

Government of the People's Republic of Bangladesh
Prime Minister's Office
Bangladesh Economic Zones Authority
Monem Business District (Level 12)
111, Bir Uttam C.R. Dutta Road, Dhaka-1205
www.beza.gov.bd

Memo No: 03.07.0000.014.011.012.2020- 613


Date: 14/02/2021

**Request for Expression of Interest (REOI)
National Competitive Bidding (NCB)**

Description:	
1. Ministry/Division	Prime Minister's Office
2. Agency	Bangladesh Economic Zones Authority (BEZA)
3. Procuring Entity Name	Bangladesh Economic Zones Authority (BEZA)
4. Procuring Entity District	Dhaka (BEZA HQ)
5. Expression of Interest (EOI) for	Selection of consulting firm for Preparation of Master Plan Including Design, Supervision and Monitoring Works for Development of Sheikh Hasina Sarobar at Bangabandhu Sheikh Mujib Shilpa Nagar, Mirsarai, Chattogram
6. EOI Ref. No.	PS01-BEZA-2021
7. EOI Publication Date	17 February 2021 or before
8. EOI Closing Date & Time	04 April 2021 at 3.00 PM
Procurement Information:	
9. Procurement Method	National Competitive Bidding (NCB)
10. Procurement Sub-Method	Quality and Cost Based Selection (QCBS)
Funding Information:	
11. Budget and Source of Fund	Revenue (BEZA own fund)
Particular Information:	
12. Brief Description of Assignment	The assignment includes but not limited to: (a) Carry out necessary site analysis, subsoil and hydrological investigation followed by an inception report; (b) Preparation of Feasibility Study, EIA & SIA Report, Masterplan Report; (c) Preparation of Development Plan, including Master plan and international standard urban infrastructures, land-use plan, road network, area lighting, drainage system etc.; (d) Preparation of Implementation Plan, including Design of Site Development Scheme and Common Infrastructures, Design of Recreational Facilities, Hotel & Resort Facilities, Institutional Facilities, Structural and Utility Services Design, Landscaping Design etc.; (e) Preparation of 3D perspective views and animation; (f) Preparation of cost estimation, technical specification and bidding documents; and (g) Construction supervision.
13. Specific Tasks of the Assignment	The scope of the services includes: Phase I: Study Phase Survey and Investigation, Feasibility Study, Financial Analysis, EIA and SIA and Master Plan Phase II: Design Phase Development Plan, Implementation Plan (architectural, structural & utility services design), Cost Estimation, Specification and Bid Documentation Phase III: Supervision Phase Construction supervision during implementation of the development activities
Information for Applicant:	
14. Qualification and Experience of the Firm	i) The interested consulting firm should have at least 20 (twenty) years of general experience in the field of consultancy services with qualified experts, engineers and other technical key personnel (in case of JV, each member shall meet the requirements). ii) The consulting firm must have at least 15 (fifteen) years of architectural consultancy services experience for design and supervision of infrastructure development (in case of JV, each member shall meet the requirements). iii) Consultants may associate to enhance their qualifications, but should mention whether the association is in the form of a "joint-venture" or of "sub-consultancy". All members of such association should have real and well-defined inputs to the assignment and it is preferable to limit the total number of firms/institutes in the



		association to three.		
15.	Financial Capability	i) The average annual consultancy turn-over, during immediate last three consecutive financial years (FY 2017-18 to FY 2019-20) shall not be less than BDT 4 (four) crore. ii) In case of JV, each member shall meet at least 25%, lead member shall meet at least 40% and all members together shall meet 100% of the requirement under Section 15(i).		
16.	Expected Team (Key-Staff) Composition	Team Leader, Chief Design Architect, Deputy Team Leader, Architect, Sr. Structural Design Engineer, Sr. Structural Design Engineer (Bridge Expert), Geo-technical / Foundation Engineer, Sr. Electrical Design Engineer, Sr. Mechanical Sanitary & Plumbing Design Engineer, Drainage Engineer cum Liquid & Solid Waste Management Expert, Hydrologist, Financial Analyst, Economist, Environmental Specialist, Sociologist/Social Safeguard Specialist, Sr. Urban Planner, Resident Engineer, Procurement Specialist.		
17.	Contract Execution Period	The duration of the contract is expected to be 30 months .		
18.	The Criteria for Shortlisting	The criteria for shortlisting: <ul style="list-style-type: none">• Firm history, specifically age of the firm / year of registration / incorporation• Financial status and capacity, qualification and experience of the firm (as mentioned in Sections 14 & 15)• The firm should have specific experience as below:<ul style="list-style-type: none">i) Experience in at least 1(one) similar assignment (min. 100 acres area) in Feasibility Study under any public/private organizations during the last 10 (ten) years.ii) Experience in at least 1(one) assignment in detailed designing of Lake/Lakeside area development (min. 100 acres area) under any public/private organizations during the last 10 (ten) years.iii) Experience in at least 1(one) assignment in Master Plan Design of Industrial Park/Economic Zone or similar (min. 100 acres area) under any public/private organizations during the last 10 (ten) years.		
19.	Documents Comprising the Expression of Interest (EOI)	The Expression of Interest (EOI) must comprise the following documents: <ul style="list-style-type: none">i) Brochure/company profileii) Experience detailsiii) Income Tax Certificate (for the FY 2017-18 to FY 2019-20)iv) Up to date Trade License, TIN & VAT/BIN Certificates etc.v) List of professionalsvi) Documents indicating financial capability (bank solvency certificate, and audited balance sheet for FY 2017-18 to FY 2019-20 for annual turnover)vii) Resources/logistic facilities of the firm.		
20.	Place of Receiving the EOI	Bangladesh Economic Zones Authority, Monem Business District (Level 12), 111, Bir Uttam C.R. Dutta Road, Dhaka-1205, Bangladesh		
21.	Package Details			
	Package no.	Location	Indicative Start Date	Indicative Completion Date
	PS01-BEZA-2021	Dhaka (BEZA HQ)	01 July 2021	31 December 2023
	Procuring Entity Details:			
22.	Name & Designation of the Official Inviting EOI	Doyananda Debnath General Manager (Planning & Development)		
23.	Address of Official Inviting EOI	Bangladesh Economic Zones Authority, Monem Business District (Level 12), 111, Bir Uttam C.R. Dutta Road, Dhaka-1205, Bangladesh		
24.	Contact Details of Official Inviting EOI	Phone: + (88) (02) 9632463 E-mail: doyananda@yahoo.com		
25.	Particular Instructions	<ul style="list-style-type: none">• Procuring entity reserves the right to accept or reject any or all EOIs for any reason whatsoever• Consultant will be selected in accordance with the procedure set out in Public Procurement Act 2006 and Public Procurement Regulation 2008• This EOI notice is also available in BEZA website www.beza.gov.bd and CPTU website www.cptu.gov.bd• Details of Terms of Reference (TOR) is available in www.beza.gov.bd		


