



**भारतीय अन्तर्देशीय जलमार्ग प्राधिकरण**  
(पोत परिवहन मंत्रालय, भारत सरकार)  
**INLAND WATERWAYS AUTHORITY OF INDIA**  
(Ministry of Shipping, Govt. of India)

**Head Office: A-13, Sector -1, NOIDA, Distt. Gautam Budh Nagar - 201 301 (U.P.)**

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**1. NOTICE INVITING QUOTATION**  
**NIQ No. No. IWAI/HY/Yamuna/2014/1**

Inland Waterways Authority of India (IWAI), Noida invites quotation from listed Contractors (at NIQ page 8 of 8) for undertaking the following survey works:

schedule	Description of Works	EMD (in Rs.)	NIQ document cost (Rs.)
1.	<b><u>Detailed bathymetric survey in river Yamuna from Wazirabad Barrage to Okhla Barrage (23.4kms)</u></b>	10,500/-	500/-

**2. TERMS & CONDITIONS**

1. Notice Inviting Quotation (NIQ) document will be available for download w.e.f. 10.09.2014 to 18.09.2014. The completed bids as per terms and conditions mentioned in the tender document should be submitted to the office of Hydrographic Chief latest by 1500 hrs on 18.09.14 and shall be opened on the same day at 1530 hours.
2. Interested bidders may download NIQ document online from the IWAI's website "www.iwai.nic.in" and are advised by paying Rs. 500/- (Rupees Five hundred only) in the form of Demand Draft. The demand draft should be drawn from any nationalized bank in favour of "IWAI Fund" payable at Noida. The Demand Draft submitted for NIQ document shall be non refundable.
3. The bidder shall submit Earnest Money Deposit for an amount of 10,500/- (Rupees Ten thousand five hundred only) in the form of demand draft along with quotation. The demand draft should be drawn from any nationalized bank in favour of "IWAI Fund" payable at Noida.
4. The bidder should be conversant with the similar work and should submit credential for similar works carried out by them.
5. IWAI reserves the right to accept or reject any or all tenders without assigning any reason and no correspondence shall be entertained in this regard.

**SUBMISSION OF BID**

Bid should be submitted in two covers viz. separate sealed Envelope-1 (Technical bid) and Envelope-2 (Price bid).

The first cover/envelope containing Part-1 shall be submitted along with the following documents:-

1. NIQ document cost (Demand Draft in favour of IWAI fund payable at Noida).
2. Earnest Money Deposit (Demand Draft in favour of IWAI fund payable at Noida).
3. Latest certificate of solvency from nationalized / scheduled Bank included in the second schedule of the RBI Act for not less than the value Rs.2.1 lakhs.

4. A signed declaration stating that the bidder has accepted all the terms and condition of NIQ herein floated by IWAI to be enclosed with the bid by the bidder while submitting sealed quotation.
5. Declaration that Bidder(s) have not been banned or de-listed by any Govt. or quasi Govt. agency or Public Sector Undertaking.
6. Downloaded NIQ document duly filled in and completed in all respects, signed with rubber seal on each page as a proof of acceptance.
7. Acceptance to all NIQ document terms & conditions to be confirmed.
8. Copy of Bidders Registration Certificate / ISO Certificates / Other accredited agency certificates.
9. Copy of document in the respect of PAN, service tax, VAT number.
10. Copy of audit report / balance Sheet for the last three financial years (2011-12, 2012-13 & 2013-14). Submitted Audit report / Balance Sheet should be clearly sealed & signed by the Auditor / Directors of the firm.
11. Procedure to be adopted for position control.
12. Details of equipment to be deployed.
13. Scanned Copies of similar work orders and performance certificates / job completion certificates for each individual item for which the bid is submitted (as per prequalification requirement), issued by the client during the past 3years, for evaluation of financial & technical capabilities of the bidders. Supply orders and performance certificates / job completion certificates shall be in the name of bidder only clearly indicating the value of work.

