

**BUDGETARY OFFER**

**Name: Consultancy services for preparation of Feasibility cum Detailed Project Report (DPR) for the Development of New Container and Multipurpose Terminals at Kandla.**

Description of Item	Unit	Amount (in Rs.)	
		In Fig.	In Words
Lump-sum charges for Consultancy services for preparation of Feasibility cum Detailed Project Report (DPR) for the Development of New Container and Multipurpose Terminals at Kandla as specified in <b>Annexure-B</b> (The rate quoted shall include expenses of stationary, postage and payment of fees to professionals, experts etc.) including of conveyance & subsistence incurred by the Advisor or his authorized representative during visit of Kandla/MoPS&W. The rate quoted shall be exclusive of GST.	<b>Lump Sum</b>		

**Signature of Technical Consultant with seal**

**Executive Engineer (C-I)  
Deendayal Port Authority**

**Consultancy services for preparation of Feasibility cum Detailed Project Report (DPR) for the Development of New Container and Multipurpose Terminals at Kandla**

**1.0 INTRODUCTION**

Deendayal Port (erstwhile Kandla Port) is a protected natural harbour situated in the Kandla Creek in Gujarat, 90 Nautical Miles from the mouth of Gulf of Kachchh on the West Coast of India. It is portal to the West and North India and enjoys locational advantage with vast hinterland of 1 Million Sq. Km. consisting of States of J&K, Punjab, Himachal Pradesh, Haryana, Rajasthan, Delhi, Gujarat and part of Madhya Pradesh and Uttar Pradesh.

Ports play a key role in economic development by handling both domestic coastal and export-import traffic. Deendayal Port is the nearest among all Major Ports in India to the vast hinterland it serves through well connected four-lane road network of National Highways as well as Broad Gauge Railway linkage.

Presently, the Port has fourteen dry cargo berths for handling general & breakbulk cargo traffic, two berths for handling container cargo, Seven oil jetties for handling POL products and other liquid cargo traffic at Kandla within Kandla Creek, one Offshore Terminal at Tekra for handling dry bulk cargo, and three Single Buoy Mooring (SBM) & two product jetties at Vadinar for handling crude oil.

Deendayal Port Authority (DPA) has initiated action to Development of New Container and Multipurpose Terminals using the 6.0 km available water front on the west side of the Kandla creek entrance. The project shall be developed under PPP mode with suitable VGF support.

**2.0 SCOPE OF WORK.**

The main objective of the Consultancy Services is to prepare a Techno Economic Feasibility cum Detailed Project Report for the Development of New Container and Multipurpose Terminals (which includes but not limited to Dry cargo, Liquid cargo, facilities) at Kandla by firming up with more details, which will be a standalone base document for planning the project, taking investment decision, getting approvals and implementation.

The scope of consultancy services / Terms of References (TOR) shall include but not necessarily be limited to the following activities: -

- 2.1** The Advisor/Consultant shall carry out the Site visit & undertake a detailed reconnaissance survey and conduct meetings with port officials to get a clear idea about the project. Review of all available reports and information about the project and the project influence area if available. Any additional data if required by Consultant shall be worked out / arrived by him with the help of already available data or by any other suitable method at his own cost.

**2.2** Review the available traffic study report as well as Carry out the detail studies for Traffic Gap Analysis for the proposed Facilities. To evaluate & workout detailed projection of traffic in terms of Cargo as well as vessels for the project. The analysis for forecast traffic should be done year wise basis. Further a detailed rationalise methodology undertaken for evaluation for traffic project should be also detailed out. Also, study & analyse market trend, global scenario and various Port facilities existing at the nearby Ports developed along the Coastline or likely to be developed on the existing Port, servicing the same hinterland.

### **2.3 Carry-out Engineering Surveys and Investigations**

2.3.1 Topographic Survey; Carryout topographic survey in the proposed Port area. This will basically include (i) Proposed back-up area (ii) Road & Rail connectivity from proposed back-up of berth/Terminal location to existing road / rail network at Kandla/Tuna Area.

2.3.2 Geotechnical Investigations: (Boreholes) Geotechnical Investigations, preferably in the form of bore holes and collection of subsoil data, are required for planning and designing marine structures, pavement design, buildings, road/rail corridors. In case of dredging works, the numbers& arrangement of boreholes shall cover all dredge areas and the testing of samples, analysis and classification of soil.

### **2.4 Port Detail Design and Engineering**

2.4.1 Design Criteria Firmed up Traffic Estimate with Phases, Design vessels. Benchmarking & capacity calculations of berths which are inputs for planning the layout, design of structures and fixing depth for dredging works.

