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**KOLKATA PORT TRUST**  
**Hydraulic Study Department**  
20, Garden Reach Road, Kolkata -700043



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Hyd/9043/D/Part-V/1

Date. 02 -01-2018

To  
Prof. V. Sundar / Prof. K. Murali  
Department of Ocean Engineering  
Indian Institute of Technology, Madras  
Chennai- 600036

**Sub:** Study for removal of lock at HDC & Extended Monitoring Study of shipping channel leading to HDC by IIT, Madras (Phase-III)

**Ref:** 1. Your offer letter No. NIL dated 23rd November, 2017  
2. Minutes of the Mid-Year Review Meeting- 2017 held on 6<sup>th</sup> & 7<sup>th</sup> November.2017

Sir,

Reference above, your offer for undertaking the captioned study has been accepted by the Kolkata Port Trust Administration at a total consultancy charges of Rs. 2,97,40,000.00 ( Rupees Two crore ninety seven lakh forty thousand only) including Rs. 45,40,000.00 ( Rupees Forty five lakh forty thousand only) as GST, with the scope of work and commercial Terms & Conditions as detailed in your offer.

2. The salient features of Terms of Reference (ToR), Terms of payment and other Terms & Conditions for the captioned studies are given below:

A. Terms of Reference :

- i) Monitoring of navigational channels to HDC from 1<sup>st</sup> November, 2017 to 31<sup>st</sup> October, 2019. The said Monitoring study would involve Hydrographic survey of Eden channel, Upper part of Lower Auckland Bar, Upper Jellingham channel and Haldi river confluence to assess the impact of works ( i.e. Impediment removal and Silt Trap dredging) recommended by IIT-M during / post implementation period and to recommend measures / on course rectification, if required.  
The said Monitoring study would also involve regular assessment for the eventual deepening of Eden channel up to 5.5 m. with corresponding dredging in all navigational channels and Dock systems.
- ii) Numerical model study of options for second lock, refurbishment or removal of first lock or a combination of them with corresponding measures for Jellingham and Eden Channels. The said study would involve detailed model studies with 4 options for lock system for

estimating currents and siltation rate during tidal cycles and arriving at most beneficial option / configuration.

iii) Feasibility studies for structural measures (as detailed below) corresponding to the conclusion of model studies as stated in Para 2. A (ii) including deepening of HDC and other measures.

- Preliminary analysis of present berths as built and residual strength if dredged to -14m CD. Preliminary analysis and design of the concepts for strengthening and use of berths with dock depth of -14m CD. Block cost estimation.

OR

- Preliminary design and analysis of second lock and associated infrastructure. Block cost estimation

B. Timeline, Deliverables & Terms of Payment :

Timeline	Deliverables	% of Payment	Amount of Payment (Rs)
T0 (Work Order)	Submission of Inception Report with details of studies proposed and methodology	50% of total charges	126 lakhs + GST
T0 + 30 days	Submission of Interim Report with model study report on Item #2 (Ref : Offer of IITM dt. 23 Nov, 2017) and results of field measurement	30% of charges on Item #2 & #3 (Ref : Offer of IITM dt. 23 Nov, 2017)	Rs.18 lakhs + GST
T0 + 120 days	Submission of Final Report with studies and results of monitoring	20% of charges on Item #2 & #3 (Ref : Offer of IITM dt. 23 Nov, 2017)	Rs.12 lakhs + GST
Oct, 2018	Submission of Interim report on monitoring study	25% of charges on Item #1 (Ref : Offer of IITM dt. 23 Nov, 2017)	Rs.48 lakhs + GST
Oct, 2019	Submission of Final report on monitoring study	25% of charges on Item #1(Ref : Offer of IITM dt. 23 Nov, 2017)	Rs.48 lakhs + GST

- All payments will be in the form of crossed Demand Draft in favour of Indian Institute of Technology Madras

C. Other terms:

- i) KoPT would provide all logistics during monitoring (launch / boat, guest house accommodation, local transport, field office for IITM at HDC, KoPT). KoPT official shall accompany the monitoring team of IIT-M.
  - ii) All reports of the Study have to be submitted in 5 (five) hard copies and one soft copy. Ocean Engineering Department of IIT, Madras will be required to present the report and the recommended measures before different statutory bodies, viz. Board of Trustees of KoPT, Expert Committee, Ministry of Shipping etc. as and when necessary, for obtaining clearance of the final recommendations and/or recommended measures/methods as a part of their final report.
3. This may be treated as the formal Work order. Kindly acknowledge the receipt of the same and arrange to return a signed copy as a mark of your acceptance.

Yours sincerely,



(M. N. Ray)

Chief Hydraulic Engineer (I/C)

Copy to :

- (1) The Commissioner of Income Tax (TDS), 10-B, Middleton Row, Kol- 700071
- (2) The Commercial Tax Commissioner, Sales Tax Building, 14, Beliaghata Road, Kolkata – 700015
- (3) Sr. PS to Chairman for favour of kind information of Chairman.
- (4) PS to Dy. Chairman (H) for favour of kind information of Dy. Chairman (H).
- (5) DMD for information please.
- (6) G.M (Marine) for information please.
- (7) Chief Vigilance Officer for favour of information please.
- (8) GM (Engg), I/c for information please.
- (9) GM (Fin), I/c for information please. This has reference to his concurrence dated 22.12.2017
- (10) Dy. Chief Hydraulic Engineer for information & necessary action please.
- ✓(11) Director (P & R) [Attn: Sr. Dy. Director (Comp)] for info. & necessary publication of the tabular relevant info in the KoPT website please. The softcopy would be emailed shortly.
- (12) PA to CHE for record please.
- (13) A/c cell, HSD [Thru': PA (E)] for information and necessary action please.



(M. N. Ray)

Chief Hydraulic Engineer (I/C)