

Topographical Survey

For ROURKELA SMART CITY LIMITEDY, ROURKELA



Issued in: November, 2017

**Employer: Rourkela Smart City Limited,
RDA Office Building, Udit Nagar
Rourkela-76901**

ROURKELA SMART CITY LIMITED (RSCL)
SHORT TENDER CALL NOTICE

Sealed tenders are invited by Rourkela Smart City Ltd. for carrying out the work of topographical and Bathymetric survey for the proposed ABD area of Rourkela Smart City (consisting of an area of approx. 600 hectares,) Odisha as mentioned below:

S.No.	Description	EMD	Time of Completion
1	TOPOGRAPHICAL & BATHYMETRIC SURVEY WORK USING TOTAL STATION & DGPS for ABD area Rourkela Smart City	25000	40 Days

S.No.	Tender Activities	Date & Time
1	Last Date & Time of submission of Tenders	22.11.2017 at 15.00 HRS
2	Date & Time of opening technical bid	23.11.2017 at 11.00 HRS
3	Financial Bid opening	Will be Notified to Qualifying Bidders

The scope of work, technical specification, terms & conditions, BOQ are given in Detailed Tender Call Notice (DTCN) and the same can be downloaded from www.rmc.nic.in www.rda-rourkela.in

The complete tender documents accompanied by an earnest money deposit (EMD) of Rs. 25000.00 (Rupees Twenty Five Thousand only) AND Paper cost of Rs. 6000.00 in the form of Demand Draft/Banker's cheque made from any Nationalized/Schedules Bank, favoring " RSCL(Smart City Mission grant fund) payable at Rourkela.. RSCL reserves the right to accept any tender or reject any or all tenders or annul this tendering process without assigning any reason and liability whatsoever.

The Technical and financial bid are to be submitted in two separate envelopes. Both the envelopes to be kept in third envelope and shall be addressed to CEO, RSCL, RDA office building, Udit nagar, Rourkela - 769012 via Registered Post/Speed Post/hand Delivered.

SD//: Ms Monisha Banerjee (IAS)
 Chief Executive Officer
 Rourkela Smart City Limited

Memo-RSCL/17-18/

Date-

Copy To: Advertising Manager Telegraph/Prameya.

They are requested to publish the above advertisement in your newspaper by 15-11-2017

Ms Monisha Banerjee (IAS)
 Chief Executive Officer
 Rourkela Smart City Limited

Details of Proposed Topographical Survey – SMART CITY Rourkela

1. Scope of Work

The Work shall be executed as per the requirements of RSCL / Rourkela Smart City Limited. The scope of services for topographical survey as follows:

Topographic survey using total station/DGPS/Auto Levels equipment will have to be carried out for 1241 acres (5 Square Kilometer) of land parcel from Bisra Chowk to Panposh Chowk(BCPC) including Brahmani River, Rourkela (Boundary as provided in the drawing / as physically shown by the competent authority during survey).

The work shall be carried out as per topographic survey specifications as mentioned below;

1. **Topographical and Alignment Survey** - Topographical survey using Total Station/DGPS/Auto level of the area including preparation of road plan with levels along roads/streets at 10m intervals and junctions of roads, locations such as change in gradient, road turnings, naming areas, important landmarks and green/built up area including preparation of contour map.
2. Carry out the **block level survey** for the proposed plot areas with levels at 5 m X 5 m grid and generation of contours at 0.25 m interval. All levels shall be with respect to locally available permanent bench-mark. Establishing temporary bench marks within area / plot by using Total Station survey instruments with accuracy as per the Survey of India standards.
3. Benchmark stations shall be fixed at least 06 locations in the project area in consultation with RSCL engineer in charge including construction of bench mark pillars of RCC. The bench marks stations shall be established by Total Station Survey/Fly level survey with reference to GTS bench marks available near to or within project area or provided by client.
4. Establishing Temporary Benchmarks within the project area w.r.t the known GTS benchmark or a benchmark transferred from GTS as per point no 03.
5. UTM coordinate system shall be used for establishing the TBM /BM by DGPS survey.
6. Preparation of survey maps including plans, L-sections and Cross-sections showing all topographical/physical features to be included but not limited to – Railroad network including bridges/culverts, River, Sewerage System, localized depressions/elevations, Electrical poles, telephone poles, transformers, manholes, existing drains, trees, building lines, type of buildings (kutcha/semi pucca/ pucca /shops/houses, no. of stores etc.), and also building frontage, water supply lines, taps, bore wells, open wells, overhead tanks etc., all water bodies – lakes, streams, ponds, canals & places such as temples, temple, mast, mosque, church, grave yard, road width, type of road surface, invert level of natural nallas/pond/rivers including HFL of discharging bodies etc.
7. Locations of existing drains clearly identifying the type (open/closed/Cross-section type /kutcha/pucca, within or outside foot path), width and invert level of drain including the beginning and end of drain, sizes of drains.