Doyananda Debnath
Joint Secretary
General Manager (P & D)
Bangladesh Economic Zones Authority

Section 6. Terms of Reference
PREPARATION OF MASTER PLAN INCLUDING DESIGN, SUPERVISION AND
MONITORING WORKS FOR DEVELOPMENT OF SHEIKH HASINA SAROBAR
AT BANGABANDHU SHEIKH MUJIB SHILPA NAGAR, MIRSARAI, CHATTOGRAM

1.0 INTRODUCTION

✓ PS-01-BEZA-2021

1.1 Background of the project

The Vision 2021 and the Seventh Five-Year Plan (2016-2021) called for a shift to a new development paradigm. The plan sets an ambitious target - average economic growth of 7.4% supported by economic and export diversification, job creation, human resources, and technology development. In alignment with the vision to become a middle-income country by 2021 and a developed country by 2041, the current government has given relentless effort in infrastructure development and has planned to develop more than 100 economic zones to boost Bangladesh's industrial and service sector growth both locally and globally.

Bangabandhu Sheikh Mujib Shilpa Nagar is the largest of the economic zones planned by the government to be developed. This Shilpa Nagar, possessing unique built-in site-specific advantages as a location of Economic Zone, has been carefully designed through sensitive land use planning. It has well functional traffic movement plan, environmental management plan, sufficient infrastructures, security, utilities and amenities, warehouses and all other facilities required in an Economic Zone. Although having provisions for high durability access roads, rail connectivity and port facilities, protection of water bodies and development surrounding such features will not only increase the experiential value of the peninsular location of the Economic Zone but will also bring planned industrialization to fruition. The project has been proposed in association with this idea.

Proposed Sheikh Hasina Sarobar in Bangabandhu Sheikh Mujib Shilpa Nagar, Mirsharai, Chattogram covers **212 acres** of land. As it is located inside Bangabandhu Sheikh Mujib Shilpa Nagar, the proposed lake will be an urban oasis for the regional facilities of the industrial city. It will be connected to regional hubs and other components of the Economic Zone through extensive road, rail, and water routes. The proposed lake area will be composed of common infrastructures like roads, walkways, plaza, recreational facilities, hospitality facilities, institutional and training facilities etc. The development of the proposed lake will provide a breathing space in an industrial city. The proposed project will create an environment with holistic international standard urban infrastructure and facilities in Bangabandhu Sheikh Mujib Shilpa Nagar which will enhance the pace of industrialization and economic growth along with increasing the value of the Economic Zone overall. It will also ensure contribution in the development the overall economy of the country.

The Government of Bangladesh has undertaken the Development of Sheikh Hasina Sarobar with GoB fund. Bangladesh Economic Zones Authority (BEZA) is implementing the project. Now, for effective planning and operation "Development of a Master plan and its Detail Design" is essential for implementation of the project.





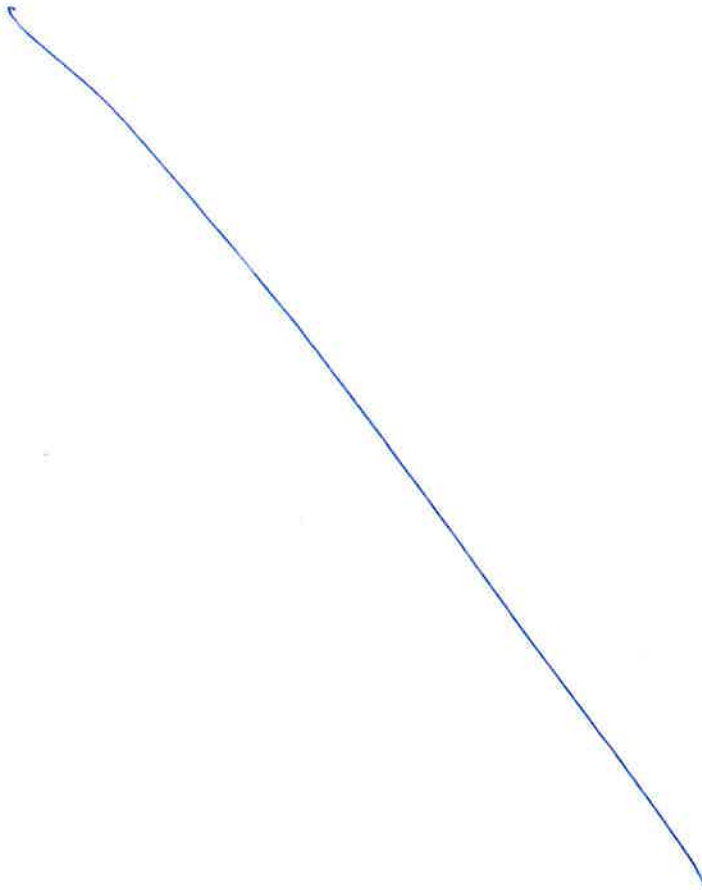




1.2 Location

The project site is situated in Mirsharai Upazila of Chottogram district. Project area is **212 acres** located in between $22^{\circ} 46' 15.294''$ & $22^{\circ} 46' 47.3448''$ North latitudes and in between $91^{\circ} 27' 54.7632''$ & $91^{\circ} 27' 47.7576''$ East longitudes.

The site is in 10.72 km distance from Dhaka-Chattogram Highway, 12.16 km distance from Mirsharai Bus Stand and 54.58 km distance from Chattogram City Gate. The proposed lake is located in Pashchim Ichhakhali of Ichhakhali union of Mirsharai upazilla. The river Feni is located very close to the site. And Sandwip Channel is around 2.5 km away from the proposed **Sheikh Hasina Sarobar**.



