

Limited Tender
Centre for Industrial Consultancy and Sponsored Research (IC & SR)
IIT Madras
INVITATION FOR BID

For and on behalf of IC & SR, IIT Madras, sealed tenders are invited in Duplicate under Two bid Tender System for the following work being executed by IIT Madras:-

1)	Description:	To carry out the Topographic & Bathymetry survey, Current measurement and collection of sediment at Kamarajar Port, Ennore, Chennai. (Detailed scope of work as mentioned under Section-III of this specification).
2)	Specification No.	OED/KPL/2018/01
3)	Earnest Money Deposit:	Rs. 40,000/- (Rupees forty Thousand only) in the form of DD in favour of The Registrar, IIT Madras, Chennai issued by any Nationalized bank. The amount should be given with Technical bid only. If it is not attached with technical bid the tender is summarily rejected. If the contractor/ Tenderer fails to undertake the above work after issuance of LOA the EMD should be forfeited without making any correspondence or reference to the tenderer.
4)	Last date for Submission of Bid:	16.00 Hrs. IST on 11.05.2018
5)	Date & Place of Opening of Tender (Techno commercial bid):	16.15 Hrs. IST on 11.05.2018 Rm.005, Ground Floor, Department of Ocean Engineering, IIT Madras, Chennai 600036 If the due date happens to be a holiday, the tender will be received & opened on the next working day.
6)	Validity of offer:	90 days from the date of opening.
7)	Method of submission of tender:	Two cover system
8)	Clarification to be obtained from:	Prof. K. Murali The Project Coordinator Department of Ocean Engineering IIT Madras, CHENNAI - 600 036 TAMIL NADU Phone no.: 044- 2257 4816 Email.: murali@iitm.ac.in dr.murali.iitm@gmail.com

9)	Cost of Tender specification	Nil
10)	Tender Inviting Authority:	Prof K. Murali, Dept of Ocean Engineering IIT Madras Chennai 600036 Telephone No: (91) (44) 2257 4816

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SECTION - I
INSTRUCTION TO BIDDERS

1.1 General:

Separate sealed competitive bid under "Two cover system" is invited in Duplicate for the following works.

1.2 Scope of work:

The scope of the study shall include:

To carried out the Topographic & Bathymetry survey, Current measurement and collection of sediment at Kamarajar Port, Ennore, Chennai.

(Detailed scope of work as mentioned under Section-III of this specification).

1.2.1 Specification No: OED/KPL/2018/01.

1.2.2 Cost of Tender Specification: Waived

1.3 EARNEST MONEY DEPOSIT (EMD): Rs. 40,000/- (Rupees forty thousand only) in the form of DD in favour of The Registrar, IIT Madras, Chennai issued by any Nationalized bank. The amount should be given with Technical bid only. If it is not attached with technical bid the tender is summarily rejected.

If the contractor/ Tenderer fails to undertake the above work after issuance of LOA the EMD should be forfeited without making any correspondence or reference to the tenderer.

1.4 Schedules for Receipt and Opening of Bid:

- | | |
|---|--------------------------------|
| a) Last date and time for receipt of bids | : 16.00 Hrs. IST on 11.05.2018 |
| b) Date and time for opening of bids | : 16.15 Hrs. IST on 11.05.2018 |

1.5 Submission of Tender:

Tender should be furnished in sealed cover, super-scribed as **"To carry out topographic & bathymetry survey, current measurement and collection of sediment at Kamarajar Port, Ennore, Chennai"**.

The offer should be addressed to:

Prof. K.Murali
Project Coordinator,
Department of Ocean Engineering
IIT Madras, Chennai- 600 036.

1.5.1 The Bidders have the option of sending the bid by Registered post, Courier or submitting the bid in person, so as to ensure that the bids are received in the specified office of the Purchaser, by the date and time indicated in the Sl.No.1.5 above. Bids submitted by Telex/ Fax/ Telegram/e-mail etc. will not be accepted.

1.6 Opening of Tender

The tenders will be opened at **Rm.005, Ground Floor, Department of Ocean Engineering, IIT Madras** on the due date and time prescribed in the presence of such of those tenderers who may desire to be present. If the due date for tender opening happens to be a holiday, the tenders will be opened on the next working day.