2.4.2 Port layout Planning the configuration of the Port layout, positioning and alignment of components like berth structures, operational areas, Harbour basin & manoeuvring (turning) circles, approach channel, road & rail connectivity etc. The proposed Port Layout shall be checked to ensure safe manoeuvring of ships, Sediment transportation studies etc.

- Berth structures: Planning & Design of berth structures including piles and super structure, reinforcement details, founding levels and preparation of connected drawings (longitudinal and cross sections).
- To analyse & establish the dredging level alongside the Project & its approach. To suggest the alignment for navigation channel.
- To analyse & establish the type of foundation & its founding level for the Project.
- To analyse & establish the handling equipment and the rated capacity.
- To analyse & establish the quantity & type of berthing aids. To analyse & establish the finished level of Berthing facilities & land development.
- To assess the requirement of Offshore & Onshore land requirement in line with the capacity of the Project.
- To analyse & workout the requirement of sweet water and suggest mode for economic availability of same. Also, to evaluate & establish the nearest suitable source of water &

electricity & quarry materials. To analyse and workout the route for supply of water and electricity.

- 2.4.3 Navigational Channel and Dredging Fixation of keel clearances for design vessels, depths of dredging in berth areas, Port basin & manoeuvring areas and approach channel, computation of dredging quantities with supporting calculations, dredging methods, details of reclamation /dumping grounds by matching the dredge quantity with reclamation quantity for economic optimization etc.
- 2.4.4 Port Crafts and Tugs: The consultant shall assess the requirement of Port crafts and Tugs required for the proposed facilities to perform the various marine related activities
- 2.4.5 Operational areas/ Stack yards / Storages Layout of Operational areas, Stack yards, ground slots and stacker arrangement for containers and other Multipurpose cargoes including storages cargos, design of terminal pavements, and foundation for equipment's and buildings, receipt and delivery areas.
- 2.4.6 Utilities and Utilities Corridor: Basic calculations and drawings, including general arrangements and typical cross sections of all internal road and intermodal yard, water supply (including quantity and source), electrical power supply (including quantity and source), sewerage, rain water drainage system, lighting, fire fighting and communications. A separate corridor for these may also be planned taking into consideration future developments.
- 2.4.7 Port Complex / Buildings. Basic design and drawings of the Port buildings, including Parking areas, and architectural views of main buildings.
- 2.4.8 Cargo Handling Equipment's Planning & design of container & Multipurpose handling equipment's, Container yard and Intermodal yard handling equipment's, etc including broad specifications.
- 2.4.9 Planning of Road and Rail Connectivity; Modal Split of cargo through rail / road mode, No. of Railway sidings and No. Of road lanes. To analyse & establish the shortest and economical road & rail connectivity of project facility with existing nearby main road & railway route.
- 2.4.10 Based on the above analysis & studies, work out and establish the most ideal, Technically, economically and environmentally suitable alignment of the proposed Berthing facilities & allied facilities.

## **2.5 Environmental And Social Impact Assessment**

- 2.5.1 The Employer has already appointed Environmental Advisor to prepare EIA/EMP Study, CRZ Mapping and all connected documents and reports required for Environmental /CRZ Clearances and assist the Port in obtaining Environmental Clearance going through steps /procedures prescribed by MoEF&CC. The assistance and coordination if required in the process of obtaining Environmental /CRZ Clearances or approvals from various regulatory bodies at State level and National level shall be provided by the consultant.

2.5.2 Social Impact Assessment: The Consultant shall undertake social impact assessment due to the improvements such as Port Layout, Road and Rail connectivity and other related facilities proposed on the Project.

**2.6** The Techno-Economic feasibility Report shall also include the followings but not limited to: -

- i. Executive Summary: - A brief summary covering all aspects of Techno Economical Feasibility Report.
- ii. Introduction
- iii. Past performance of the Port
- iv. Estimation of capacity of project facility including Traffic Projection with detailed evaluation and rationalised analysis.
- v. Project description in detail.
- vi. Project implementation: - Analysis and workout in details various activities for implementation of the project and activity-wise time period to ascertain the entire realistic time period for implementation of the project as whole. This also include the CPM chart.
- vii. Requirement of staff for implementation of the scheme:- To analysis & workout category-wise / designation-wise the requirement of staff for implementation of the project including evaluation of amount.
- viii. To analysis & work out direct and indirect employment may be generated with implementation of the Project facility.
- ix. Operation & Maintenance (O&M) cost:- The O & M cost shall include but not limited to cost towards:
  - (i) Water, Power & Fuel requirement
  - (ii) Maintenance Dredging requirement
  - (iii) Maintenance & Civil structure
  - (iv) Operation & Maintenance of Mechanical equipment.
  - (v) Operation & Maintenance of Electrical Equipment's
  - (vi) Administrative & Management cost.
  - (vii) Operation & Maintenance of Tugs & Launches for Pilotage & berthing of Vessels.
  - (viii) Operation & Cost for any other facilities required for implementation of the Project facility
  - (ix) Capital Cost in form- "Quantity, Prevailing Market rates, Unit, Amount & Remarks".