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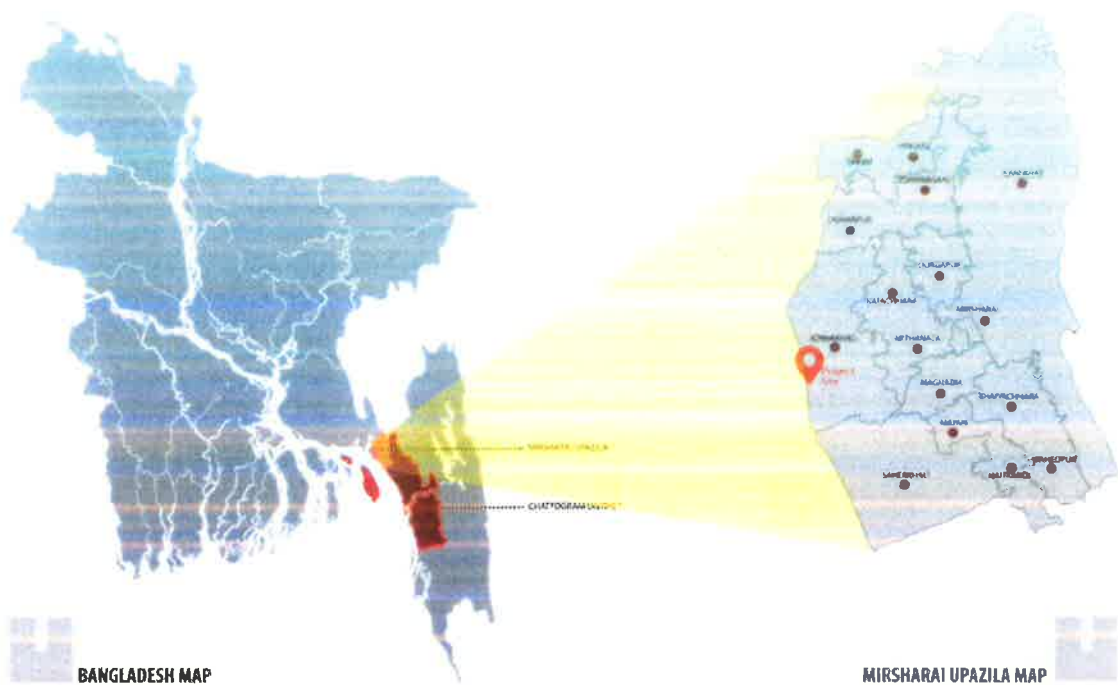


Figure: Sheikh Hasina Sarobar, Bangabandhu Sheikh Mujib Shilpa Nagar, Mirsharai, Chattogram

2.0 OBJECTIVE OF THE ASSIGNMENT

Attractive landscaping and afforestation, provision of open spaces and leisure activities in an Economic Zone can foster development alongside ensuring sustainable growth in the new urbanity. An Economic Zone generally attracts the investors and industrialists by providing desired business and industrial ecosystem to achieve the ultimate goal of economic growth and development. But developing a relief spot inside the economic zone promoting leisure and urban activities will definitely add a tremendous amount of value in the eyes of the investors.

Careful transformation of the area into a large water body and its surroundings to a grandeur urban hub for a new industrial city, including Five-Star Hotel, Resort, Museums, Youth Center, Eco-Islands & other relevant facilities is the main objective of this project. Such a Greenfield development in a vast industrial zone or a city will not only act as a breathing space for the dwellers but will also have the potential to become the nation's icon creating harmony in city life, promoting,

- Sustainability & continuity issues
- SDG Implementation
- Environmental, Economic and Social benefits
- International standard project

The proposed consultancy services includes **Preparation of Feasibility Study, Master Plan Design, Detailed Design & Construction Supervision of International Standard Lake Area Development of "Sheikh Hasina Sarobar" (212 Acres land)** at Bangabandhu Sheikh Mujib Shilpa Nagar, Mirsharai, Chattogram.

3.0 PROPOSED COMPONENTS OF PROPOSED SHEIKH HASINA SAROBAR

The main components of the consultancy assignment are as follows but not limited to:

- A. Lake Development, Excavation & Shore Protection
- B. Common Infrastructure (Roads, Bridges, Walkways, Plaza, Parking etc.)
- C. Recreational facilities (Amphitheatre, Aviary, Boat Club, Food Court, Toilets etc.)
- D. Hotel & Resort Zone (250-Bed Five Star Hotel, 120-Bed Resort Facility etc.)
- E. Institutional Zone (Museum, Aquarium, Youth Base Camp etc.)

4.0 SCOPE OF SERVICES

4.1 The services to be provided by the consultants are but not limited to as follows:

Study Phase:

- i) Preparation of inception report
- ii) Topographic survey followed by survey report
- iii) Geotechnical investigation report
- iv) Feasibility Study report
- v) EIA & SIA Report
- vi) Master Plan Report

Design Phase:

- i) Preparation of Development Plan
 - a. Detailed design of Master Plan and international standard urban infrastructures
 - b. Design of area lighting and drainage system
 - c. Land-use plan
 - d. Road network and connectivity

- ii) Preparation of Implementation Plan
 - a. Design of Site Development Scheme and Common Infrastructures
 - b. Architectural Design of Recreational Facilities, Hotel & Resort Facilities, Institutional Facilities
 - c. Design of Structural & Utility Services of different facilities as mentioned in the approved Master Plan
 - d. Landscaping of the project area
 - e. Prepare Cost Estimation, Technical Specifications with BoQ and Bidding Documents

Construction Supervision Phase:

- i) Construction Supervision
- ii) Monthly Progress Report;
- iii) Checking and verification of shop drawings provided by the contractor
- iv) Vetting of bills for construction work

4.2 DURATION OF CONSULTANCY SERVICES:

Phase	Duration
i) Study Phase	4 (Four) months
ii) Design Phase	8 (eight) months
iii) Construction Supervision Phase	18 (eighteen) months

5.0 SPECIFIC SCOPE OF SERVICES

PHASE-I: STUDY PHASE

5.1 Survey and Investigation

5.1.1 Site Analysis

The Consultant will visit the site and carry out preliminary site analysis to determine the best possible location for the construction taking into consideration topography, soil characteristics and location of site. The site analysis shall also include study of the relationship of the site with surrounding as well as the climatic considerations required for the architectural design.

5.1.2 Topographic Survey

The Consultant shall carryout topographic survey including contour survey of the site, showing existing structures, site services, vegetation and other topographic details. The topographic survey shall also contain overhead and underground installations, if any, to be shown on a plan, on the basis of its investigation. The consultant shall identify the limitations of the site and shall recommend suitable and economic solutions.

5.1.3 Sub-soil Investigation

The consultant shall conduct sub-soil investigation to determine the bearing capacity and settlement characteristics of the surface and sub-surface strata of the soil in order to select the most suitable type of foundation and cost effective safe foundation design for the building and other infrastructure.

5.2 Feasibility Study

The Consultant shall prepare Feasibility Study Report including EIA, SIA and Financial Analysis. The main objective of these studies is to assess the feasibility of the envisaged excavation of the Sheikh Hasina Sarobar from environmental and social points of view and find out suitable option for development and protection of shores of the Sarobar considering social and environmental aspects.