The individuals attending the opening of tenders should be duly authorized by the participating firms in the tender.

If the tenderer has any doubt about the meaning of any portion of this specification, he may address the Tender Inviting authority which should reach at least one week before opening of this tender. Any clarification received after this date will not be entertained.

1.7 Tender Inviting Authority

**Prof. K.Murali
Project Coordinator,
Department of Ocean Engineering
IIT Madras, Chennai- 600 036.**

SECTION – II

COMMERCIAL AND TECHNICAL CONDITIONS

2.1 GENERAL

The scope of services shall be as detailed in Section - III of this specification.

2.2 LOCATION

The site is located in the Kamarajar Port, Ennore, Chennai.

2.3 COMPLETENESS OF TENDER

The tender should be complete in all aspects. The tenderer shall furnish all relevant details called for in the specification with supporting documents wherever required for considerations by IC & SR. The tenders not containing the complete details as requested in the specification are liable for rejection.

2.4 PRICES

Tenderers shall quote FIRM Price only. Shall quote price separately for each item in the respective schedule as prescribed in the specification

2.5 VALIDITY OF TENDERS

Tenders should be valid for acceptance for a period of at least **Ninety (90) days** from the date of tender opening. In case any bidder quotes a lower validity period than that called for, his offer shall be liable for rejection. In exceptional circumstances, the purchaser may solicit the bidder's consent to an extension of the period of the validity. The request and response thereto shall be made in writing (including fax or telex).

2.6 PAYMENT TERMS:-

The consultant shall be paid lump sum fee / charges for providing the consultancy services as per the schedule below at the specified percentages:

Sl.no	Description	% Total Consultancy charges
1	Mobilization advance (after mobilization of equipment and comment of work)	30 %
2	On submission of Draft report	50 %
3	On submission of Final reports	20 %

2.6.1 Payment will be made by Cheque / Bank transfer on any one of the commercial banks or their branches in India as may be decided by IC & SR from time to time. If the contractor requests for DD payment, Exchange Commission for issue of bank draft will be to the account of the consultant.

2.6.2 Offers agreeing to the above terms of payment will be preferred. IC & SR may reject the offers with other terms of payment.

2.7 Schedule of Submission of Report:

- a. Submission of Draft report: Fifth weeks from the date of award of work
- b. Submission of Final report: Sixth weeks from the date of award of work

Note: The draft (01 copy) and final report (03 copies) should contain the following in PDF form, as well as the tenderer should furnish the soft copy of the reports so as to finalize the same in easy manner;

- The contour map shall be prepared preferably in A0 size with contours at 5m interval from the lowest bed level to M.W.L.
- Charts/drawings for the report all charts/ drawings shall be appropriately reduced for inclusion in the report.

2.8 FORCE MAJEURE

2.8.1

Neither the Contractor nor the Purchaser shall be considered in default in performance of its obligations hereunder if such performance is prevented or delayed for any causes beyond the reasonable control of the party affected, such as war, hostilities , revolution, riot, civil commotion, epidemic, major fires, explosions, floods, earthquakes or because of any law, order, proclamatory regulations or ordinance of Government or because of any act of God, provided notice in writing of such cause with necessary evidence that the obligation under the Contract is thereby affected or prevented or delayed, is given within 14 days from the happening of the event and in any case it is not possible to serve the notice within 14 days period, then within the shortest possible period without delay. In case the force majeure conditions prolong beyond a continuous period of 6 months, the Purchaser shall be entitled to decide the further course of action including revisions in the terms of Contract, if any.

2.8.2 As soon as the cause of Force Majeure has been removed, the party whose ability to perform its obligation has been affected shall notify the other party the actual delay occurred on account of such activities.

2.8.3 Although the time for completion of work shall be suitably extended (not exceeding the period during which the work was stopped on account of Force Majeure clause), such extension shall not result in any financial claim by the Contractor against the Purchaser or any account of such a delay for any other reason whatsoever.

