

DEENDAYAL PORT AUTHORITY



"Modification and Strengthening of South Wharf along- with Backup Area at Bunder Basin".

**Executive Engineer
HARBOUR DIVISION**

**Deendayal Port Authority
Nirman Bhavan, 1st Floor
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SCOPE OF WORK

The broad scope of work to be carried out by the Technical Advisor is as under :

1. Project Outline of scope of activities

DPA is proposed to Modify and Strengthen the South Wharf along-with Backup Area at Bunder Basin for cargo transshipment services. In this regard, DPA requested to carry out the following major activities to be involved in the project.

- a. Technical Advisor shall visit the site and conduct detailed survey of the site for preparation of report and design etc., Conditional assessment of the existing berthing structure including existing underneath soil slope etc., investigations, block estimate for repairs and up-gradation, To suggest suitable alterations for strengthening of the structure of existing wharf in order to increase load carrying capacity of the structure and strengthening required for increasing the life of the structure to carry suitable handling equipments. Technical Advisor shall also submit the modus operandi for execution of proposed additions & alterations, Technical Advisor before submission shall make Power Point presentation of detailed designed basis report along-with various alternatives methods of strengthening the existing structure with approximate cost of each alternatives before the Competent Authority and Pre-tender design, submission of design basis, typical design calculation, any structural modeling details, drawings, BoQ and cost estimate.
- b. Preparation of Design and detailed working Drawings (GFC) for execution, Preparation of Estimates & Detailed Technical specifications, Preparation of Tender Documents and Carry out tender evaluation for Award of work to successful Contractor.
- c. Monitoring / supervision of work till completion.

2. Details of existing South Wharf Facility at Bunder Basin

Enclosed South Wharf Completion Drawings for reference

3. Scope of work Description

- a. Detailed Design and Drawings for execution

- i. DPA may make available the report of Geo-technical investigation carried out in the vicinity, if available and data in respect of tide, wave, current and bathymetry, if available. Any additional data if required by Technical Advisor shall be worked out / arrived by him with the help of already available data or by any other suitable method at his own cost.
- ii. Technical Advisor shall undertake Geo-technical investigation study including bore-holes of required depth, depth below bed level and required lab test for Berthing Structure. If required technical advisor may assign this job to get done through expertise agency.
- iii. To interact with officials of various departments of Port like Marine Department, Mechanical Engineering Department, Traffic Department etc. and take note of their requirements and incorporate the same in the proposals.
- iv. Carry out detailed structural analysis of the existing berth structure and mooring loads from vessel.
- v. Carry out structural analysis and design RC Platform and Piles.
- vi. Prepare Design basis and reports.

b. Preparation of Estimates & Detailed Technical specifications.

- i. Prepare bill of quantities for item rate contract and abstract.
- ii. Prepare rate analysis based on DPA manual and prevailing market rates for items which is not available with the DPA SOR.
- iii. Prepare Project Cost estimate
- iv. Prepare specifications for the RC works, Piles, Pile muff, Beams, shore protection, mooring works and other miscellaneous items.

c. Preparation of Tender Documents.

- i. Preparation of Tender Document as per Model Tender Document
- ii. Prepare scope of work for items in the facility.
- iii. Preparation of scope of works, milestone payment schedule
- iv. Estimation of Construction schedule and equipment requirement
- v. Tender forms and annexures as per DPA standard tenders

d. Carry out tender evaluation for Award of work to successful Contractor.

- i. Prepare Technical Bid evaluation report.
- ii. Prepare queries to be sent to the bidders.

- iii. Prepare Commercial Bid evaluation report.
- iv. Assist in preparing Letter of intent, award letter to be issued to successful bidder.
- e. Monitoring / supervision of work till completion.

The Technical Consultant has to depute competent graduate civil engineer having minimum 05 years experience of Marine Works on work site on full time and round the clock basis for the entire contract period to perform the following tasks after award of work.

- i. Review of Contractors submission for design drawings, materials, and construction methodology.
- ii. Review of Contractor design components, if any.
- iii. Review and approve Contractor's drawings for construction.
- iv. Solutions to the practical problems encountered during execution of work and furnish Advise Solicited, if any during the execution of work.
- v. Respond to queries during construction and revise drawings to suit the field changes if any.
- vi. Prepare daily, weekly, and monthly reports.
- vii. Organize progress review meetings.
- viii. Attend clarification meetings during construction with DPA and contractor.
- ix. Provide day to day site supervision for quality assurance of execution of works.
- x. Coordinate contractor's activities provide weekly report to DPA on progress.
- xi. Certify bill of quantities and interim bill from the contractor.

4. Deliverables

The time period for the providing Technical services for the work of "Modification and Strengthening of South Wharf along-with Backup Area at Bunder Basin" shall be 24 months or till completion and handing over the entire work to DPA. If completion of the work is extended beyond its schedule date of completion, the contract period of the Technical Advisor shall be automatically get extended, but no compensation shall be entertained for the said period except task mentioned at Sr. No. 1 (c) i.e. Monitoring / supervision of work till completion.

- Design Basis document
- Structural Analysis Report

- Design of RC platform and shore protection
- Specifications for work elements such as RC works, bollards, fenders etc.
- Good for Construction Drawings
- Scope of works for tender.
- Bill of quantities and Rate analysis
- Cost estimate
- Construction schedule
- Tender Documents
- Progress monitoring reports

5. Consultancy Fee

Sr. No.	Reference to Particulars Clause	Unit	Rs. in Figures	Rs. in words
1 (a)	Technical Advisor shall visit the site and conduct detailed survey of the site for preparation of report and design etc., Conditional assessment of the existing berthing structure including existing underneath soil slope etc., investigations, block estimate for repairs and up-gradation, To suggest suitable alterations for strengthening of the structure of existing wharf in order to increase load carrying capacity of the structure and strengthening required for increasing the life of the structure of carry suitable handling equipments. Technical Advisor shall also submit the modus operandi for execution of proposed additions & alterations, Technical Advisor shall make Power Point presentation of detailed	Lump Sum		

	designed basis report along-with various alternatives methos of strengthening the existing structure with approximate cost of each alternatives befor the Competent Authority and Pre-tender design, submission of design basis, typical design calculation, any structural modeling details, drawings, BoQ and cost estimate.			
1 (b)	Preparation of Design and detailed working Drawings (GFC) for execution, Preparation of Estimates & Detailed Technical specifications, Preparation of Tender Documents and Carry out tender evaluation for Award of work to successful Contractor.	Lump Sum		
1 (c)	Monitoring / supervision of work till completion (After award of Work Order to the Contractor).	Per Month		

Note : The employer reserves the right to terminate the consultancy Services at any stage if the project does not proceed or performance of the consultant is not found satisfactory and employer shall not pay for the remaining stages.

**Technical Advisor
Stamped & Signed**

**Executive Engineer (H)
Deendayal Port Authority**