The specific objectives are following:

- Baseline survey of environment and social issues
- Policies and Regulatory framework
- Preparation of biodiversity conservation plan. (down towards end)
- Identification of potential impacts
- Public consultation and disclosure plan
- Outline of Environmental Monitoring and Management Plan (EMMP) for conservation of aquatic resources, fisheries resources, bird sanctuaries etc.
- Occupational health safety and risk assessment
- Preparation of Social Impact Assessment
- Measures for mitigating the adverse effect of potential social impacts
- Social Management plan

5.3 Financial Analysis

The Consultant shall prepare Financial Analysis Report. The main objective of this study is to assess the financial feasibility of the envisaged excavation of the Sheikh Hasina Sarobar find out suitable option for development.

The specific objectives are following:

- Preliminary/Indicative cost of the project
- Potential return on Investment including NPV and IRR
- Cost of funds
- Benefit cost ratio (BCR)
- Estimated time period of the completion of the project.
- The yearly profit acquired by BEZA by way of leasing out the built up space.
- Up-front payment with sharing of space / rental.
- Detail cash flow projections with explanation of the calculators.
- Payback period
- Balance sheet & profile and loss statement.
- Analyze the social investment cost
- Profit & Loss statement
- Preparation of taxation and loan repayment schedules
- Preparation of comparative revenue model
- Preparation of common operation and management cost

5.4 EIA and SIA

The Consultant shall prepare EIA and SIA Reports.

The main objectives of EIA are following.

- Policies and Regulatory framework
- Baseline survey of environment
 - physio-chemical environment
 - biological environment
- Identification, evaluation and mitigation of potential impacts
- Socio-economic data collection & secondary data collection
- Collection and analysis the last 20 years of weather (temperature, rainfall, humidity, sunshine, wind speed and wind direction) data from BMD
- Study the present air (PM2.5, PM10, NOx, SO2, CO), noise, surface and groundwater quality (two locations)
- Prediction and evaluation of impacts
- Public consultation and disclosure plan
- Outline of Environmental Management Plan (EMP)
- Occupational health safety and risk assessment
- Identify current owners and users of land within the project boundary and other stakes of the communities along the existing land.

The main objectives of SIA are following.

- Social Impact Assessment and Mitigation Plan
- Stakeholder analysis and consultation with the key stakeholders
- Identification and description of mitigation measures identified to alleviate negative social impact both during construction and operation on vulnerable families, groups (e.g. women), and communities;
- Identification and description of enhancement measures associated with potential multipurpose developments, including estimate and profile of potential beneficiaries;
- Comprehensive cost estimate of all identified measures;
- Institutional and other requirements to implement and monitor the SMP
- Social awareness and education of contractors and local communities

5.5 Master plan Report

The master plan report will include the following.

- Analysis of existing physical conditions
- Summary of topographic survey, geotechnical investigation report, hydrological study
- Architectural design principles, and design & planning concept
- Formation of space programs and placement of major infrastructures
- Land-use planning concept
- Access, connectivity and circulation scheme
- Summary on structural systems and design criteria
- Summary on Mechanical, Electrical and Plumbing systems
- Methodology of estimation and summary of cost

PHASE-II: DESIGN PHASE

5.6 Development Plan

On completion of site analysis, topographic survey and sub-soil investigation, the Consultant shall prepare preliminary design on the basis of requirements of the client and on the basis of survey and investigation results of the site. The consultant shall prepare necessary architectural design of master plan and international standard urban Infrastructures in sufficient details to reflect the client's requirement and submit preliminary architectural design of the facilities and infrastructure including a preliminary cost estimation of the project following mainly current Public Works Department (PWD) Schedule of Rates and market rate for approval of the client. This submission shall show all essential dimensions and include:

- a) The Master Plan considering all requisite facilities
- b) Land use plan including all proposed components of the site
- c) Site plan showing the proposed location of buildings, internal roads, car parking areas and indicative landscaping of the compound
- d) Design of Area Lighting, Drainage System, MEP services connection scheme
- e) Preliminary architectural plan of the Large Area cum Lake Development & Infrastructures facilities, including road network and connectivity among different facilities
- f) Incorporate sufficient flexibility in the architectural plan so that the project may be split into a number of phases, for its total completion
- g) Preliminary cost estimate of the project
- h) Any other information/proposal considered appropriate by the Consultant.

5.6.1 Preparation of Implementation Plan

The Consultant shall prepare detailed and final drawings for Site Development and Common Infrastructures, sub-station, boundary fence, internal road, electrical installations, etc. in accordance to the approved development plan. Proposals submitted at this stage shall include but not remain limited to:

- a) Site plan showing all finished grades, contours, drainage, location of structures and facilities, roads, walkways, parking area, landscaping etc.
- b) Final Layout plans, sections etc. of the infrastructures.
- c) Detailed structural drawings.
- d) Detailed drawings of Water supply, drainage and sewerage system.
- e) Detailed drawings of electrification (Internal and External)
- f) Detailed design drawings and specification for electrical sub-station, standby generator, area lighting and security lighting.
- g) Detailed design drawings and specification for Fire-Detection and protection system for the complex.
- h) Specifications & Tender documents for the infrastructures to be built only.
- i) Any other drawing's/specifications etc. that is/are considered appropriate by the Consultant.

5.6.2 Construction Documentation and Working Drawings:

The Consultant shall prepare the working drawings in sufficient details, tender documents, schedule of items and specifications, BoQ. The Consultant shall prepare following construction document on the basis of the Detailed Working Drawing, specifications etc:

- a) Tender Documents of all major groups of work for inviting tenders.
- b) Schedule of Items of works and Bill of Quantities for all the items.
- c) Cost Estimation following Public Works Department (PWD) current Schedule of Rates and other Government Authorities approved Schedule of Rates. The items not matching with the any of the Government Schedule of rates shall be analyzed considering present market rate of materials, labor and equipment's.

5.6.3 Prepare Architectural Design and Working Drawings

The Consultants shall provide the following pertinent information in the drawings for the concerned works:

- Site plan
- Layout plan showing, (a) all dimensions, all items schedule; and (b) description of all finish materials of each item
- Elevation, Section and detail drawings of infrastructures
- Walkway pavement details
- Landscape details with the name of trees and shrubs
- Drainage System
- Water Management System
- Sewerage Management System
- 3D Model (a small scale practical paper model with a base of 8 fit X 2 fit)
- 3D Animation

5.6.4 Prepare Structural Design and Working Drawings

Information to be provided in structural' drawings submitted by the Consultants:

- To use appropriate loading in the model following BNBC.
- To carry out the foundation designs based on the sub-soil investigation report.
- To prepare details structural design drawing including working drawings.