If requires, the Rate analysis for the Rate considered for particular item(s) should also be submitted by the Advisor. The content of capital cost shall include but not limited to

- a. Cost of Berthing structure & mooring aids with approach trestle.
- b. Cost of Road & Rail connectivity
- c. Cost of Dredging

- d. Cost of development of land development, Backup area/ storage area including ground treatment, if required.
  - e. Cost of cover storage with fencing
  - f. Cost of handling equipment
  - g. Cost of electrification include illumination, transmission lines etc
  - h. Cost of Water supply & firefighting system
  - i. Cost of Environment measures
  - j. Cost of Studies & Investigation.
  - k. Cost of any other facilities required for implementation of the Project facility
- x. Viability Analysis – This shall include but not limited to Financial and Economic Benefits, Net Present Value, analysis of cash flow, phasing of expenditure. The Financial and Economic Viability Analysis with Assessment of Financial Risk and its impact.
  - xi. Revenue/ Return from the project.
  - xii. To establish & detailed out rationalised & detailed justification towards setting up the Project.
  - xiii. Identify the studies / Investigations required to be carried out for further course of action
  - xiv. Identify the statutory approvals/ clearances, if any required for setting up the facility.
  - xv. To analyse and establish all requisite allied facilities required for operation of the Project which includes but not limited to Container Freight Station, Godowns, warehouses, etc.
  - xvi. Evaluate and prepare project structuring, implementation scheduling and selection of suitable PPP framework including short term and long-term measures.

NOTE: 1 It is envisaged that the project may be developed by the Port on PPP mode. Hence, the operation & maintenance cost (OPEX) and capital cost (CAPEX) of the project should be in consonance with the guidelines issued by Tariff Authority of Major Ports (TAMP)/Competent Authority from time to time for PPP Projects.

- 2.7 After establishing the layout of Berthing Facility, make a presentation in presence of Port Officials for discussions.
- 2.8 After preparation of draft Techno-Economic feasibility report make a presentation in presence of Port Officials for discussions.
- 2.9 Based on the suggestions/comments/observations of the Port on Draft Report to frame final Techno-Economic feasibility report.

**3.0 General Terms & Conditions are as under:**

- i. To interact with officials of various departments of Port like Engineering Department, Marine Department, Mechanical Engineering Department, Traffic Department, Finance Department etc. and take note of their requirements and incorporate the same in the proposals.
- ii. The Contract period / time limit for entire Job completion will be for a period of 6 months from the date of commencement of Work.
- iii. The Lodging and Boarding arrangement for the Entire staff / Key personnel of the Consultant, for the entire Contract period, shall be the responsibility of the Consultant at his own risk and cost.
- iv. The Consultant shall work by complying with all laws, rules, regulations guidelines that govern the contract.
- v. The Advisor should provide a detailed description of the resources that will be applied to the assignment, especially adequately experienced key personnel, capable of and devoted to the successful accomplishment of work to be performed under the contract.
- vi. DPA may close the assignment at any stage for which further no payment will be made.

**4.0 Deliverables:**

The overall schedule for the completion of the scope of work is 6 Months.

1. **Task-I** : Submission of Inception Report: Site inspection & Interaction of Port Officials, collection of available data and Submission of Inception Report showing preliminary report with approach & Methodology.  
(Within 10 days after date of commencement of Work)
2. **Task-II**: Submission Report of Topographic Survey, Geotechnical Investigations including collection of Soil and all Field study data etc.  
(Within 3 Months after date of commencement of Work)

- 3. Task-III:** Submission of Report on Planning and Detailed Design/Engineering of Port Layout including Dredging parameters, Berths (Cargo Terminals), Marine Structures on the basis of firmed up Traffic forecast and social impact assessment.  
(Within 4 Months after date of commencement of Work)
- 4. Task-IV:** Submission of Draft Final Feasibility cum-DPR covering all the aspects as per TOR/Scope of Work, Executive along with Draft PIB Memo, Draft PPPAC Memo etc.  
(Within 1 month after approval of Task-III Submission.)
- 5. Task-V:** Submission of Final Report updated based on feedback on draft report from the Authority.  
(Within 1 month after approval of Task-IV Submission.)

## Annexure-C

- **Location:** The location on for the development of new berths has been proposed on the west side of the entrance of the Nakthi creek, Kandla as shows below;

