



**Irrigation Department
Government of Sindh, Pakistan**

World Bank

SINDH BARRAGES IMPROVEMENT PROJECT

IDA CREDIT 62420

RFB No: PK-AFOF SBIP-98666-CW-RFB

Contract: SBIP/S4

**Rehabilitation and Modernisation
of Sukkur Barrage**

**Package-4:
De-Silting of Rice Canal in
Head Reach (RD 0 to 82.4)**

Bidding Documents

**Volume 4
Site Data**

May 2023

Overall Content of Bidding Documents

PART 1 – BIDDING PROCEDURES

VOLUME 0 – BIDDING PROCEDURES

Section I - Instructions to Bidders (ITB)

This Section provides relevant information to help prequalified Bidders prepare their Bids. It is based on a one-envelope Bidding process. Information is also provided on the submission, opening, and evaluation of Bids and on the award of Contracts. **Section I contains provisions that are to be used without modification.**

Section II - Bid Data Sheet (BDS)

This Section includes provisions that are specific to each procurement and that supplement Section I, Instructions to Bidders.

Section III - Evaluation and Qualification Criteria

This Section specifies the criteria to determine the Most Advantageous Bid.

Section IV - Bidding Forms

This Section includes the forms for the Bid Submission, Bill of Quantities, Schedules of technical proposal, including technical and financial qualifications, personnel, financial resources, and equipment, Bid Security and others to be completed and submitted by the Bidder as part of its Bid.

Section V - Eligible Countries

This Section contains information regarding eligible countries.

Section VI - Fraud and Corruption

This Section includes the Fraud and Corruption provisions which apply to this Bidding process.

VOLUME 1 – BILL OF QUANTITIES

PART 2 – WORKS’ REQUIREMENTS [INCLUDED WITHIN VOLUMES 2, 3 AND 4]

Section VII - Works’ Requirements

This Section specifies the Scope of Works, Specification, the Drawings, and supplementary information that constitute the Works’ Requirements for the Works to be procured. The Works’ Requirements also include the environmental and social (ES) requirements (including requirements relating to Sexual Exploitation and Abuse (SEA) and Sexual Harassment (SH) which are to be satisfied by the Contractor in executing the works.

VOLUME 2 – SPECIFICATION

VOLUME 3 – DRAWINGS

VOLUME 4 – SITE DATA

PART 3 – CONDITIONS OF CONTRACT AND CONTRACT FORMS

VOLUME 5 – CONDITIONS OF CONTRACT AND CONTRACT FORMS

Section VIII - General Conditions (GC)

This Section refers to the “General Conditions” which form part of the Conditions of Contract for Construction (Second Edition 2017) published by the Federation Internationale Des Ingenieurs – Conseils (FIDIC).

Section IX - Particular Conditions (PC)

This Section includes particular conditions of the contract consisting of: Part A- Contract Data; Part B -Special Provisions, PART C – Fraud and Corruption; and PART D – Environmental and Social (ES) Reporting Metrics for Progress Reports. The contents of this Section supplement the General Conditions and shall be completed by the Employer.

Section X - Contract Forms

This Section contains the Letter of Acceptance, Contract Agreement and other relevant forms.

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1 Introduction

1.1 The Requirement

The Rice canal off takes from right side of Sukkur Barrage which is located about 225 air miles north east of Karachi in the Sindh Province of Pakistan. The Contractor is required to construct and complete in accordance with the annexed Conditions of Contract, Specifications and the Drawings, the works for Rehabilitation and Modernization of Sukkur Barrage, Package 4: De-Silting of Rice Canal in Head Reach RD 0 to RD 82.4, for the Irrigation Department, Government of Sindh, and Pakistan.

The principal items of works to be executed under the Contract are described in Volume 2 – General Specifications.

1.2 Aims and Objectives of the Document

This document collates existing data that is relevant to the rehabilitation and modernisation of Sukkur Barrage Contract SBIP/S4.

The data is provided for the Contractor's information only. The Contractor shall review and confirm the completeness and accuracy of the supplied data.