In addition to general structural viz. infrastructure and sectional drawings with its necessary details, the following information should be submitted in written form.

- Bearing capacity of soil.
- Ultimate strength of reinforcement
- 28 days concrete strength $f_y = ?$
- Clear cover, hooks, lapping details.

5.6.5 Prepare Drainage System Design and Working Drawings

Internal & External drainage system design and drawings;

- Drainage Layout plan showing underground pipelines invert levels, sectional dimensions etc.
- Sewerage disposal/treatment system
- Details of surface drain
- Position & details of outfall
- layout & details of inspection pit, soak-pit/soak-well & septic tank

5.6.6 Prepare Electrical Design and Working Drawings

Information to be provided in electrical drawing submitted by the Consultants shall include:

External Electrical drawings:

- Site plan/layout plan showing HT/L.T. distribution line/electric poles.
- Cable route with size.
- Lay-out plan of fittings and fixtures like Garden light, Walk way Light, Street light, ODB, etc.
- Service connection.
- Substation equipment layout plan & detail with lightening arrestor.
- Outdoor transformer (pole mounted) at lightening arrestor & drop out fuse
- Standby Generator
- Earthing details

5.6.7 Prepare cost estimates and specification

This will include:

- a. Quantities of various items to be included in the Bill of Quantities
- b. To prepare the engineering estimates for the contract documents for the construction of the infrastructures based on the current schedule of PWD, or relevant GOB schedule, or market price reference with necessary calculation.
- c. To carry out the rate analysis for the items which are based on the market rates not available in PWD schedule of rates
- d. To prepare appropriate specifications for all the items/elements necessary for the entire construction

5.6.8 Prepare the bid documents for works

The construction of the physical infrastructure will require appointment of construction firms using appropriate procurement methodologies. This process will require preparation of acceptable bid documents using the suitable Standard Bid Documents for Works Contract. This preparation of the document will include:

- a. Technical specifications, bill of quantities, tender documents, drawings and other necessary documents and information required for inviting bids like evaluation criteria for inviting bids
- b. To estimate the personnel, equipment and assess other qualifications required to carry out the construction activities
- c. To address and incorporate all the procurement aspects in the Procurement Document

Consultants shall also submit, if required, other periodic or special report relating to the progress and performance of the works.

PHASE-III: SUPERVISION PHASE

5.7 Construction supervision

- 1) Demonstration of design and drawings to the selected contractor
- 2) Assist to provide site layout
- 3) Select and possess construction material samples, concrete cylinders etc. for necessary laboratory tests
- 4) Check and report to ensure quality workmanship
- 5) Ensure the works done as per design, drawing and specification
- 6) Prepare and submit monthly progress report according to deliverables schedule
- 7) Check and certify the measurements of bill claimed by the contractor
- 8) Check the health and safety measures taken by the contractor
- 9) Prepare and submit construction completion report
- 10) Check and verify the as-built drawings submitted by the contractor

5.8 Activities of the Consultants' Head Office

- i. Exercising control over the site office(s) and be responsible for the overall coordination with concerned agencies
- ii. Recommendation for conducting tests of materials
- iii. Verification of necessary shop drawing provided by the Contractor
- iv. Revising of cost estimates (if required)
- v. Visiting site(s) periodically
- vi. Issuing variation orders, if there be any, agreeing cost of variation(s) with the contractors, after approval of the Client
- vii. Vetting contractor's interim payment and all bills.

6.0 TEAM COMPOSITION AND REQUIRED QUALIFICATION FOR THE EXPERTS:

The consultants will propose a comprehensive team composition with task assignments for each key staff along with sufficient support staff to meet the objectives and scope of the services.

Indicative list of the positions of key professionals who will be evaluated during the technical evaluation process is given below in **Annexure-A** (note that the list does not include support staffs for field work and other activities such as field survey, data collection, documentation etc.).

Annexure-A

A. The minimum required Qualification and Area of Expertise of key professionals' staff are as follows:

Key Professionals:			Man month (study phase)	Man month (design phase)	Man month (super vision)
Sl. No.	Position	Qualification, Area of Expertise & Task assigned			
1	Team Leader	<p>The team leader should have a Master's degree in Architecture/Urban Design and 20 years of general experience including planning and design of large area development project, management, supervision, and improvements of urban infrastructure related to Master Plan & Basic Infrastructure facilities. S/he should have 15 years of specific experience in a relevant position as a team leader or deputy team leader for Master plan with infrastructure development projects and also have experience in design and implementation of buildings. The team leader shall also have good knowledge of project management systems, and experience of managing a large-scale development project. He/she is preferred to have good communication skills, be familiar with participatory approaches to project design and implementation and be able to assist in the capacity building and training program.</p> <p>The team leader will have the overall responsibility to deliver (i) Sheikh Hasina Sarobar Project appraisal report; (ii) Climate resilient design, Lake Shore protection, green and sustainable buildings concept and relevant Architectural / Engineering design; (iii) Cost analysis; and also assist the Project Director in Review of EIA and SIA. The team leader will also be responsible for preparing inception, midterm, and draft final and final reports.</p> <p>The team leader will be responsible for reporting to the Bangladesh Economic Zones Authority for managing the following individual consultants and tasks</p>	4	8	4
2	Chief Design Architect	<p>The Chief Design Architect is preferred to have a Bachelor's degree in architecture and 15 years of general experience in designing buildings, including 10 years of specific experiences in planning and designing Lake Development & building facilities. Chief design architect shall also have good knowledge of project management systems, and experience of managing a large-scale development project. Major responsibilities include conceptualization of the layout plan of facilities, architectural plans, and design of all building works and infrastructures.</p>	0	8	0