Experience of having successfully completed similar works (Bathymetric survey in any area) during last 7 years ending last day of month previous to the one in which this tender is invited should be either of following:

- (i) Three similar works **each** costing not less than Rs. 2.1 Lakhs; **or**
- (ii) Two similar works **each** costing not less than Rs. 2.6 Lakhs; **or**
- (iii) One similar work costing not less than Rs. 4.2 Lakhs.

### **3. TECHNICAL & SPECIAL CONDITIONS**

#### **1. OBJECTIVES:**

The objective of the contract is to conduct detailed bathymetric survey in river Yamuna from Wazirabad Barrage to Okhla Barrage (23.4kms).

#### **2. Terms of Reference (ToR) for undertaking detailed bathymetric survey in river Yamuna from Wazirabad Barrage to Okhla Barrage (23.4kms)**

The Scope of work shall cover all technical aspects of hydrographic survey at par with International Standards including the following:-

The detailed hydrographic survey is to be carried out by using Automated Hydrographic Survey System (using digital Echo sounder for depth measurement, DGPS for position fixing and Hypackmax or equivalent software for data logging). The survey is to be conducted in WGS'84 datum.

The horizontal control is to be made from either one of the following methods:-

- i. Transfer of positions from GTS Bench Marks or position established at bridges, barrages etc.
- ii. Using RTK GPS with minimum 24 hours observations at some permanent platform/base
- iii. DGPS receiving direct Satellite corrections

The vertical control is to be established with respect to the chart datum / sounding datum from either one of the following methods:-

- i. Already established by Central Water Commission/ State Irrigation Department / State Flood Department and at their gauge stations along the river.
- ii. Sounding Datum may be taken as observed water level with respect to Mean Sea Level (MSL)

Other Terms of Reference for the survey work shall be as given below: -

- a. Erect Water level gauges near Rail Bridge pillar at Inter State Bus Terminal (ISBT) and also at Barrages at both ends. Readings are to be taken at 1 hr interval for 12 hours (6 AM to 6 PM) or for the entire period of survey. The gauges are to be connected to a nearest Bench Mark by leveling and its datum value shall be established w.r.to MSL & CD. Detailed description of the bench mark along with its position and value to be given in the report for future recovery. At least 2 gauges (one U/s and one D/s at 10 Km apart) shall be read simultaneously and soundings to be carried out within the gauge stations.
- b. Cross-section sounding lines are to be run from bank to bank at 100m interval. Continuous soundings are to be taken by running the sounding boat at constant speed on the cross-section so as to get smooth contours. On completion of the cross-sections, deepest route is to be identified/ established by linking deepest soundings on the cross-sections. No payment will be made for running longitudinal lines.
- c. Current velocity at every 10 km interval shall be observed once in a day during the survey period. Current meter measurement should be taken at depth surface, 0.5d, 0.3d and d (d-measured depth of water) & values indicated in the report along with position.
- d. Water and bottom samples are to be collected from the deepest route at every 10 km interval and are to be tested and the characteristics of the soil and the water are to be incorporated in the report. Soil sample can be collected by a grab and water sample at depth surface, 0.5d, 0.3d & d (d-measured depth of water) by any approved systems. The following tests are to be carried out for Bottom & water samples:-
  - a) Grain size distribution, b) Specific gravity, c) PH value, d) Cu, Cc, e) Clay silt % and Sediment concentration for Water Samples.The results/characteristic of water and soil are to be incorporated in the report along with position.
- e. The soundings are to be reduced to the chart datum/ sounding datum.
- f. The survey chart is to be prepared on a scale of 1:5000. Contours of 0m, 1m, 2m, 3 m, 5m and 10 m are to be indicated on the charts.
- g. Shallow patches /shoal and submerged sand-chur having less than 1.0 m depth, rocky outcrops, rapids and other navigational impediments are to be indicated on the charts.
- h. Barrages, bridges, aqueducts, survey pillars and other conspicuous objects are to be fixed and indicated on the chart and included in the report. Barrages, bridges, aqueducts, survey pillars and other conspicuous objects are to be fixed which are only in the water and surveyed area.
- i. Details of water intake/ structures are to be collected and shown on the charts and include in the report.
- j. Details (horizontal and vertical clearances above HFL) of bridges, aqueducts, electric lines, telephone lines, cables enroute are to be collected and indicated on the chart and also included in the report.
- k. Availability of existing jetty, ferry ghats, approach roads etc. are to be indicated on the charts and included in the report.
- l. Photographs of the prominent features are to be taken and included in the report

along with its position.

