

NATIONAL BOARD OF REVENUE (NBR)
CUSTOMS MODERNIZATION AND INFRASTRUCTURE DEVELOPMENT PROJECT
ACCELERATING TRANSPORT AND TRADE CONNECTIVITY IN EASTERN SOUTH ASIA –
BANGLADESH PHASE 1 PROJECT

Terms of Reference for Consulting Services

Feasibility Study, Conceptual Design, Cost Analysis
for Custom House, Dhaka (DCH), Custom House, Benapole (BCH) and
Customs Risk Management Commissionerate (CRMC)

1. Introduction and Background

The National Board of Revenue under Internal Resources Division of Ministry of Finance has been allocated a Public fund for Customs Modernization and Infrastructure Development Project under Accelerating Transport and Trade Connectivity in Eastern South Asia-Bangladesh Phase 1 Project and intends to apply part of the proceeds for hiring individual consultant for carrying out feasibility and detailed design studies & Cost Analysis for the Modernization and Infrastructural development of Custom House, Dhaka (DCH), Custom House, Benapole (BCH) and Customs Risk Management Commissionerate (CRMC).

▪ **Custom House, Dhaka (DCH):**

Custom House, Dhaka (DCH) plays a pivotal role in Bangladesh's economic landscape. Located in the Kurmitola area, it holds the distinction of being the largest airport customs station in the country.

- DCH is responsible for collecting crucial government revenue through duties and taxes levied on imported and exported goods. This ensures the smooth flow of funds into the national treasury.
- The Custom House acts as a gateway for international trade. It streamlines the clearance process for imported and exported goods, ensuring swift movement of cargo while adhering to customs regulations.
- DCH officials vigilantly detect and prevent smuggling of contraband items like gold, drugs, and other restricted goods. This safeguards national security and protects legitimate businesses.

▪ **Custom House, Benapole (BCH):**

Custom House, Benapole (BCH) is a significant governmental institution located in Benapole, a town situated in Jessore District, Bangladesh, near the border with India. It serves as a crucial gateway for trade between Bangladesh and India, two neighboring countries with significant bilateral trade ties. BCH holds the distinction of being the largest land port in Bangladesh. It plays a pivotal role in facilitating cross-border trade and ensuring compliance with customs regulations.

- BCH oversees the clearance of goods entering and leaving Bangladesh through the Benapole-Petrapole border checkpoint.



- BCH processes trade-related documentation, including customs declarations, car pass and transit permits.
- BCH plays a vital role in enforcing customs laws and regulations at the border. Customs officers conduct inspections, audits, and surveillance activities to prevent smuggling, customs fraud, and other illegal trade practices. They collaborate with other law enforcement agencies to maintain border security and integrity.
- BCH implements various trade facilitation initiatives aimed at streamlining customs procedures, reducing clearance times, and enhancing trade efficiency at the border.

▪ **Customs Risk Management Commissionerate (CRMC):**

Customs Risk Management Commissionerate (CRMC) is a newly formed Commissionerate, yet to setup its permanent office premise. This Commissionerate will act as the central authority for implementing the automated risk management procedures to be implemented all over Bangladesh. As a part of NBR's commitment towards automation of the revenue administration, the risk assessment procedures are to be automated. For this reason, Customs Risk Management Commissionerate (CRMC) will play the pivotal role in risk management for all consignments and passengers crossing different borders of Bangladesh.

It is worth mentioning that, Customs Risk Management Commissionerate (CRMC) is an Information Technology (IT) based office. So, without any permanent establishment and infrastructure for CRMC, risk management related services might be disrupted. For this reason, permanent establishment and IT infrastructure is essential for uninterrupted operations of CRMC. In this backdrop, Customs Risk Management Commissionerate (CRMC) office must be well equipped to accommodate a central data depository to work as the data hub for different risk related data coming from different sources and shared with different offices; an I-TOC center where real time scan images of consignments and passengers from different ports will be analyzed using artificial intelligence, to detect the risky consignments and passengers; a coordination center to coordinate with local risk management units situated at different ports and land customs stations; a server room for the servers to run the customized risk management software that is going to be purchased under the National Single Window project; and 5 (five) vehicles for fast communication (the existing organogram has the provision for 5 cars).