Sl. No.	Position	Qualification, Area of Expertise & Task assigned	Man month (study phase)	Man month (design phase)	Man month (super vision)
3	Deputy Team Leader	The Deputy team leader is preferred to have a Master's degree in Architecture and 10 years of general experience in the relevant field and 6 years of specific experience related to preparation of planning and design (provision for utilities and logistic facilities), management, supervision, and improvements of urban infrastructure related to Master Plan & Basic Infrastructure facilities; prepare graphic representations of proposed plans using computer-aided design and drafting software, analyze reports on land conditions, such as public gathering spots, drainage systems and energy usage etc. Inspect design and implementation work to ensure that it adheres to original plans if any and all other works necessary for proper consultancy to the proposed project.	4	3	18
4	Architect	The expert is preferred to have a Bachelor's degree in Architecture and 10 years of general experience in the relevant field and 5 years of specific experience in design and supervision of architectural projects. The expert will work with the team leader and other relevant experts and prepare the architectural design of the facilities. Major tasks include preparation of the layout plan of the facilities, architectural plans, and design of all building works and infrastructures to be constructed.	2	3	2
5	Senior Structural Design Engineer	The Engineer is preferred to have a Bachelor's degree in Civil Engineering with at least 20 years of general experience in the relevant field and 15 years of specific experience in structural design, management, supervision, and improvements of urban infrastructure related to large area development and building facilities. Senior Structural Design Engineer shall also have good knowledge of managing a large-scale development project. He/she is preferred to have good communication skills, be familiar with participatory approaches to project design and implementation and be able to assist in the capacity building and training program. Senior Structural Design Engineer will review Architectural design and suggest structural feasibility. Formulate criteria prepare design method and design analysis of various structures of the project; He/she will also be responsible for top supervision of construction works.	0	3	3
6	Senior Structural Design Engineer (Bridge Expert)	The Engineer is preferred to have a Bachelor's degree in Civil Engineering with at least 15 years of general experience in the relevant field and 10 years of specific experience in structural design, management, supervision, and improvements of roads, bridges, culverts etc. and other building facilities. Senior Structural Design Engineer (Bridge Expert) will review Architectural design and suggest structural feasibility, formulate criteria, prepare design method and design analysis of designated structures of the project; He/she will also be responsible for top supervision of construction works.	0	4	3

Sl. No.	Position	Qualification, Area of Expertise & Task assigned	Man month (study phase)	Man month (design phase)	Man month (super vision)
7	Geo Technical / Foundation Engineer	The Engineer is preferred to have a Bachelor's degree in Civil Engineering, expert in Geotechnical / Soil Engineering and 15 years of general experience including soil analysis, foundation design, management, and supervision. The Engineer is preferred to have at least 10 years of specific experience in designing of Foundation as Geotechnical Engineer or Foundation Engineer. The engineer will be responsible to (i) Analysis of Sub-Soil Investigation Report, ii) Providing Earth Cutting & Slope protection Methodology iii) Foundation Design, iv) coordinate and guide all activities in connection with the structural design of the project; (v) formulate criteria to prepare design method and design analysis of various structures of the project; (vi) maintain liaison with project Architect and other Architects and concern for coordinated effort in arriving at economical & sustainable design solution;	1.5	2	2
8	Sr. Electrical Design Engineer	The Engineer is preferred to have a Bachelor's degree in Electrical Engineering or similar discipline and 20 years of general experience in area development and the design, selection & installation of electro-mechanical devices, of which preferably 15 years of specific experience in electrical design and installations for Infrastructures & buildings. He/she will be responsible for-i) 33/ 11 KV sub-station & switching station design & Cable layout. ii) Service Drops, Indoor sub-station, Underground Cable routes, etc. iii) Design and prepare drawings of External & Internal electrical network distribution system for the project including service line from PDB / REB supply; iv) Guide to carry out all types of electrical survey works at site. v) Visit construction sites as and when required during execution vi) Any and all other works necessary for proper consultancy. He/she will closely work with the team leader and others Expert.	0	3	3
9	Sr. Mechanical, Sanitary & Plumbing Design Engineer	The engineer is preferred to have a Bachelor's degree in Mechanical Engineering, Electro-Mechanical Engineering or similar discipline and 15 years of general experience in the design, selection, and installation of electro-mechanical devices, of which preferably 10 years of specific experience in mechanical design and installations for buildings. He/she will be responsible to prepare the layout plan as well as mechanical design of the facilities. He/she will closely work with the team leader and other relevant consultants.	0	3	2
10	Drainage Engineer cum Liquid & Solid Waste Management Expert	The expert is preferred to have minimum of Master's Degree in Civil Engineering / Water Resources Engineering / Environment & Disaster Management. He / She should have at least 15 years of general experience in the relevant field and 10 years of specific experience in Liquid / Solid waste management / urban drainage modeling, water management on urban drainage. Previous experience in urban drainage modeling studies will be preferred. Responsibilities of Drainage Engineer or Waste management expert goes to i) Project base model development, scenario run, Catchment & discharge analysis for storm water drainage ii) Waste management plan & design, iii) Attend meetings as and when required, iv) Report & presentation preparation	0	2	0

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Sl. No.	Position	Qualification, Area of Expertise & Task assigned	Man month (study phase)	Man month (design phase)	Man month (super vision)
11	Hydrologist	The expert is preferred to have minimum of Master's Degree in Civil Engineering / Water Resources Engineering / Hydro-informatics. He / She should have at least 15 years of general experience in relevant field and 10 years of specific experience in Water Resources / urban drainage modeling, water management, civil/ storm water engineering/ hydraulics, research and modeling software on urban drainage. Responsibilities of Hydrologist or water management expert goes to i) Project base model development, scenario run, hydrologic & hydraulic analysis, ii) Attend meetings as and when required, iii) Report & presentation preparation	2	2	0
12	Financial Analyst	This expert should have Masters' Degree in economics and have 20 years of general experience in relevant field and 15 years of specific experience as an Economist / Financial analyst. Capable in Economic and Financial Analysis and Sensitivity Analysis of Development Projects. Capable to prepare Project Documents and its approval procedure, Technical Studies of projects. Prepare Technical Reports and Development Project Proposals etc.	2	0	0
13	Economist	This expert should have Masters' Degree in economics and have 20 years of general experience in relevant field and 15 years of specific experience as an Economist. Capable in Economic and Financial Analysis and Sensitivity Analysis of Development Projects. Capable to prepare Project Documents and its approval procedure, Technical Studies of projects. Prepare Technical Reports and Development Project Proposals etc.	1	0	0
14	Environmental Specialist	The expert is preferred to have 15 years of general experience in relevant field and 10 years of specific experience in environmental management or impact assessment, and a graduation degree in environmental engineering or related fields, with previous experience. Familiarity with environmental safeguards requirements with respect to project design and construction/ implementation will be an advantage. He/she will undertake (i) preparation of a diagnostic assessment of applicable and relevant laws, regulations, rules and procedures for managing and mitigating the urban development; (focusing on GOB's Safeguard Policy Statement, policy principles that are likely to apply to the project; (ii) determine the potential environmental impact of the proposed design and assess risk, hazard associated with project activities; iii) identification of measures for monitoring and environmental safeguard systems performance; and (iv) preparation of environmental assessment and environmental management plan report of the project.	2	0	0