8. Location of existing sewers (if any) with diameter, manholes etc, wells capacity data.
9. Mapping of existing water supply network with diameter, overhead tank with capacity and staging, UGR with capacity, pumping station etc.
10. Levels at bridges, culverts with key details such as GA, width, deck level, girder level, etc.
11. Levels at important locations like road junctions, area where there are major undulations of the ground etc.
12. Railway lines with details of culverts-ventway and levels details
13. The levels taken shall be sufficient enough so as to depict the true ground profile. High flood levels shall be marked on the maps for river/ nallah crossings if any.
14. Surveyor shall carry out surveys for longitudinal section (L-section) and cross section of nallah / river / natural drains or any other hydrological features if advised by Engineer in charge. Levels (invert level) shall be taken along the centre line of nallah / river at 25 m interval and levels at 2.5 m interval across the width of Nallah/Drain/River on either side of centre line. Details of an additional cross section shall be taken wherever the change in cross section of nallah/river. Also Obstructions/siltation shall be noted over length and width of the drain in the survey drawing.
15. The drawings shall be prepared at 1:500 scale or scale specified by client during survey with clear marking of North direction and Legend.
16. Submission of two hard copies of survey report (Word and PDF format) and survey drawings along with the editable soft copy (AutoCAD format) and in GIS format. Drawings shall be prepared in the AutoCAD format with (3D format) X, Y & Z-coordinate of physical property. Also prepare plan / drawing in A0 sheet in suitable scale in AutoCAD format and submit hard and soft copy of drawing etc.

The survey agency shall deploy adequate no. of survey team with Total Station, Auto Levels, and DGPS equipment's to complete the work within 60 days from date of Work Order.

- i. You will make your own arrangement for the water and electric supply required for your operations as well as water required for potable usage during the period of the survey works.
- ii. The cost for providing local transportation, accommodation and incidental expenses for staff deployed for survey shall be borne by survey agency and are included in the above fee. Thus, the fee for services indicated in the above table is all-inclusive fee and no extra fee on any account shall be payable by RSCL.
- iii. The quantities indicated in table are indicative quantities. It should be clearly understood that the quantities to be actually executed may vary from those indicated above to suit the site constraints. RSCL reserves the right to modify any aspect of the scope of survey at any time till successful completion of the contract.

Data Collection:

- Maps/reports/documents related existing infrastructure of city to be collected from the client.
- The collected map/drawings are to be digitised and superimposed on survey maps.

2. Evaluation Process

Employer shall constitute a Tender Evaluation Committee to evaluate the responses of the bidders. The Tender Evaluation Committee shall evaluate the responses to the RFP and all supporting documents/documentary evidence. Inability to submit requisite supporting documents/documentary evidence by bidders may lead to rejection of their bids.

The decision of the Tender Evaluation Committee in the evaluation of bids shall be final. No correspondence will be entertained outside the process of evaluation with the Committee. The Tender Evaluation Committee may ask for meetings or presentation with the Bidders to seek clarifications or confirmations on their bids.

The Tender Evaluation Committee reserves the right to reject any or all bids. Each of the responses shall be evaluated as per the criteria and requirements specified in this RFP.

The steps for evaluation are as follows:

2.1 Stage 1: Pre-Qualification

- a. Employer shall validate the Set 1 “RFP Document fee & Bid Security/Earnest Money Deposit (EMD)”.
- b. Technical and Financial/Price bids for those bidders who don't pre-qualify will not be opened. Financial/Price bid will not be opened for those bidders, who don't qualify the technical evaluation. Bid Security amount shall be returned for those who don't qualify the financial evaluation stage and after work order/LOI is issued to successful bidder.