The data hub will act as the central data depository for all risk related data. This depository should have facilities for both cloud storage and physical RAID (redundant array of inexpensive disks) system. This center will have the LAN (local area network) facilities, server systems and other infrastructural setup.

The I-TOC center is the central monitoring zone for analyzing the scan images fed directly from different scanners located in different custom houses, ports and land stations. This center will work as the core of the monitoring system for identification of risky cargoes and passengers. This I-TOC center will have large monitoring screen, powerful server systems and internet connections. For the proper operation of this I-TOC center, customized software would be necessary. Such software system would incorporate the artificial intelligence (AI) for automation identification of risky

consignments and cargoes. Majority of the expenses will be incurred for the development of this I-TOC center.

At the time of inception of Customs Risk Management Commissionerate (CRMC), an initiative was taken for land acquisition. Later, Customs Risk Management Commissionerate (CRMC) was granted permission to set up an office spanning 20,004 square feet. Initiatives have been taken to accommodate Customs Risk Management Commissionerate (CRMC) in the second building of the NBR. Before that, the office could be run in a rented premise.

2. The Objective of the Assignment

The main objectives of the consulting services are to obtain all engineering and quality assurance services spanning from feasibility studies to detail Conceptual design studies, as well as the corresponding cost analysis for Implementing the infrastructural and capacity development of DCH, BCH and CRMC.

3. The Scope of the Assignment

3.1 Feasibility Study

3.1.1 Stakeholder Consultations

The Consultant shall make in-person consultations, either in groups or individually, with the relevant government officials, traders and service providers so that their legitimate requirements could be accommodated in the development Conceptual plans.

The consultant shall also explore the adequacy of existing cross-border data exchange mechanism and consult the stakeholders on the requirements for additional data exchange protocol between the customs or port authorities of India and Bangladesh for efficient customs clearance.

3.1.2 Preliminary Baseline

Assemble a preliminary baseline for each facility's site, including but not limited to the following:

For DCH and BCH:

- a. Conduct topographical/ Geotechnical survey (Soil test) , covering the existing customs house, port and future extension area and connecting transportation corridors, which can Install permanent benchmarks at a spacing not more than 200 m from each other.
- b. Produce topographical & Digital map of surveyed area with contour interval of 100 mm showing all the natural and manmade features.
- c. Collect available geological, geomorphological, and geotechnical maps. Analyze the geological condition including seismicity and associated hazards of the proposed locations.
- d. Collect climate condition baselines such as rainfall, drainage pattern, humidity, temperature and visibility and analyze these conditions.
- e. Take an inventory of all standing trees.



- f. Determine the area of inundation and corresponding water level for year with average precipitation and 50-year maximum precipitation. Identify and determine the extent of disaster risk relevant to design (cyclone, sea level rise, earthquake etc.) for the next 50 years.
- g. Characterize the existing land use within the area of influence of the port.
- h. Identify and describe the known Physical Cultural Resources (historical, religious, or architectural) as well as socially sensitive areas like schools, shrines, graveyards within and adjacent to the area to be developed.
- i. The Consultant is expected to clearly identify and map the roles and processes for every agency in general and by customs staff in particular at Dhaka air port and Benapole land port.
- j. Evaluate the functional requirement for the last 5 years together with number of user and number of Officer in each functional space to get the space requirement for the specific function in the next 50 yrs.

For CRMC:

- a. Conducting required survey, covering the existing office space, infrastructural facilities, future extension requirements and required connectivity with different customs houses and land custom stations.
- b. Identifying the future space requirement and capacity development initiatives.
- c. Producing a conceptual design for the National Risk Targeting Center (NRTC) / Integrated Targeting operation center (ITOC) that would be used as the central hub for monitoring and analyzing real time scan image feeds coming from different ports, covering both passengers and consignments.
- d. Developing a conceptual design for the data center that would work as the central depository for all risk related data and information. Such a depository should have the facilities to provide real time risk analysis and raise flags.

3.1.3 Traffic Studies

- a. Assess the parking space being used by goods vehicles waiting for the formalities, passenger vehicles used by customs staff and visitors and taxi (used by customs agents, freight forwarders, other service providers, etc).