2.9 TAXES

The price quoted shall be firm and **shall be inclusive of all statutory levies and taxes including GST as applicable. Necessary income tax will be deducted at source** on each bill as per the regulations in force. If the Institution is exempted from payment of income tax, the documentary evidence for the same has to be furnished.

2.10 JURISDICTION FOR LEGAL PROCEEDINGS

No suit or any proceedings in regard to any matter arising in any respect under this contract shall be instituted in a Court Save in the City Civil Court of Chennai or the Courts of Small Causes at Chennai. It is agreed that no other courts shall have jurisdiction to entertain any suit or proceedings even though part of the cause of action might arise within their jurisdiction. In case any part of cause of action arises within the jurisdiction of any of the courts in Tamil Nadu and not in the courts in the Chennai City, it is agreed between the parties that such suits or proceedings shall be instituted in a court within Tamil Nadu and no other court outside Tamil Nadu shall have jurisdiction, even though any part of the cause of action might arise within the jurisdiction of such courts.

The bidders shall furnish an undertaking in a non-judicial stamp paper of value Rs.100/- agreeing to the above condition as per schedule furnished in Annexure-II. This should be given after issuing the work order – This is applicable for selected L1 bidder.

2.11 ARBITRATION

Arbitration is not applicable to this contract.

2.12 SPECIAL CONDITIONS

2.12.1 Eligibility Criteria (Compulsory)

The intending tenderer must have completed similar nature of works in the last three years.

2.12.2 Completion of project

Time duration of completion of project 50 days from the date of acceptance of work order. No more extension time will be allowed for executing the awarded work.

2.12.3 Milestones & Deliverables

Sl. No	Description of items	Period
1	Topographic survey and data analysis	Four weeks from the date of award of contract
2	Bathymetry Survey and data analysis	
3	Collection of sediment including sample of the bed materials and data analysis	
4	Current Measurement - 3 locations at 0.2D, 0.6D and 0.8D for each 3 seasons in neap to neap cycle (14 days).	Measurement will be taken during the earliest Neap to neap tide (two weeks)
5	Submission of draft report	Fifth weeks
6	Final Report Submission	Sixth weeks

The tenderers should clearly indicate their acceptance or otherwise to the following terms and conditions.

1. Specific acceptance of Board's terms of payment.
2. Board's terms of Liquidated damages for delay in completion of work.
3. Validity of tender.

If no indication is given by the tenderer in his offer, it is presumed that the tenderer is agreeable to the terms and conditions of IC & SR mentioned in the specification.

All information in the bid shall be in ENGLISH only. All corrections, over typing etc. in the tender should be attested.

Tenderers are advised to post sufficiently early so as to ensure that the tenders reach this office in time. Tenders though posted in time but delayed in transit by post will not be considered, if received after the due date and time.

NOTE: While quoting the tender, the tenderer should quote separately for each season. Administration has the right to decide according to the requirements.

2.13 DEVIATIONS IN TENDER

Offers which conform to the specification without any deviation will be preferred. If the tenderer wants to deviate from any of the terms and conditions, the same shall be mentioned clearly.

2.14 IC & SR BOARD RESERVES THE RIGHT

- a) Not to accept the lowest or any tender.
- b) To reject any or all the tenders without assigning any reasons thereof.
- c) To relax or waive any of the conditions stipulated in the tender specification as deemed necessary in the best interest of the project for good and sufficient reasons.
- d) To revise the quantum of works/completion period of work of any or all the items covered by this enquiry during the pendency of contract and to terminate the contract in between the agreed stipulated period.

2.15 EVALUATION AND COMPARISON OF TENDER OFFERS

- a) The evaluation of the Tender will be done as per IIT Madras guidelines IC & SR.
- b) The evaluation shall include contract value of works with applicable sales/service tax, etc.,
- c) In case of discrepancy between the prices quoted in words and in figures, the lower of the two shall be considered.