2.2 Stage 2: Technical Evaluation

- a. Set 2 “Technical bid” will be evaluated only for the bidders who succeed in Stage 1.
- b. Employer will review the technical bids of the short-listed bidders to determine whether the technical bids are substantially responsive. Bids that are not substantially responsive are liable to be disqualified at Employer's discretion.
- c. The bidders' technical proposal proposed in the bid document shall be evaluated as per the requirements specified in the RFP and technical evaluation framework as mentioned in Section 4.
- d. if any clarifications required on Bidders technical proposal shall be called for meeting and presentation by Employer.
- e. Each Technical Bid will be assigned a technical score out of a maximum of 100 marks. Only the bidders who get an Overall Technical score of 70% or more in the Technical Evaluation Framework as given in Section 4 will qualify for commercial evaluation stage. Failing to secure minimum marks shall lead to technical rejection of the Bid.

2.3 Stage 3: Financial/Price Evaluation

- a. All the technically qualified bidders will be notified to participate in Financial/Price Bid opening process.

- b. The Price bids for the technically qualified bidders shall then be opened on the notified date and time and reviewed to determine whether the Price Bids are substantially responsive. Bids that are not substantially responsive are liable to be disqualified at Employer's discretion.
- c. Price Bids that are not as per the format as per Volume IV-Price Bid shall be liable for rejection.
- d. The bid price shall be exclusive of Goods Service Tax (GST) and other applicable taxes (if any). Taxes & Duties (if any) to be shown as extra in Indian Rupees.
- e. Commercial bids of technically qualified bidder shall be evaluated on a score of 100 points. The Commercial Score of the bidder shall be calculated with respect the lowest Total Price by technically qualified bidder. The methodology of Commercial Score shall be as follows :
Commercial Score of the bidder under consideration = (Lowest Total Price from all technically qualified Commercial Bids / Total Price quoted in Commercial bid by the bidder under consideration) X 100
- f. If the Bid of the successful Bidder is seriously unbalanced in relation to the Engineer' estimate of the cost of work to be performed under the contract, the Employer may require the Bidder to produce detailed price analyses for any or all items of the price Bid, to demonstrate the internal consistency of those prices with the employers requirement, specifications, implementation methods and schedule proposed. After evaluation of the price analyses, the Employer may require that the amount of the performance security be increased at the expense of the successful Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract. The amount of the increased performance security shall be decided at the sole discretion of the Employer, which shall be final, binding and conclusive on the bidder.

2.4 Stage 4: Total Bid Evaluation

- a. The Total Score shall be based on Quality and Cost based Evaluation (QCBS).
- b. Technical Score shall have 80 % weightage and Commercial Score shall have 20% weightage.
- c. The Total Score of the bidder = $0.8 \times (\text{Technical Score}) + 0.2 \times (\text{Commercial Score})$
- d. The bidder achieving the highest Total Score shall be invited for negotiations for awarding the contract. In case of a tie where two or more bidders achieve the same highest Total Score, the bidder with the higher Technical Score will be invited first for negotiations for awarding the contract.

3. Qualification Criteria

SI	Qualification Criteria	Documentary Evidence
1	The average annual turnover of minimum INR 10 Lacs over the last Three financial years ending year 2016-17	1. Audited financial statements for the last Three financial years 2. Certificate from the Chartered Accountant on turnover details over the last three (3) financial years
2	The bidder should have completed Topographical survey in last 3 years i) One job having job value of INR 16 lacs ii) Two jobs having job value of INR 10 lacs iii) Three jobs having job value of INR 8 lacs	Copy of Completion Certificate / Work order / Reference of person under whom jobs are executed / any other document in support of successful completion of job
3	The bidder should not have been black-listed by any State / Central Government Department or Central /State PSUs as on bid submission date	Legal Attorney certified letter of undertaking to this effect on the letter head, co-signed by bidders' authorized signatory.

4. Technical Evaluation Framework

The Bidder's technical proposal proposed in the Technical Evaluation bid shall be evaluated as per the evaluation criteria in the following table.

Section no.	Evaluation Criteria	Total Marks
A.	Sole bidder/Lead Bidder Profile	10
B.	Project Experience	25
C.	Approach & Methodology	50
D.	Proposed resources	15
Overall Technical Score Total		100

Important: Qualification criteria for technical evaluation and progression to commercial evaluation stage.

Only the bidders who get an Overall Technical score of 70% or more will qualify for commercial evaluation stage Failing to secure minimum marks shall lead to technical rejection of the Bid.

N.B- Authority (or a nominated party) reserves the right to check/validate the authenticity of the information provided in the Pre-qualification and Technical Evaluation criteria and the requisite support must be provided by the Bidder.