3.1.4 Economic Appraisal

The Consultant will be expected to undertake a comprehensive economic evaluation of the proposed alternatives to ensure the identification and selection of the most economically efficient options, and the optimal implementation schedule for any subsequent physical works. This activity is expected to require the following activities:

- a. Estimation of the economic internal rate of return (**EIRR**) and the net present value (NPV) for all identified alternatives, compared to an identified “do- minimum” alternative using a standard

cost/benefit methodology, a 25-year appraisal period, and a 6 per cent discount rate. Costs and benefits should be expressed in constant prices (to a defined base year price), but growth in the real value of time should be included;

- b. Economic costs and benefits should be shadow-priced as appropriate to reflect local conditions, e.g. labor costs, value of time, vehicle costs and maintenance practices. Account should also be taken of the estimated mitigation costs identified as necessary in the Environmental and Social Impact Assessment;
- c. The assessment will include costs of any land and property that must be expropriated. The Employer will assist the Consultant in securing information on prevailing compensation rates for land and the different types of buildings, if necessary;
- d. The possibility of alternative design standards, limited road realignments, different improvement options, and staged construction should be investigated, taking into consideration construction and maintenance costs and relevant economic rates of return; and
- e. The Consultant will carry out sensitivity analysis on the parameters that are estimated with the greatest uncertainty and calculate the key switching values for critical parameters.

3.1.5 Required outputs

- a. A Conceptual Master Plan, including the Functional Program requirement for the infrastructure of Dhaka Custom House, Benapole Custom House and linked infrastructure including last mile connectivity needs such as access roads, ports, etc. The Conceptual Master Plan should show all the necessary requirement information about infrastructure, equipment and service lines.
- b. A Conceptual Master Plan for Customs Risk Management Commissionerate (CRMC) and linked infrastructure including all required connectivity needs such as NRTC/ ITOC, data depository etc. The Conceptual Master Plan should show all the necessary requirement information about infrastructure, equipment and service lines.
- c. Development of 2 number of alternative Detail Conceptual plans for DCH, BCH and CRMC, assess the different possible options and determination of the best options.
- d. Feasibility reports with a content and format acceptable to the Employer and the World Bank.
- e. Cost estimates for execution and cost-benefit projection/analysis, including economic analyses and sensitivity analyses.
- f. Preliminary project implementation plans including Green Building construction technology considerations.
- g. All Green Building related considerations, following international Green building standards as- LEED etc. to be considered while designing & costing of the project.

3.2 Conceptual Design

3.3.1 Preliminary tasks

- a. Divide the area surveyed in 5m x5m grid and determine the coordinates (x, y, z) of the corners of the grid with additional levelling survey.
- b. Cadastral survey where acquisition of land is necessary for carrying out the improvement works.
- c. Preparation of existing site inventory and identification of the rehabilitation of the public utilities.
- d. Adequate Geological /Geotechnical investigations including 10 m deep boreholes at 5 m spacing for foundations of building over 3 stories, pitting (1m x 1m x 2m) with DCP test at isolated footings of buildings 3 stories and under, pitting (1m x 1m x 1m) with DCP test at 50m spacing for yards and parking area. Soil samples from all the boreholes and pits shall be tested at recognized laboratory to determine the bearing capacity and other required parameters.
- e. Construction material survey to identify the source, quality and quantity of the Sustainable construction materials and location of the borrow pits and the quarries.
- f. Hydrological consideration of the site, to determine the different hydrological parameters for climate resilient design of the proposed Sustainable infrastructure.
- g. Conceptualize how the buildings and other structures will be developed as green, sustainable infrastructure. As a minimum, the broad sustainability areas of focus would be - energy efficiency, waste and pollution reduction, preserve water, use of renewable energy, resilient against natural disaster and have a longer life span, following all the regulations of International standards as LEED etc.

3.3.2. Conceptual Master Plans

Prepare Conceptual masterplans considering all the present and future use of the DCH, BCH and CRMC with preliminary requirements (building with rooms for different purpose, parking area for vehicles for diverse purposes, security arrangement, water supply, electrification, management of waste water and garbage, water retention area, boundary walls, toilets, canteen and cooking facilities, staff quarters and other utility buildings) including alternative/ options of Conceptual designs for comparison purposes.