SECTION – III

TECHNICAL SPECIFICATION

1. SCOPE OF SERVICE

1.1. SCOPE OF WORK

The scope of the study shall include

- Bathymetry survey
- Topography survey
- Collection of sediment samples
- Current Measurement

1.2. COMPONENTS

1.2.1 Bathymetry survey

To carry out bathymetric survey around the project site, a small boat shall be mobilized for carrying a single frequency echo sounder of 200 kHz onboard. The soundings shall be carried out as per the specification. The bathymetric survey shall be carried out at 50m line spacing in open ocean perpendicular to shore up to a water depth of 10m (all levels mentioned in this report are with respect to Chart Datum). The survey area extends up to 1 km on either side of the creek mouth. Inside the creek the line spacing shall be 50 m up to 15 km in north of creek and 5 km in south of creek.

The required accuracy of the depth measurement is 2% of the measured depth with resolution 0.1-m. The position information should be stored using DGPS, which shall provide accuracy better than +/- 1m. Necessary tidal correction to be applied for bathymetric measurements carried out at site. The survey tracks of the boat should be worked out using hydrographic software HYPACK MAX and the map shall be presented in UTM & Geographic co-ordinates.

1.2.2 Topographic survey

The area not covered under Hydrographic survey up to M.W.L. shall be surveyed by taking levels at 50m interval. Interval along range lines lay at 50 m interval (50 m x 50 m grid). DGPS should be used for the survey. Approximate area is around 70 km².