The following sections explain how the Bidders shall be evaluated on each of the evaluation criteria.

5. Technical Bid Criteria & Evaluation

Sr. No.	Criteria Category	Evaluation Criteria Details	Max Marks allotted	Supporting Documents required
A	Sole bidder/ Lead bidder Profile (Max. 10 marks)			
A1		The average annual turnover of minimum INR 10 Lacs over the last Three financial years ending year 2016-17	7	1. Audited financial statements for the last Three financial years 2. Certificate from the Chartered Accountant on turnover details over the last three (3) financial years
A2	Manpower	Bidders should have professional surveyors in the team or as an associate having following experience 1. Minimum 3 years experience in Topographical Survey.	3	CV of the Surveyors with his professional work portfolio to be submitted. CV of Lead Surveyor Copy of Completion Certificate / Work order / Appreciation letter / Newspaper publication / Publication in leading magazine / Reference of person under whom jobs are executed / any other document in support of successful completion of job
B.	Project Experience (Max –25 marks)			
B1		The bidder should have completed Topographical survey in last 3 years i) One job having job value of INR 16 lacs ii) Two jobs having job value of INR 10 lacs iii) Three jobs having job value of INR 8 lacs Marks shall be allotted as given below: Each Project with minimum value INR 8 Lacs = 15 marks Each Project with minimum value INR 10 Lacs = 20 marks Each Project with minimum value INR 16 Lacs = 25 marks	25	Copy of Completion Certificate / Work order / Reference of person under whom jobs are executed / any other document in support of successful completion of job

Sr. No.	Criteria Category	Evaluation Criteria Details	Max Marks allotted	Supporting Documents required
		Maximum marks = 25 marks		
C.	Proposed Design for this project (Max –25 marks)			
C1		<p>The bidder should carry out the survey as explained in RFP document and to the satisfaction of Employer.</p> <p>Marks shall be allotted as given below:</p> <p>Bidders should have surveyed area of 300 Hectares is meeting minimum Employers Criteria/Expectations = 20 marks</p> <p>Bidders should have surveyed area of 400 Hectares is as per Employers Criteria/Expectations = 40 marks</p> <p>Bidders should have surveyed area of 600 Hectares and Above Employers Criteria/Expectations = 50 marks</p> <p>Maximum marks = 25 marks</p>	25	The Tender Evaluation Committee will give marking based on bidders past projects and presentations.
D	Approach & Methodology & Solutions proposed (Max. 25 marks)			
D1	Robustness & quality	<input type="checkbox"/> Adequacy, robustness and scalability of proposed technology	10	Assessment to be based on a note covering all requirements as mentioned submitted by Bidder.
D2	Understanding	<input type="checkbox"/> Demonstrated level of understanding of the scope of work and all aspects of the project	10	
D3	Assessment of Works and Mobilisation plan	Deployment strategy of Manpower <input type="checkbox"/> Contingency management <input type="checkbox"/> Mobilization of existing resources and additional resources as required	5	
E	Proposed resources (Max. 10 marks)			
E1	Proposed resources (Max. 15 marks)	For minimum qualification and experience refer clause 3.6.2 – Key Personal Criteria <input type="checkbox"/> Project Manager – 4 marks <input type="checkbox"/> Lead Surveyor – 4 marks	15	

Sr. No.	Criteria Category	Evaluation Criteria Details	Max Marks allotted	Supporting Documents required
		<input type="checkbox"/> Surveyor – 4 marks <input type="checkbox"/> GIS and Execution team – 3 mark		

6. BASIS FOR PRICES

- 6.1 The prices shall remain firm and not be subjected to any escalation whatsoever throughout the execution of the Contract.
- 6.2 All taxes/ duties as applicable shall be indicated separately in the Bill of Quantities. RSCL will not be liable to pay any amount towards the same except for reasons of statutory changes.
- 6.3 You shall arrange for all transport, camping facilities and day to day needs of your personnel and equipment as required at your own cost.
- 6.4 Quantity of survey mentioned is tentative and it may vary as per project requirement.
- 6.5 Payment shall be made as per actual quantity.
- 6.6 The agency is to quote the basic rates excluding GST. GST shall be paid extra as per prevailing rates.