### **3. Position Fixing**

The position fixing should be done by using differential global positioning system not less than 12 channel receivers for submetre accuracy.

### **4.0 TIME SCHEDULE.**

The time schedule of execution of the entire assignment will be as follows:

- i) Zero date of this project will be taken as date of issue of work order.
- ii) The contractor should complete mobilization of equipment and manpower complete and start field works within 10 days from zero date.
- iii) The actual river survey work should commence within 15 days from zero date.
- iv) The actual survey work should be completed within 10 days (Ten days) after commencement of work.
- v) Two copies of the draft survey chart and report (hard & soft copies both) shall be submitted within 15 days period of completion of field survey work.
- vi) Five copies of the final survey charts & reports (hard & soft copies both) shall be submitted within 30 days period after communicated modification/comments on draft report / charts, by IWAI.
- vii) Final report will be accepted by the Engineer-In-Charge, after checking the same as per agreement.

Note: LD clause will be applicable on above Time Schedule.

### **5.0 FINAL REPORTS**

The draft report shall be submitted on completion of field survey. After getting the comments of IWAI, the final report will be presented including the following in additions to description of equipment used, methodology survey accuracy checks etc., as per the TOR.

- i) The final sounding charts & reports as per ToR – five (05) nos.
- ii) All raw data and processed data of AHS system are required to be submitted along with final charts in DVDs – five (05) nos.

### **6.0 SPECIAL CONDITIONS**

**6.1** The contractor will study the requirements of the survey operations as explained in earlier sections and will take total responsibility for mobilizing all the survey equipments, vessels and the requisite personal and complete the surveys as required within the stipulated time.

**6.2** In order to avoid serious time lag between field survey and submission of final survey charts/drawing the contractor is expected to setup a base office nearby where periodically the field data collected are brought and plotting works are carried out. This is also expected to help the contractor to fulfill the gaps in information before finalisation.

**6.3** The contractor will provide free access to the Engineer - in charge who will inspect and verify the data during the field work stage itself. Any correction pointed out should be carried out and information's as required should be provided without any undue delay. These contracts do not provide for any down time of equipment or boat hence the contractor should insure that these are avoided if not kept at minimum. The contractor has to arrange transport vehicle, boat for Engineer-in-Charge / representative visit at site.

**6.4** IWAI will not accept any liability towards loss damage of any equipment vessel/survey equipment or any other type of loss, during the course of execution of contract. The contractor shall be responsible for paying all wharfage or other local charges.

**6.5** Measurement shall be taken jointly by the Engineer-in-Charge or his authorized representative and by the Contractor or his authorised representative. The Contractor shall, without extra charge, provide assistance with every appliance, labour and other things necessary for measurement.

**In case, if the quantity exceeds the awarded quantity, the Contractor shall inform to the Engineer-in-Charge or his authorized representative before completion of the awarded quantity and seek prior approval before undertaking such extra work. The Engineer-in-Charge or his authorized representative will examine such work as per agreement clauses. The limit of variation of work is  $\pm 20\%$ .**

**6.6** Details of Bench Marks, Satellite Imageries, Topsheets, previous available reports/data will be supplied by IWAI (if available) with required undertaking OR an introductory letter will be issued by IWAI to the successful bidder for collecting information from State / Central Government.

**6.7** In case of any obstruction in conducting the survey in the awarded stretch during the contract period, IWAI will issue introductory letter. Contractor will provide contact details of such authorities, photo ID of survey personnel to be deployed in such area.