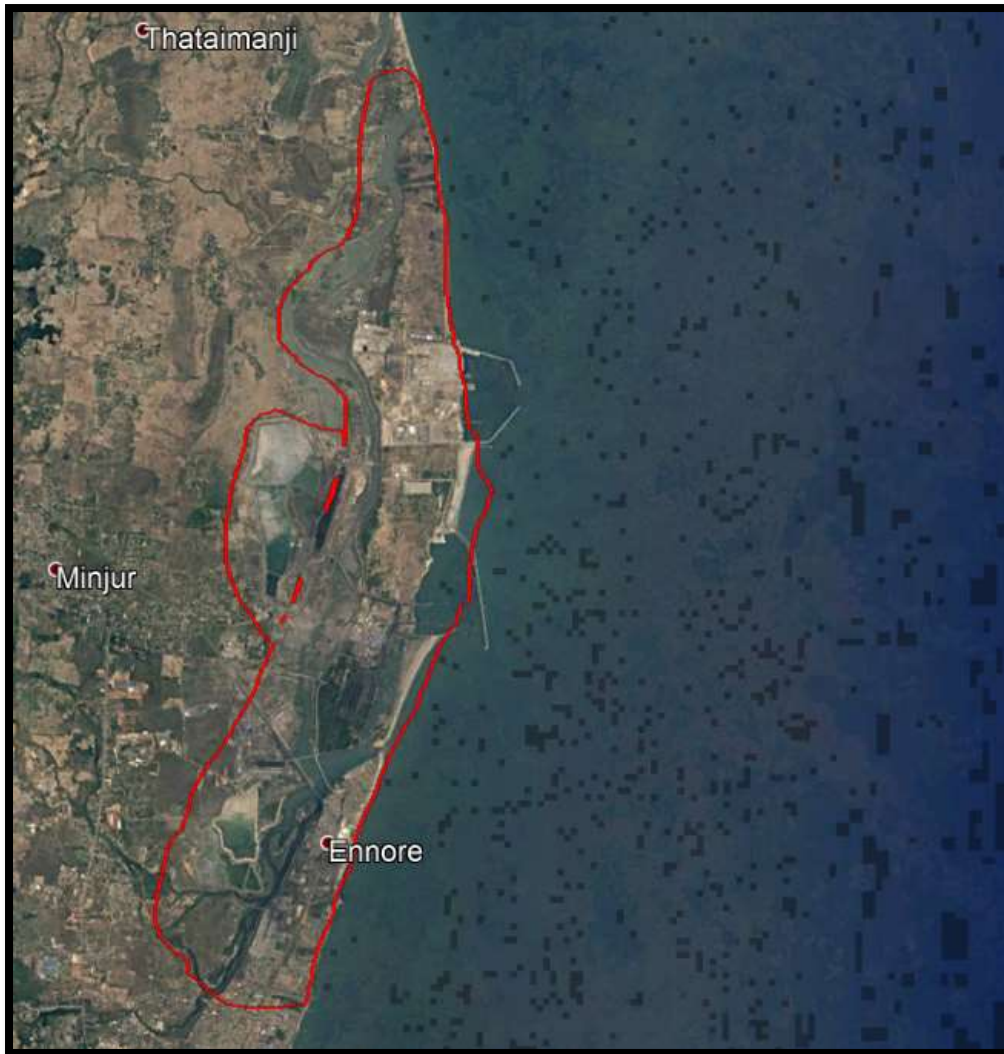


Fig.1 Proposed Topography survey area

1.2.3 Collection of Sediment samples

Bed Surface sediments at designated locations (3 locations) shall be collected over three seasons for analysis of their size distribution and to ascertain the nature of bed surface sediments. Bed sampling should be taken at 3 locations during three tide phases for one spring & one neap for 3 seasons (3*2*3).

- Sediment sizes
- Density
- Specific gravity
- Moisture content
- Depth and Location of sample collection to be mentioned.



Fig.2 Location of Bed sample collection

Table 1 Locations of Bed sample collection

Location	Longitude	Latitude
1	80.327932°E	13.232394°N
2	80.316280° E	13.230301° N
3	80.320815° E	13.228726° N

1.2.4 Current Measurement

Acoustic Doppler Current Profiler (ADCP) capable of providing vertical cross section of current speed and direction shall be used in this study. Current velocity & direction measurements being collected from 3 locations at 0.2D, 0.6D and 0.8D for each 3 seasons in neap to neap cycle (14 days).

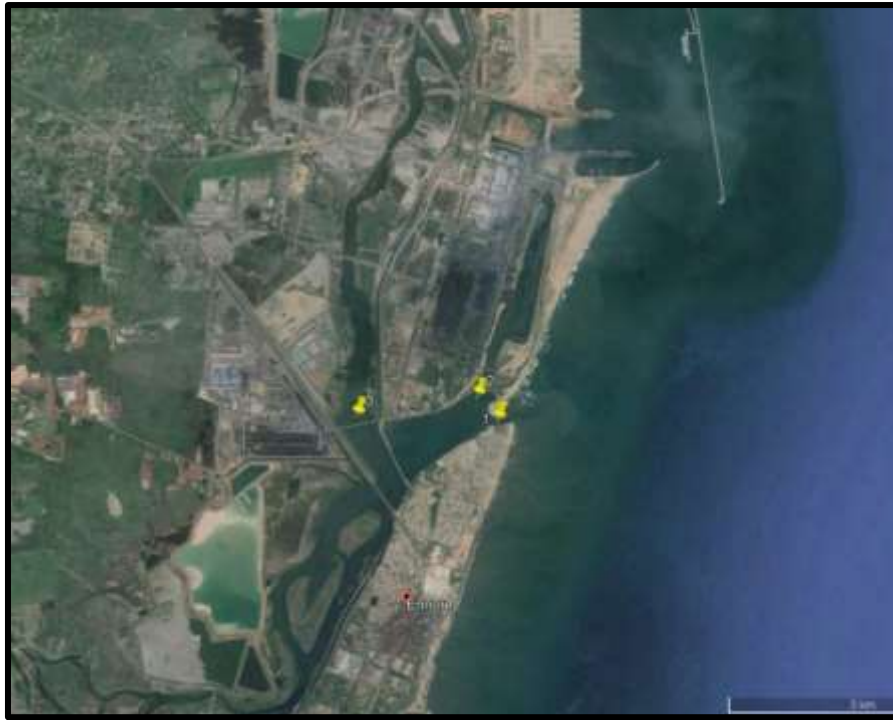


Fig.3 Locations of current meter deployment

Table 2 Locations of current meter deployment

Location	Longitude	Latitude
1	80.329625°E	13.232329°N
2	80.327556°E	13.234705°N
3	80.315188°E	13.232761°N

1.2.5 Data Analysis/Preparation of Tables/Charts/Drawings

After completion of the capacity survey, the survey data shall be analyzed by the Consultant to obtain the following

1. Elevation- Area-Capacity curve along with table will be prepared from the lowest elevation up to MWL at 1 m or less interval.
2. Assessment of effects of sedimentation on performance
 Separate chapters are to be included in the Report for “Sedimentation Analysis”, “Mathematical Modeling”, “Soil Conservation Measures” and Conclusion and Recommendation”. A sample calculation is to be shown for each: Estimation of rate of sedimentation, Prediction of sediment distribution etc.