3.3.3. Designs and Drawings

1. Component-1: Detail Conceptual Master plan Design and drawings preparation of 3D;
 2. Component-2: geo-technical investigation including required Functional program development for Sanitary/Plumbing, Electro-Mechanical and Acoustic Design, IT design, Communication plan, Landscape design, Conceptual Sustainable design component;
 3. Component-3: Cost Analysis/ Budget Preparation of the total Project Implementation;
 4. Component-4: Conceptual Time Schedule Preparation for the Implementation Period.
- a. The Conceptual Masterplan design & cost Analysis shall adhere to all the relevant standards approved by the Government of Bangladesh, and should give due consideration to the following aspects, and:
 - Economy in construction and maintenance without compromising on required functionality.
 - Monitoring by CCTV network and a security system;

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- LAN based secure data transfer system as a backbone for internal communication and communication with land port authority, quarantine authorities, immigration, police and other relevant government agencies;
- Electronic communication with the customs and port authorities on the Indian side;
- Decent and comfortable working spaces for all users;
- Aesthetic and fitting into the landscape;
- Needs assessment for essential furniture and equipment;
- Accessible to users with disabilities.
- Consider special requirements of the female staff and visitors, including toilet facilities for women, women-only waiting rooms and service counters, as appropriate.
- **CUSTOMS MODERNIZATION Component**

To include the following modernization components within the conceptual masterplan & Budget.

- A. SPEED (System for Processing Express Entry Declaration) for Express Service Modernization and Digitalization System which includes Parallel Customs Computer System for Express Shipment (Express Service) existing around 50 ESP (Express Service Provider) and in future ESP Licensee, their functions, activities, scope, responsibilities, monitoring report generation, integration with ASYCUDA (Automated System for Customs data), NSW (National Single Window), ARMS (Automated Risk Management System), Bond Management System and existing all other systems.

Functions: Submission of Cargo Declaration (Manifesto Declaration), Goods Declaration (Bill of Entry Submission), Assessment, Electronic Payment and Goods Release, Integration of ESP with the System.

- B. Integrated Detained Goods Management System (DGMS)

Functions: Detained Goods through DM (Detention Memo), Adjudication Process i.e, entry in DM software, issuance of show-cause notice, hearing, adjudication orders, disposal of detained goods (release, return, auction or handover to other departments like HPMO (High Excellency Prime Minister's Office Relief fund, DNC (Drug and Narcotic), BPC (Bangladesh Parjatan Corporation), management of uncleared goods and auctionable goods, valuable goods (Gold, Currency, Other precious metal) and other Goods, auction, upgradation and digitalization of warehouse at Hazrat Shahjalal International Airport including transit warehouse and central warehouse of Custom House, Dhaka.

- b. All the Conceptual design works must follow applicable requirements, norms and standard code of practices on buildings, pavements, sanitation, electrification, communication, firefighting, etc. as required in Bangladesh with regards to use, flooding, fire hazard, high winds and earthquakes. The designed structures should be climate resilient.
- c. The buildings and structures have to be designed as disaster resilient and green buildings. The Consultant should explore the reputed green building certifications (e.g. BREEAM, LEED, EDGE,

CASBEE etc.), compare suitability considering the customs houses and CRMC location context and make specific, attainable proposals. The consultant will advise the client with selection of the appropriate green building certification, the level it would achieve, and costing analysis (life cycle) for every incremental level of certification. Upon concurrence, the green building standards will be incorporated and demonstrated in design, cost analysis and detail design prepared by the Consultant.

- d. Based on construction norms and standard unit rates applicable, Conceptual summary cost estimate shall be prepared. For work items not reflected in government approved norms and standard unit rates, cost analysis shall be made to derive appropriate unit rates.
- e. The Consultant shall furnish the important documents, Conceptual design reports, drawing and other necessary information in the format acceptable to the Employer in soft copies.
- f. Prepare Implementation work schedule in compliance with GoB standard specifications for related works or acceptable international standards. The specification document shall cover each of the BOQ items, possible source of material, details of quality assurance and quality control tests, method of measurement and payments as well as appropriate penalties for non-compliance.
- g. The consultant shall be responsible to supply all the required information regarding obtain municipal approval and approval on the development plan from concerned agency.