Sl. No.	Position	Qualification, Area of Expertise & Task assigned	Man month (study phase)	Man month (design phase)	Man month (super vision)
15	Sociologist / Social Safeguard Specialist	The expert is preferred to have 15 years of general experience in relevant field and 10 years of specific experience in social safeguard, and a graduation degree in social science, anthropology, or related fields. Familiarity with social safeguards and gender requirements with respect to sub project design and construction/implementation will be an advantage. He/she will be responsible for (i) explain the socio-economic dynamics and assess potential social impacts associated with project activities; (ii) conduct public consultation meetings, FGD etc and prepare necessary document on social aspects of the project (iii) actively involve and contribute in the dissemination programs; and iv) preparation of social assessment and social management plan report of the project.	1.5	0	0
16	Sr. Urban Planner	The expert is preferred to have a Master's degree in Urban and Regional Planning, or similar discipline and 15 years of general experience in relevant field and 10 years of specific experience in Urban Planning, master planning, city development design and construction. He/she is also preferred to have working experiences in urban projects with proven proactive urban/city planning capability. He/she will lead all aspects in the design of the master plan, so, having broad understandings of urban planning, urban design, land-use planning, urban transport & environment, social & institutional aspects will be an advantage. He/she is preferred to have good communication skills, familiar with participatory approaches to project design and implementation.	1.5	2	0
17	Resident Engineer	The Resident Engineer should have a Bachelor's degree in civil engineering and 15 years of general experience in relevant field and 10 years of specific experience , or have a Diploma in Civil Engineering Degree with 20 years of general experience in relevant field and 15 years of specific experience in Construction management, supervision, and improvements of urban infrastructure related to Large Area / Lake Development / Building facilities. The Resident Engineer shall also have good knowledge of project management systems, and experience of managing an Urban / Township development project. He/she is preferred to have good communication skills, be familiar with participatory approaches to project implementation and be able to assist in the capacity building and training program.	0	0	18
18	Procurement Specialist	He / She should have Bachelor degree in Civil / Electrical / Mechanical Engineering. He / She shall have prior experience in Procurement with 15 years of general experience in relevant field and 10 years of specific experience in Public Procurement. Specialist shall have prior experience on the preparation of bid document of Works.	0	3	0

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Non-key Professionals					
Sl. No.	Position	Qualification, Area of Expertise & Task assigned	Man month (study phase)	Man month (design phase)	Man month (super vision)
1	GIS Expert	The expert is preferred to have a Bachelor Degree in Urban and Regional Planning/ Geography/ Geo-informatics/ Computer Science, or similar discipline with 8 years of general experience in relevant field and 5 years of specific experience in urban planning, master planning, city development design, and municipal infrastructure design and construction as a GIS expert. Advance Knowledge in mapping with GIS, Remote Sensing and Geo- database modeling and experience in planning and implementation of field mapping logistics as well as advance knowledge in the use of ArcGIS 10, RTK GPS for gathering field data.	2	2	0
2	Junior Architect (2 Pax)	The Jr. Architect will have a Bachelor's degree in architecture and 5 years of general experience in designing buildings and other infrastructure, including 03 years of specific experiences in planning and designing building facilities. S/he will work with the team leader, Senior Architect, and other relevant experts and prepare the architectural design of the infrastructures. Major tasks include preparation of the layout plan of the infrastructure, architectural plans, section, elevation and design of all building works and infrastructures to be constructed.	4	12	0
3	Junior Structural Design Engineer	The Engineer is preferred to have a Bachelor's degree in Civil Engineering with at least 7 years of general experience in structural design, management, supervision, and improvements of urban infrastructure related to road, pavements, shore protection and building facilities. S/he should have 5 years of specific experience in relevant works. The Junior Structural Design Engineer shall Co-ordinate and guide all activities in connection with the structural design of the project.	0	3	0
4	Cost Estimator (Civil)	The Cost Estimators should have a Bachelor's degree in civil engineering with 10 years of general experience in relevant field and 6 years of specific experience ; or, have a Diploma in Civil Engineering with 15 years of general experience in relevant field and 10 years of specific experience . He/she will be responsible for appropriate cost estimate about civil works in the project. S/He should be able to read, operate & calculate the AutoCAD drawings and able to calculate the measurements in the excel sheets. He should be skilled in preparing Rate Analysis as per standard practice following the latest Govt. approved schedule of rates & Market rates (Analyzed as applicable). Assess cost effectiveness of products, projects or services, tracking actual costs relative to bids. Confer with engineers, architects, owners, and contractors on changes and adjustments to cost estimates. Prepare estimates used by management for purposes such as planning, organizing, and scheduling work.	0	4	4

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Sl. No.	Position	Qualification, Area of Expertise & Task assigned	Man month (study phase)	Man month (design phase)	Man month (super vision)
6	Cost Estimator (Electrical)	The Cost Estimators is preferred to have a Diploma in Electrical Engineering with 15 years of general experience in relevant field and 10 years of specific experience in electrical estimation work. S/he should be able to read, operate & calculate the Auto CAD drawings and must be able to calculate the measurements in the excel sheets with proper name of destinations. He should be skilled in preparing Rate Analysis as per standard practice following the latest Govt. approved schedule of rates & Market rates (as applicable). His/her familiarity in cost estimation with the government requirements for preparing and implementing Large Area / Lake / Building development would be an advantage. Electrical estimators will prepare Bill of Quantities with Technical specifications for Tender documents and perform related work as required.	0	3	2
7	Site Architect	The expert is preferred to have a Bachelor's degree in architecture and 5 years of general experience in designing buildings and other infrastructure, including 3 years of specific experiences in supervision of Master plan design project. The Architect will work in field level & closely work with Resident Engineer and other relevant contractor's representatives and supervise the architectural layout & design of the infrastructures and Buildings. Major tasks include Checking of the layout plan of the infrastructure, architectural plans, section, elevation and design of all building works and infrastructures to be constructed.	0	0	6
8	Survey Expert	The Survey Expert should have a Diploma in Civil Engineering / Associate Degree program at a technical school and 15 years of general experience in relevant field and 10 years of specific experience in topographic survey work. S/he shall also have good knowledge of benchmark referencing, measurement checking and demarcation of large-scale development project. S/he is preferred to be able to read architectural and construction drawings etc.	2	0	0
9	Site Engineer (Civil)	The Site Engineer (Civil) should have a Bachelor's Degree/Diploma in Civil Engineering and 10 years of general experience in relevant field and 6 years of specific experience in Civil engineering and in Construction supervision. The Site Engineer shall also have good knowledge of Project scheduling, Quality controlling, measurement checking and close supervision of any large-scale development project. He/she is preferred to have good communication skills, be familiar with Bill of Quantities, Specification, and be able to read all types of Construction Drawings, assist in the measurement preparation by the Contractor She/he will be the deputy to the Resident Engineer.	0	0	18