**6.8** The prices shall include all the taxes, levies cess, octroi, excise, service tax or any other local or central taxes as applicable/ charged by Center or State Government. No extra in this regard shall be paid.

**6.9** No forms regarding sales tax, trade tax or any other exemption, etc. will be supplied by IWAI. However, department would assist to the contractor for arranging these documents at contractors cost by writing to the concerned authorities only. Supply or arrangement of these forms, if required, shall be responsibility of the contractor.

**6.10** All arrangements for establishment, watch & ward of stores and security of sites, permits, license, appropriate vehicles for transportation, handling, etc. shall have to be made by the contractor at his own cost and nothing extra on this account shall be paid.

## **7. PAYMENT ON ACCOUNT**

The contractor shall receive, as fees for all services and expenses required for carrying out detailed hydrographic survey in the respective stretches and submission of charts and reports in the following installments:

i) On submission of preliminary charts & survey report after completion of 100% field works	60%
ii) On submission of Draft Report	15%
iii) On submission of Final Report	15%
iv) On Acceptance of Final Report	10%

## **8. GENERAL CONDITIONS**

### **1. SECURITY DEPOSIT**

- 1.1 The successful bidder EMD will be converted in to security deposit (SD) and the successful bidder has to remit balance amount of Security Deposit Balance Security Deposit (i.e. Total 5% Security Deposit deducting EMD submitted with technical bid) in the form of Demand Draft. Bank guarantee will not be accepted as security deposit.
- 1.2 The total performance guarantee/security deposit shall remain with IWAI till defect liability period after satisfactory completion of work.
- 1.3 Interest will not be paid on security deposit or performance guarantee.
- 1.4 **PERFORMANCE GURANTEE:** The contractor shall be required to deposit an amount equal to 5% of the tendered value of the work as performance guarantee in the form of either demand draft payable at any nationalized/schedule bank **OR** an irrevocable bank guarantee bond of any scheduled bank or State Bank of India in accordance with the form prescribed within 15 days of the issue of the work order. The successful bidder has to remit 5% of contract value for security deposit after adjusting EMD and the security deposit shall remain with IWAI till expiry of renewal period.

### **2. LIQUIDATED DAMAGES**

If the contractor fails to complete all items of works within the period(s) of completion as stipulated in the aforesaid tender or any extended period (not due to the fault of the contractor) as may be agreed he shall without prejudice to any other right or remedy of the Authority on account of such default, pay compensation (not by way of penalty) at the rate of  $\frac{1}{2}$  % (half percent) per week or part of week on the total value of the contract subject to a maximum of 10% of the total value of the contract.

3. The Authority will notify the successful Bidder in writing that the bid has been accepted. The successful Bidder will be required to enter into a contract with the Authority and has to submit Security deposit within 10 days of award of work.

## PART – II

### 9. PRICE BID

#### BILL OF QUANTITIES

Note: The bidder shall enter a firm price against each item and fill up the table. Prices should be in rupees (in words & figures).

Sl#	Description	Qty.	Unit price per line km (excluding taxes & duties) (Rs)	Service Tax (Rs.)	Unit price per line km (including all taxes & duties) (Rs)	Total Amount (including all taxes & duties) (Rs)
1.	To carry out detailed Bathymetric survey including current meter observations, water level observation, collection of bottom & water samples and its analysis. Mobilisation of survey units, equipment and hiring and running charges of boats, insurance of personnel and equipment. Preparation of charts & reports etc. complete in all respect as per TOR in <b><u>River Yamuna from Wazirabad Barrage to Okhla Barrage (23.4kms)</u></b>	<b>117.5 line km</b>				
	<b>TOTAL (in words)</b>					

Note: - IWAI reserves the right at the time of awards of order to increase the quantity of equipment specified in the price schedule without any change in unit prices or other terms and conditions.