3. Analysis of sediment samples Laboratory analysis of the sediment samples collected from the sea bed shall be carried out to obtain sediment sizes, density, specific gravity, moisture content etc. Method of calculation of bulk density (Lane's method or Miller's method or some other method) to be mentioned.
4. Vertical Sediment Distribution Vertical sediment distribution curve/table shall be provided.
5. The contour map shall be prepared preferably in A0 size with contours at 5m interval from the lowest bed level to M.W.L.
6. Charts/drawings for the report all charts/ drawings shall be appropriately reduced for inclusion in the report.

1.2.6 Schedule of rates (to be quoted by the tenderer)

Sl. No	Description of items	Cost
1	Topographic survey and data analysis	
2	Bathymetry Survey and data analysis	
3	Collection of sediment including sample of the bed material and data analysis	
4	Current Measurement - 3 locations at 0.2D, 0.6D and 0.8D for each 3 seasons in neap to neap cycle (14 days).	

Note: The final work order may be issued for all or part of the above work.

2. SCHEDULE OF FEES - I

SPECIFICATION NO. OED/KPL/2018/01

Name of the Work:

“To carry out topographic & bathymetry survey, current measurement and collection of sediment at Kamarajar Port, Ennore, Chennai”.

Sl.no	Description	% Total Consultancy charges
1	Mobilization advance (after mobilization of equipment and comment of work)	30
2	On submission of Draft report	50
3	On submission of Final reports	20

SIGNATURE :
NAME :
DESIGNATION :
DATE :
PLACE :
SEAL

3. ANNEXURE-I

(This should be given after issuing the work order – This is applicable for selected L1 bidder)

UNDERTAKING TOWARDS JURISDICTION FOR LEGAL PROCEEDINGS (NON JUDICIAL STAMP PAPER VALUE RS.100/-)

This undertaking executed at.....on this (Date) (Month) Two thousand and by M/s Registered under Companies Act, 1956 having its registered office at hereinafter called the contractor (which expression shall where the context so admits mean and include its successors in office and in favour of Indian Institute of Technology Madras, Chennai- 600 036. herein after called the purchaser (which expression shall where the context so admits means and includes its successors if Office and assigns).

WHEREAS a contract for the supply ofhas been awarded in favour of the contractor under the Purchase order No.....dated.....

AND WHEREAS in accordance with the terms of the above Purchase order, the contractor has to furnish un undertaking to the effect that no suit or any proceedings in regard to any matter arising in any respect under this contract shall be instituted in any matter in any respect under this contract shall be instituted in any court other than in the High court, Madras of District court at or Sub-court ator at the District Munsiff court at as the case may be.

IN CONSIDERATION of the Board having agreed to accept the undertaking the contractor hereby undertakes that no suit or any proceedings in regard to any matter arising in respect of this contract shall be instituted in any court, save in the High court, Madras or District court at.....or sub court at or at the District Munsiff court atas the case may be it is agreed that no other court shall have jurisdiction to entertain any suit or proceedings, even though , part of the cause of action might arise within their jurisdiction. In case any part of the cause of action might arise within the jurisdiction of any other Courts in Tamil Nadu and rest within the jurisdiction of Courts outside the State of Tamil Nadu , then it is agreed to between the parties that such suits on proceedings shall be instituted in a

court within the State of Tamil Nadu and no other Court outside the State of Tamil Nadu shall have jurisdiction.

IN WITNESS WHEREOF Thiru..... of M/s hereby put his hand and seal for due observance of the undertaking in the presence of the following witnesses

COMPANY SEAL		SIGNATURE	:
DESIGNATION	:		
COMPANY	:		
DATE	:		

WITNESSES:

- 1)
- 2)