2 Site Description

2.1 Site Information

The following Drawings show the Site Information.

Drawing No.	Title
426054-SBIPIP-PIC-CL-S4-1001	Project Location and Major Transport Routes
426054-SBIPIP-PIC-CL-S4-1002	Sukkur Barrage Upstream and Downstream Areas
426054-SBIPIP-PIC-CL-S4-1003	Right Pocket River Training Works and Canal Head Regulators
426054-SBIPIP-PIC-CL-S4-1004	Sukkur Barrage Downstream Areas, Right Side
426054-SBIPIP-PIC-CL-S4-1005	Benchmark Details
426054-SBIPIP-PIC-CL-S4-1006	Monthly Climatic Data of Rohri Station near Sukkur Barrage
426054-SBIPIP-PIC-CL-S4-1007	Sukkur Barrage Inflows
426054-SBIPIP-PIC-CL-S4-1008	Rice Canal Head Regulator
426054-SBIPIP-PIC-CL-S4-1009	Map of area impacted by previous Anti-Encroachment-Drive (AED)

2.2 Location and Access

The Site area is located between co-ordinates 27°41'12.61"N, 68°50'45.00"E and 27°48'57.48"N, 68°38'42.41"E on right side of Sukkur barrage running adjacent to Indus River passing through the Sukkur city in its head reach. The distance from Karachi is about 480km by road.

The main broad-gauge railway line connecting Karachi to Rohri, is at a distance of about 4.5km by road from the barrage.

Roads on either side of the river connect the work site with the main railway line. The main access route will be the M5, N5 on the left side and N65 on the right side of the Indus River.

2.3 Site of Works

The Site of the Works is the section of Rice canal from RD 0 to RD 82.4 within the right-of-way lines, boundaries and limits shown on the Drawings. This reach of canal starts from barrage to Ruk complex near Ruk town.

The Site is subject to seismic disturbances, dust storms, floods in river, heavy rainstorms and insects and vermin are prevalent.

2.4 Climate

The Site is located approximately on latitude 27°north and the climatic conditions are those of a Semi-Arid region about 360km away from the sea. The mean maximum temperature in the vicinity of the Site remains above 30°C during May to September. The highest maximum temperature can reach 52°C during July. Minimum temperatures during winter seldom fall below the freezing point. The average temperature and rainfall data in the vicinity of the Site are shown on Drawings.

2.5 Discharges

The flows in Indus at Sukkur Barrage vary from low flows in winter to high flows in summer months of July, August and September, with high flood peaks.

The historical monthly average flows of Rice Canal, Dadu Canal and North-West Canal are shown in drawings.

2.6 Existing Services

A high-pressure gas pipeline crosses the canal at RD 16.2 and a railway line at RD 75 as shown in drawings. Photographs of both are provided below.

Photo 2.1: Gas Pipeline crossing (RD 16.2)



Photo 2.2: Railway Bridge (RD 75.2): upstream view (a) and (b)



Photo 2.3: Railway Bridge (RD 75.2): downstream view (c) and (d)



2.7 Contractor's Camp / Anti-Encroachment Drive (AED)

The RoW of canal from RD 0 to RD 40 is restricted by World Bank being impacted by Anti Encroachment Drive. As such the contractor shall not establish his camps within this reach, or use it for any other purpose – temporary or otherwise. The Contractor can establish his main office at Sukkur city and camps outside the ROW of canal at his own risk and cost.

3 Surveys and Investigations

3.1 Topographic and Bathymetric Survey Information

A system of benchmarks has been established as shown on Drawing SBIP/S4/SI/1005.

The master benchmarks, PBM1 and PBM2, are located on either end of the barrage as shown in Photos 3.1 and 3.2 below. The value of the benchmarks are 215.25 ft amsl and 215.31 ft amsl respectively.

Pre work joint survey of canal will be carried out by the representatives of the Employer, PIC and contractor before starting the earthworks.

Photo 3.1: PBM1 on Right Side of Barrage



Photo 3.2: PBM2 on Left Side of Barrage