**Seal & Signature of the Bidder**

**NIQ issued to the following firms:-**

1. M/s Land and Coast, Prime Corner, 6,7,8, Plot No. 109 B&C, Sector-50 (New), Sea Woods, Nerul (west), Navi Mumbai-400076; E-mail: [land\\_coast@yahoo.com](mailto:land_coast@yahoo.com), [landandcoast@gmail.com](mailto:landandcoast@gmail.com)
2. M/s Precision Survey Consultancy, P.O.- Salap (Jatin Xerox Center), P.S.-:Domjur, Howrah-711409; E-mail [survey\\_consultancy@yahoo.co.in](mailto:survey_consultancy@yahoo.co.in), [precisionsurveyconsultancy10@gmail.com](mailto:precisionsurveyconsultancy10@gmail.com), [mail2palas@gmail.com](mailto:mail2palas@gmail.com)
3. M/s IIC Technologies Limited, 8-2-350/5/B-22, Road No.3, Bajara Hills, Hyderabad-500034; E-mail: [somnath.marthi@iictechnologies.com](mailto:somnath.marthi@iictechnologies.com)
4. M/s Pramitee Engineering and Surveys Pvt. Ltd., 18, 2nd Floor, Crystal Plaza, Hiranandani Complex, Sector-07, Kharghar, Navi Mumbai – 410210; E-mail: [info@pramitee.com](mailto:info@pramitee.com)
5. M/s New Horizon Surveys (I) Pvt. Ltd., E-24/10, Suryoday, Sector 48, Nerul, Navi Mumbai – 400706; E-mail: [newhorizon703@gmail.com](mailto:newhorizon703@gmail.com)
6. M/s Horizon Survey Company India Pvt. Ltd., Plot A-732, M.I.D.C., Khairane, TTC Ind. Area, Thane-Belapur Road, Navi Mumbai-400710; E-mail: [enquiries@horizonsurveyindia.in](mailto:enquiries@horizonsurveyindia.in)
7. M/s Global Marine Infratech Pvt. Ltd., ND-7, VIP Area, Irc Village, Nayapali, Bhubaneswar – 755015; E-mail: [info@gmiindia.in](mailto:info@gmiindia.in), [ashiskantha@gmiindia.in](mailto:ashiskantha@gmiindia.in)
8. Sea Bird Surveys Pvt. Ltd., D-205, 2nd Floor, Belapur Railway Station Complex, CBD Belapur, Navi Mumbai – 400614; E-mail [seabird\\_surveys@rediffmail.com](mailto:seabird_surveys@rediffmail.com), [seabirdsurvey@gmail.com](mailto:seabirdsurvey@gmail.com)
9. Coastal Marine Construction & Engineering Ltd., Floor 7, Mira - Bhayandar Road, Mira Road (E), Dist. Thane - 401107, Maharashtra; E-mail [info@comacoe.com](mailto:info@comacoe.com)
10. Strabag India Pvt. Ltd., Southern Park, Unit No.6, 4th Floor, D-2, DDA District Centre, Saket, New Delhi-1100017; E-mail [info@strabagindia.com](mailto:info@strabagindia.com), [hari@strabagindia.com](mailto:hari@strabagindia.com)
11. Sea Eagle Marine Surveys Pvt. Ltd., 202-203 Nerul Commercial Premises Co-op. Soc. Ltd., Aggarwal Corner, Sector-21, Plot-21, Nerul East, Navi Mumbai-400706, Maharashtra; E-mail [seaeglesurveys@gmail.com](mailto:seaeglesurveys@gmail.com)
12. Xplorer Consultancy Services Pvt. Ltd., Head Office: Plot No.3, First Floor, Sarhaul, (Opp. HIPA, Sec-18), Gurgaon - 122001 (Haryana); E-mail [xplorer@exploreronline.com](mailto:xplorer@exploreronline.com)
13. Fugro Survey (India) Pvt. Ltd., Fugro House, D-222/30, T.T.C. Indl. Area, MIDC Nerul, Navi Mumbai – 400706; E-mail [mail@fugro.in](mailto:mail@fugro.in)
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