of P-M
21	Airfield Pavement Specialist	B.E./B.Sc. Civil Eng. (Post graduate/Diploma in Airport Eng. or specialized training in Airport Pavement Design – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As a Airfield Pavement Specialist for 2 Projects of min 3 months inputs ▪ Overseas Experience 1 projects of min 3 months inputs 	1	2
23	Communication Navigation and Surveillance (CNS)/ATM Engineer	B.E./B.Sc. Electronic and Communication Eng. (Post graduate/Diploma in Electronic and Communication Eng. or specialized training in CNS Equipment – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As a CNS Engineer for 2 Projects of min 4 months inputs ▪ Overseas Experience 2 projects of min 3 months inputs 	1	6
24	Air Space Design Expert	B.E./B.Sc or Bachelor in Relevant Subjects i.e. ATC or Pilot (special training on procedure design – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As a procedure design Specialist for 2 Projects of min 3 months inputs ▪ Overseas Experience 1 project 	1	3
25	Procurement Specialist	B.E./B.Sc. in any Eng. or Bachelor in Relevant Social Sciences (Familiarity with FIDIC, Procurement Guidelines – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As a Procurement Specialist for 2 Projects ▪ Overseas Experience 2 projects 	1	4
Sub-total					128

National Staff

S.N	Position	Qualification Requirement	Experience Requirement	Nos.	No. of P-M
Key Experts					
1	Airport Engineer	B.E./B.Sc. Civil Eng. (Post graduate/Diploma in Airport Eng. – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 15 Yrs. ▪ As a Airport Engineer for 3 Projects of min 6 months inputs ▪ Experience in Intl. Firms or Intl. Organizations 1 projects of min 3 months inputs 	1	21
2	Architect	B.Arch. (Specialized training in Airport Passenger/Cargo Terminals, Hangar Design – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As an Airport Architect for 2 Projects of min 6 months inputs ▪ Experience in Intl. Firms or Intl. Organizations 1 project of min 3 months inputs 	3*14	42
3	Interior Designer	B.Arch. or Diploma in Interior Design (Training in Airport Terminal Interior – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 5 Yrs. ▪ As a Terminal Interior Designer for 2 Projects ▪ Experience in Intl. Firms or Intl. Organizations 1 project 	1	7



S.N	Position	Qualification Requirement	Experience Requirement	Nos.	No. of P-M
4	Landscape Planner	B.Arch. or Diploma in Landscaping (Training in Airport/ Hotel/Resort/City landscaping – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 5 Yrs. ▪ As a Landscape Designer for 2 Projects ▪ Experience in Intl. Firms or Intl. Organizations 1 project 	1	10
5	Structural Engineer	B.E./B.Sc. in Civil Eng. (M.Sc./Post Graduate Diploma in Structural Engineering – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As a Structural Engineer for 2 Projects of min 6 months inputs ▪ Experience in Intl. Firms or Intl. Organizations 1 project 	2*12	24
6	Mechanical Engineer	B.E./B.Sc. in Mechanical Eng.	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As a Mechanical Engineer for 2 Projects ▪ Experience in Intl. Firms or Intl. Organizations 1 project 	2	20
7	Electrical Engineer	B.E./B.Sc. in Electrical Eng. (Specialized training in Power Supply, VDGS, SMGS and Airfield Lighting - Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As a Electrical Engineer for 2 Projects ▪ Experience in Intl. Firms or Intl. Organizations 1 project 	2	20
8	IT/ Communication System Engineer	B.E./B.Sc. in IT. (Specialized training in Airport IT Systems - Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As an Airport IT System Engineer for 2 Projects ▪ Experience in Intl. Firms or Intl. Organizations 1 project 	1	10
9	CNS/ATM Engineer	B.E./B.Sc. Electronic and Communication Eng. (Post graduate/Diploma in Electronic and Communication Eng. or specialized training in CNS Equipment – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As a CNS Engineer for 2 Projects ▪ Experience in Intl. Firms or Intl. Organizations 1 project 	1	10
10	Procedure design expert	B.A/ BBA/ B.Sc. (Training in Air Traffic Control/or Pilots – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 7 Yrs. ▪ As a Flight procedure Specialist for 1 Project ▪ Experience in Intl. Firms or Intl. Organizations preferred 	1	3
11	Procurement Specialist	B.E./B.Sc. in any Eng. or Bachelor in Relevant Social Sciences (Familiarity with FIDIC Procurement Guidelines – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 7 Yrs. ▪ As a Procurement Specialist for 2 Projects ▪ Experience in Intl. Firms or Intl. Organizations 1 project 	1	8
12	Environmental Specialist	B.E./B.Sc. in any Eng. or Bachelor in Relevant Social Sciences (Post Graduate in Environmental Sciences/Management – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 7 Yrs. ▪ As an Environmental Specialist for 2 Projects ▪ Experience in Intl. Firms or Intl. Organizations 1 project 	1	8
13	Socio-Economic Expert	B.A/ Bachelor in Relevant Social Sciences.	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As a Socio Economic Expert 	1	8