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Sl. No.	Position	Qualification, Area of Expertise & Task assigned	Man month (study phase)	Man month (design phase)	Man month (super vision)
10	Site Engineer (Electrical)	The Site Engineer (Electrical) should have a Diploma in Electrical Engineering and 8 years of general experience in relevant field and 5 years of specific experience in Construction supervision. S/he shall have prior experience in the supervision of similar Project. S/he shall also have good knowledge of Project scheduling, Quality controlling and close supervision of any large-scale development project. S/he is preferred to have good communication skills, be familiar with Bill of Quantities, Specification, and be able to read all types of Construction Drawings, assist in the measurement preparation by the Contractor. She/he will be the deputy to the Resident Engineer.	0	0	4
11	CAD Operator (Architectural - 2 PAX), (Structural & MEP - 1 PAX) (As Built Drawing - 1 PAX)	It is preferable that the CAD operators will have completed at least a two-year associate's degree program at a technical school or community college. They will have 10 years of general experience in relevant field and 6 years of specific experience in CAD drafting in relevant fields. CAD operators will provide the guidelines and technical details of the product especially over Structural and MEP drawings for facilities that is being built. Structural and MEP drafters will prepare drawings in accordance with architectural design. Design and draw installation diagrams. Compile and organize blocks, parts and specific details. Update equipment and building drawings and document.	2	18	4
12	Computer Operator	Computer Operator is preferred to have completed at least a bachelor's degree from any recognized University. Computer operators will have minimum 10 years of experience on documentation work with MS Word, MS Excel, MS office, MS project etc. He/she will have familiar with computation of Bill of Quantities, Tender documentation & any kind of Letter writing etc. He/she will closely work with the team leader, Concern Engineers and others specialist.	2	4	4
13	Office Assistant	Office Assistant is preferred to have at least eight pass & minimum 5 years of work experience in similar nature of Job.	4	8	0
TOTAL =			39.5	100	97
GRAND TOTAL =				236.5	

Non-Key professionals along with the support staffs will not be evaluated individually. However, they will be considered collectively along with the Key-Professionals.

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7.0 DELIVERABLES:

Sl.	Description	No. of copies	Timeline of submission
Study Phase			
01	Inception Report	3 copies	Within 15 days of signing contract agreement
02	Site Survey Report (with Topographic survey data and Geotechnical Survey data)	3 copies	Within 30 days after submission of Inception report
03	Draft Feasibility Study Report	3 copies	Within 55 days after submission of site survey report
	Draft EIA and SIA Report	3 copies	
	Draft Master plan Report	3 copies	
04	Final Feasibility Study Report	3 copies	Within 20 days after review of draft feasibility study
	Final EIA and SIA Report	3 copies	
	Final Master plan Report	3 copies	
Sub-total time period			120 days (4 months)
Approval of the Authority			
Design Phase			
05	Draft Development Plan	3 copies	Within 15 days after completion of Study Phase
06	Master plan Design, incorporating review of the Project Authority	3 copies	Within 15 days after submission of draft development plan
Approval of the Authority			
07	Geotechnical investigation reports for different component sites	3 copies	30 days after approval of project authority
08	Site development design, drawing, and cost estimation	3 copies	
09	Comprehensive Drawings of Common Infrastructures	3 copies	
10	Preliminary Architectural Design and drawing of different facilities	3 copies	50 days after submission of site development design
11	Design development with engineering drawings of different facilities	3 copies	50 days after submission of preliminary architectural drawing
12	Preliminary Cost Estimation of different facilities	3 copies	
13	Structural Drawings of different facilities	3 copies	50 days after submission of design development and preliminary cost estimation
14	MEP Drawings of different facilities (Electrical, Drainage, Sanitation etc.)	3 copies	
15	Final Cost Estimation and Bill of Quantities of different facilities	3 copies	30 days after submission of structural and MEP drawings
16	Tender Documents	8 copies	
Sub-total time period			240 days (8 months)
Construction Supervision Phase			
16	Monthly Progress Report		Within 7 th day of following month
17	Construction Completion Report	3 copies	Within 20 days of submission of completion report by the contractor
18	As-built Drawing of all Common Infrastructures	3 copies	Within 30 days of acceptance of concerned construction by the Project Authority

- Soft copy of All drawings, maps and data have to be provided in appropriate editable format.
- All hard copies of design and drawings have to be provide in an appropriate scale.

8.0 CLIENT'S INPUT AND COUNTERPART PERSONNEL

The following Services, facilities and property will be made available to the consultant by the client:

- BEZA will provide previously available reports, data, and information relevant to their assignments. However, the consultants have to make all the arrangements including office spaces for undertaking this assignment.
- BEZA will review and approve all drawings and documents submitted by the Consultant within shortest possible time.
- If any review comments are provided by BEZA the Consultant will update/ revise the review comments and submit within 7 days from the date of issuing.

8.0 PAYMENT SCHEDULE

Study Phase			
Payment Schedule	Deliverable	Time	Payment %
1 st Payment	Inception Report	15 days of signing the contract agreement	10% of study phase amount
2 nd Payment	Site Survey Report	45 days after submission of Inception report	30% of study phase amount
3 rd Payment	Draft Feasibility Study Draft EIA & SIA Report Draft Master plan Report	45 days after submission of site survey report	35% of study phase amount
4 th Payment	Final Feasibility Study Final EIA & SIA Report Final Master plan Report	15 days after review of draft feasibility study	25% of study phase amount
Sub-total=			100% of Study Phase amount
Design Phase			
5 th Payment	Draft Development Plan	15 days after completion of Study Phase	20% of design phase amount
6 th Payment	Master plan Design	15 days after submission of Draft Development Plan	15% of design phase amount
7 th Payment	Geotechnical investigation reports, Site development design, Preliminary Architectural Design	80 days after submission of Master plan design	35% of design phase amount
8 th Payment	Preliminary Cost Estimation, Structural Drawings, MEP Drawings	90 days after submission of Architectural Design	20% of design phase amount
9 th payment	Final Cost Estimation, BoQ, Tender Documents	40 days after submission of Structural & MEP Drawings	10% of design phase amount
Sub-total =			100% of Design Phase amount
Supervision Phase			
Payment of this phase will be paid in 6 (six) equal installments (i.e. quarterly)			

*Note: Reimbursable payments of each phase will be made on submission of invoices