3.3.4. Preparation of Preliminary Cost Analysis

- a. On the basis of the Conceptual Masterplan design and incorporating all relevant environmental and social mitigation measures identified in the ESIA/ESMP the Consultant shall prepare Preliminary Cost Estimates of the construction works with sufficient accuracy for the proposed development under Phase-1, considering the latest PWD Schedule of rates.
- b. For the purpose of comparing the cost estimates, the Consultant shall prepare an estimate based on prevailing prices of key items, like – structural, Architectural etc. The Employer will provide necessary assistance in approaching authorities to collect such item rates of the similar works also consult will finalize this estimate as per existing market trend for green building materials .
- c. The Consultant shall make the preliminary cost Analysis appropriately for the works in close consultation with the Employer.

4. The Expected Inputs

4.1 Duration of Services

The services to be rendered, are:

- a. Feasibility Study: 3 months
- b. Detailed Conceptual Design and cost analysis: 6 months



4.2 Qualification of the consultant

The broad qualification of the individual consultant is given below. The responsibilities shall be assigned by the Consultant to complete all the deliverables in a professional manner. The individual consultant can add team members, as required to complete the above scope of work.

INDIVIDUAL CONSULTANT QUALIFICATION

- Education: 5 years Bachelor in Architecture, preferably international accreditation, Sustainable Practice, Construction Management, or related field; relevant trainings and Member of local Professional Institute.

Experience: 15 years in designing and supervision of Highrise Building with 5 years as Team Leader of multidisciplinary team of experts in design and supervision package. Experience as Team Leader for Detailed Design & Cost analysis Document preparation of infrastructure of any Govt Division is preferred.

5. Reporting Requirements

Reporting shall be as follows:

Key Activities	Timing	Reporting	Delivery Conditions
Mobilization, Data/report collection, desk study, detailed scheduling of activities and preparation of inception report	4 weeks from Start Date	Inception Report	5 hard/ 1 soft copy; including a presentation at the Employer's office
Summarization of monthly activities	1st week of each consecutive month	Monthly Progress Report	5 hard/ 1 soft copy
Feasibility Study and development of Preliminary Master Plan	3 months form Start Date	Feasibility Study Reports and Conceptual Master Plan	<ul style="list-style-type: none"> 5 hard/ 1 soft copy; including a presentation at the Employer's office on draft reports 5 hard/ 1 soft copy of the final report within 2 weeks of the presentation and addressing

			comments received on the draft report
Cost Analysis	9 months from Start Date	Detail Conceptual Design Report & Drawings, Preliminary cost of implementation.	<ul style="list-style-type: none"> ▪ 5 hard/ 1 soft copy; including a presentation at the Employer's office on draft reports ▪ 5 hard/ 1 soft copy of the final report within 2 weeks of the presentation and addressing comments received on the draft report

Note:

- Presentation and Deliberation on the Reports at the Employer's office: Within 3 working days of the submission of the report at each stage as shown in above table. The Consultant shall submit the minutes of the meeting with proposed modifications in the report to the Project Coordinator within 48 hours for review and comments. The Employer shall provide their comments within 7 days of the submission of the minutes.
- The awarded consultant can take support from a special team consisting of a group of experts in preparing the study report. The team may consist of Architects, Civil Engineer (Structural Engineer), Environmental Specialists, Economists/Financial Analysts, Traffic Engineers, IT Specialists, Quantity Surveyors, Legal Advisors, Sustainability Experts, Mechanical Engineers, Electrical Engineers, Geotechnical Engineers, Urban Planners.

6. Management of the Assignment

The Employer for the assignment will be NBR. The assignment focal point will be the Project Director, Customs Modernization and Infrastructure Development (CMID) Project. The general obligations are as follows:

6.3. To be provided by the Consultant

During the study, the Consultant shall provide all the facilities for their staff and other logistical requirements on their own to fulfill their obligations. These will also include support staff and office facilities, office equipment and supplies, required equipment and materials for field data collection, vehicles, and communications as required. The Consultant will set out the phase wise requirements in the technical proposal and provide the financial cost estimates for these in their financial proposal.

6.4. To be provided by the Employer

The Employer will provide the Consultant with all available studies and reports and data relevant to the services. The Employer will provide access to the existing facilities and information required for the study and provide assistance where the Consultant, for the purpose of executing these services, needs to coordinate with other Government agencies, and other stakeholders.