S.N	Position	Qualification Requirement	Experience Requirement	Nos.	No. of P-M
			for 2 Projects		
14	Financial Specialist	B.A/ BBA (Training in Finance/or Economics – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As a Financial Analyst for 2 Projects 	1	8
15	Pavement Engineer	B.E/B.Sc. Civil Eng. (Post graduate/Diploma in Airport Eng. or specialized training in Airport Pavement Design – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As a Airfield Pavement Specialist for 2 Projects of min 1 months inputs. 	1	4
16	Geotechnical Engineer	B.E/B.Sc. Civil Eng. (Post graduate/Diploma in Airport Eng. or Masters in Geotechnical Engineering – Desirable)	<ul style="list-style-type: none"> ▪ Overall Experience 10 Yrs. ▪ As a geotechnical engineer for 2 Projects of min 3 months inputs. 	1	6
Sub-Total					209
Non-Key Experts					
17	Survey Engineer			1	4
18	Water Supply Engineer			1	10
19	Sanitary /Sewerage Engineer			1	10
20	Drainage Engineer			1	5
21	Road Engineer			1	12
22	River Training/bio engineering Expert			1	8
23	CAD Engineers [As required numbers (ARN)]			ARN	100
24	GIS Expert/Engineer			1	6
25	Quantity Survey Engineer			3*8	24
Sub-Total					179
National Support Staff					
26	Office Manager			1	21
27	CAD Operators			ARN	100
28	Auxiliary Staff			ARN	105
Sub-Total					226

Notes:

- (i) The international inputs shall be provided by the consultant based in the field (i.e. Kathmandu/Simara, Nepal). However, the consultant may consider providing certain inputs of few positions from head office or any other location outside the country as required for the purpose of betterment and supports to carry out the services more effectively. The consultant shall provide rationale and estimates of such inputs in the technical and financial proposals.
- (ii) The CVs of the National Non-Key Expert positions will not be evaluated and are not required in the Technical Proposal. The CVs of these candidates shall be submitted for Client's approval prior to their mobilization.



- (iii) The consultant will provide 226 person months of national support staff consisting of Office Manager, CAD Operators, Office Secretary, Office Assistant, Messenger and Auxiliary Staff to assist in carrying out the services.
- (iv) The estimated person-months are indicative, and the actual will vary based on actual duration of works and will be paid on actual time-basis. As common basis for financial proposal, the Consultants MUST use the staff person-months indicated above.
- (v) The cost of engineering survey, geotechnical investigations, preparation of 3D model, preparation of 3D audio-visual presentation and cost of training including seminars/workshops will be covered under Provisional Sum.

E. Reporting Requirements and Time Schedule for Deliverables

The Consultant shall prepare and submit the following reports in the English language (5 copies). The final report shall be prepared in hardcopy and in CD-ROM.

Report	Description/Technical Accomplishments	Timeframe
Inception Report	(i) Initial findings, project schedule, and, if appropriate, review, recommendations for preliminary study (ii) Study criteria and approach (ii) Staff mobilization schedule	1.00 month from the commencement date
Concept including Detail Project Report	Aviation Activity Demand Forecast, Best Suited Airport Business Plan, Development of Conceptual Master Plan.	3.00 month from the commencement date
Master Plan Report	Detailed Master Plan Reports (for full fledged international transit hub airport with latest facilities).	7.00 month from the commencement date
Preliminary Design Report	Preliminary Design For I Phase Development Work, Survey and Investigation Reports, and Progress of Design for All Components.	14.00 month from the commencement date
Interim Design Report	Interim Design Report for I Phase Development Work, and Progress of Design for All Components.	17.00 month from the commencement date
Draft Final Design Report	Detail Design for All Components in I Phase Development Work, Cost Estimates, Drawings, Initial 3D Audio-Visual Presentation of Facilities.	19.00 month from the commencement date
Draft Bidding Documents	Draft Bidding Document For All Works and Equipment Packages in I Phase Development Work.	19.00 month from the commencement date
Final Bidding Document For Construction.	Final Bidding Document For All Works/ Equipment Packages Including Detailed Drawings, BOQ and Specification for I Phase Development.	20.00 month from the commencement date
Final Report	Detail Compilation of All Component Deliverables Including Detailed Master Plan, Detailed Design for I Phase Development Including Drawings, 3D Model and 3D Audio-Visual Presentation of Facilities.	21.00 month from the commencement date



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

CAAN will provide the consultant with the following facilities

- (i) Office space and utilities;
- (ii) Access to site, data, survey reports, and other relevant records and information required to perform the assigned tasks.
- (iii) All previous study reports and data that are available in project office.
- (iv) Office Equipment (Laptop and desk top computers, printers, photo copiers, LAN, telephone and fax);



EVLAUATION CRITERIA FOR SHORTLISTING OF CONSULTANT

Management Competence Quality Control and Assurance Proposed Management Coordination Approach and Methodology	20
Technical Competence Firm's specialization vis à vis the sectoral focus of the assignment Firms experience vis à vis the assignment's TOR Number of similar projects undertaken where firm as lead partner Number of similar projects undertaken where firm as JV partner or sub-consultant	60
Geographical competence Firm's country experience Firm's regional experience Permanent presence / local office	20