7. Schedule of Rate

The rates should be quoted in format as below –

Item Description	Quantity	Units	Unit Rates in (₹)	Total Amount (₹)
Establishing a benchmark with a suitable post AS PER STANDARDS and marking, after transferring level by fly levelling from the closest permanent benchmark (wrt GTS)	06	No		
Topographic block contour survey by total station/Auto level/DGPS as specified above, including necessary mobilisation and demobilisation	~6	Sq Km		
Block Level Survey 5mX5M	~6	Sq Km		
Hydrographic (Bathymetric) Survey taking levels along the centre line of River at every 50 m interval and cross section at every 250m interval with spot levels interval at every 50m on either side of the centreline <i>covering full width of River.</i>	3.5 Km (but may vary as per site conditions)	Km		
Preparation of Survey Report (Editable and non-editable format) and Hard Copy	02	No		

***It shall be in sealed envelope separately.**

8. TERMS OF PAYMENT

- 8.1 The Terms of payment shall be as follows:
 - a) 40% (Forty Percent) - Completion of field work and submission of field data and drawings.
 - b) 40% (Thirty percent) - Submission of final drawings and reports.
 - c) 20% (Thirty percent) - Approval of all drawings and reports.
- 8.2 The invoice shall be raised for the actual quantities for items executed in each segment after completion of milestones mentioned above.
- 8.3 You shall submit the bills in printed forms and the charges in the bills shall always be entered at the rates specified in the bid or in the case of any extra work ordered in pursuance of these conditions and not mentioned or provided for in the bid, at the rates subsequently accepted by RSCL for such work.
- 8.4 You shall not execute any additional quantities over and above the quantities mentioned, without prior approval from RSCL.
- 8.5 If the work is not completed within 40 days due to reasons attributable to the agency 0.33% per day maximum upto 5% of the work value shall be levied.

9. COMPLETION PERIOD

- 9.1 Time is the essence of the Contract. The following Contract Period for different sections/ areas shall be applicable from the zero date (Effective Date of Contract). Contract Period includes mobilisation, execution of field works, submission of reports and drawings for different sections/ areas as mentioned below:

(a)	Commencement of Work (i.e. Date of Contract)	Issue of LOI/Letter of Award
(b)	Completion of fieldwork and Submission of Draft Report and Drawings	Within 40 days from date of Contract
(c)	Submission of Final Report and Drawings incorporating comments by RSCL	Within 15 days from the receipt of comments on the Draft Report and Drawings from RSCL.

10. DRAWINGS AND DOCUMENTS

- 10.1 Preparation of alignment plans and profiles with control points for the alignments in suitable scale, on A1 size drawings as mentioned above.
- 10.2 Prepare and submit the document explaining the method used for survey and brief note on procedure followed, along with Input parameters, if any.
- 10.3 Preparation of digital maps (including submission of 2 hard copies of survey report with drawings as draft and submission of 2 hard copies and 2 CD's of survey report with drawings as final report):
- 10.4 All the survey data, survey results, report and recommendations shall be in SI units. The licensed version of AUTO CAD shall be used for the submission of drawings in soft copy.
- 10.5 The survey agency shall work in close coordination with RSCL/ Client and other agencies.
- 10.6 The Surveyor, his employees and agents shall not disclose any information/ drawings/ documents furnished by RSCL for the subject work.
- 10.7 Any changes agreed and executed by you will be incorporated in the Report to be

furnished by you.

11. INSPECTION AND SUPERVISION

- 11.1 Periodic Inspection of the Topographic Survey Works shall be carried out by RSCL.
- 11.2 Your Supervisor in charge of the work at site shall be an engineer well versed in the execution of similar survey works
- 11.3 No work is generally expected to be done at night. However, if night work is required to be undertaken to adhere to the time schedule, prior approval of RSCL/Engineer in charge is essential. In case night work is undertaken, then sufficient lighting shall be arranged by you to safeguard the workmen and the work. However, night work if undertaken shall not entitle you to any increase in rates.

12. CORRESPONDENCE

All correspondence and documents pertaining to this Contract shall be addressed as follows:

Rourkela Smart City Limited
RDA Office Building, Udit Nagar
Rourkela-769012
E-mail- rourkelascl@gmail.com

Attn.: **CEO, RSCL**

13. SAFETY NORMS

All your workmen and other staff shall take safety precautions. The safety rules cover wearing of safety shoes, helmets, life jackets, belts and such other measures as directed by RSCL to ensure safety of personnel. In addition, you shall cover all personnel deployed at Site for all statutory insurance.

14. DISPUTES

In case of any dispute, this Contract is subject to the jurisdiction of Rourkela, Odisha.

Project Area Map:

