



REQUEST FOR QUOTATION (RFQ)

Topographic and Bathymetric Surveys of River Cross-Sections in the Tawi River Basin – Phase 1

Issued on:

January, 03rd, 2019

REQUEST FOR QUOTATION (RFQ)

Topographic and Bathymetric Surveys of River Cross-Sections in the Tawi River Basin – Phase 1

INDEX

	Page
1 GENERAL REMARKS	1
2 AREA OF INTEREST AND SCOPE OF WORK	3
3 GENERAL REQUIREMENTS AND TECHNICAL SPECIFICATIONS	6
4 SURVEYING SERVICES SCHEDULE	10
5 DELIVERABLES	11
6 INSTRUCTIONS TO BIDDERS	13
6.1 PREPARATION OF PROPOSALS	13
6.1.1 Language of the Proposal.....	13
6.1.2 Documents comprising the Proposal	13
6.1.3 Proposal prices.....	14
6.1.4 Proposal currency.....	15
6.1.5 Period of validity of Proposals.....	15
6.1.6 Suggested Payment Terms	15
6.2 CLARIFICATIONS AND REQUEST FOR INFORMATIONS	15
6.3 REJECTION OF PROPOSALS.....	16
6.4 ACCEPTANCE OF PROPOSALS.....	16
6.5 ELIGIBILITY CRITERIA	16
6.6 EVALUATION OF PROPOSALS	17
6.7 PROPOSAL DUE DATE AND SUBMITTAL PROCEDURE	18
6.8 PERFORMANCE BANK GUARANTEE	18

Appendix 1: Area of Interest: Tawi River and major Nallahs extensions to be surveyed during Phase 1

Appendix 2: Proposal Submission Form

Appendix 3: Quotation Form

Appendix 4: List of Survey Equipment's available with the Survey Firm

Appendix 5: Drawing and Specification for Permanent Survey Marker

1 GENERAL REMARKS

The Joint Venture **AQUALOGUS & OILTECH** (hereafter the “Consultant”) is requesting proposals from surveying/engineering firms (hereafter the “Surveyor”) to conduct detailed topographical / bathymetric surveying services (hereafter the “Surveying Services”) in the Tawi River and major tributaries.

The topographic / bathymetric survey data obtained will be utilized by the Consultant to prepare the *Feasibility and Detailed Project Report for Flood Mitigation and Comprehensive River Management Measures for Tawi Basin* (hereafter the “Project”), under a Contract established with the Project Management Unit (PMU), Jhelum & Tawi Flood Recovery Project (JTFRP), Disaster Management, Relief, Rehabilitation and Reconstruction Department, Government of Jammu and Kashmir.

Therefore, the Surveying Services shall be carried out in two (2) phases as follows:

- **Phase 1.A:** Ground control points (GCPs) and establish permanent benchmarks (during February, 2019)
- **Phase 1.B:** Tawi river and lower reaches of the major Nallahs (from February 2019 to April, 2019)
- **Phase 2:** Remaining nallahs (significant extension) and other areas found necessary (during 2019)

The present Request for Proposals for Surveying Services are relative to the Phase 1.A and Phase 1.B only.

The Phase 2 of the survey which comprises cross-section survey of several kilometres of tributaries, will be undertaken during 2019, after successfully conclusion of Phase 1. Performance of the selected firms in Phase 1 will be a significant component in the evaluation of proposals for Phase 2.

Therefore, the scope of the Surveying Services under the present RFQ can be summarized as follows:

- **Phase 1.A:** 40 ground control points (GCPs) and establishment of 250 permanent survey markers
- **Phase 1.B:** river cross-sections along an extension of around 203 km (135 km along the Tawi River and 68 km along major Nallahs).

The Consultant will engage in-house Surveyors for monitoring the Surveying Services and supervise river, channel alignment, and topographic survey work at the ground.

The deadline to complete the Phase 1 of the survey is strictly limited requiring completion definitely no later than April, 2nd 2019. Therefore, Survey Firms must consider carefully the

technical and human resources required to meet this commitment and proposed a suitable work plan and technical approach/methodology.

Only Survey firms that can demonstrate that they have the resources to successfully undertake this survey according to the required quality standards within the specified time frame will be considered.

Additionally, the Survey firms must be able to satisfy the eligibility criteria as detailed in the **Section 6.5** of this RFQ.

The proposal and all material received in response to this RFQ shall become the property of the Consultant and will not be returned to respondents. By submitting a proposal, a respondent acknowledges and agrees that the Consultant may, at its sole option, use any or all ideas not protected by intellectual property rights that are presented in any proposal regardless of whether the proposal becomes part of a contract. Notwithstanding any respondent copyright designations contained on proposals, the Consultant shall have the right to make copies and distribute proposals internally and to comply with public record or other disclosure requirements, or rule or order of any court of competent jurisdiction.

2 AREA OF INTEREST AND SCOPE OF WORK

The Tawi river basin, located in the State of Jammu and Kashmir, India, is a part of Chenab basin in Western Himalayas. The basin is contained in between 32°35' to 33°05' North Latitude and 74°35' to 75°45' East Longitude. The Tawi river flows for about 141 km up to the point where it enters Pakistan. Its origin lies in the Kali Kundli Glacier.

The Tawi basin (**Figure 2-1**) extends to an overall area of 2,200 sq.km which falls mostly within the Districts of Jammu and Udhampur with a small portion in Doda.

The upper portion of the river is characterized by rugged mountainous topography, whereas lower basin consists of low hills and gradational plains. The average height of the basin is 2200 m and it varies from 265 m to 4 400 above the mean sea level. The slope of the basin is from East to West in the upper part, while North-East to South-East in the lower part.

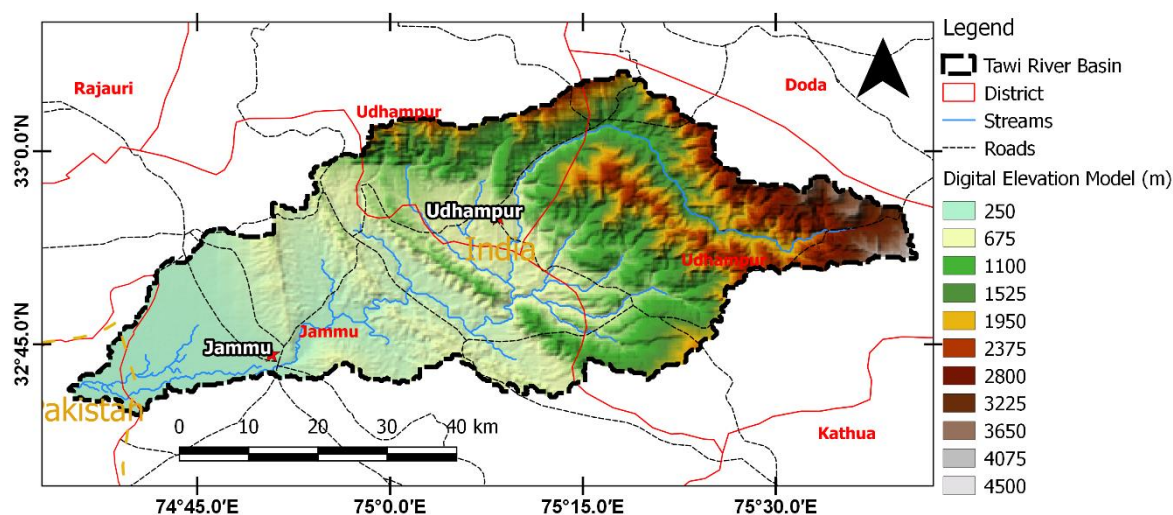


Figure 2-1: Tawi River Basin and digital elevation model (DEM).

The Surveying Services will comprise the following components:

- topographic / bathymetric surveys along the Tawi River and major Nallahs;
- topographic survey of Ground Control Points (GCPs) on locations to be previously identified by the Consultant;
- establishment of permanent survey benchmarks.

The major Nallahs to be survey during the **Phase 1.B** are identified as follows:

- Duddar Nallah
- Ram Nagar WaliKhad Nallah
- Gambir Nallah
- Jhajjar Nallah
- Sardhan Nallah

- Ballini Nallah
- Chirwa Nallah
- Balole Nallah
- Sohagni Nallah

The **Appendix 1** presents the Tawi River and major Nallahs extensions to be surveyed during **Phase 1.B**.

Moreover, the river extensions to be surveyed in the **Phase 1.B** are summarized in the Table 2.1.

Table 2.1 – Tawi river and Nallahs extensions to be surveyed during Phase 1.B.

No.	River / Nallah	Extension (km)	Limits	Remarks
1	Tawi	135	From Indo-Pakistani border up to 5 km upstream of Salmay Bridge (near Udhampur)	<ul style="list-style-type: none"> – Include Waddi and Nikki Tawi – Detail survey of existing structures, namely bridges, Jammu barrage, spurs, embankments, banks stabilization works, etc
2	Balole	28	From Nikki Tawi confluence up to Kat Walta Bridge	
3	Sohagni	5	From Waddi Tawi confluence to 5 km upstream	– Lower reach
4	Chirwa	5	From Tawi confluence to 5km upstream	– Lower reach
5	Ballini	5	From Tawi confluence to 5km upstream	– Lower reach
6	Sardan	5	From Tawi confluence to 5km upstream	– Lower reach
7	Jhajjar	5	From Tawi confluence to 5km upstream	– Lower reach
8	Gambir	5	From Tawi confluence to 5km upstream	– Lower reach
9	Ram Nagar WaliKhad	5	From Tawi confluence to 5km upstream	– Lower reach
10	Duddar	5	From Tawi confluence to 5km upstream	– Lower reach

Accordingly, the total extent to be surveyed during the **Phase 1.B** is estimated as around 203 km (135 km along the Tawi River and 68 km along major Nallahs).

In the Tawi River, the river cross section survey is to be carried out at every 500 m up to the Suspension Bridge Bhaid Devta (coordinates: Lat: 32°47'24.11"N; Long: 74°58'9.01"E - located around 40 km upstream of the India-Pakistan border), and closer at curved reaches, bridges sections, barrage sections or any other hydraulic structure and where there is rapid change in cross-section or gradient. Downstream of the Suspension Bridge Bhaid Devta, the river cross section survey in the Tawi River is to be carried out at every 200 m up to India-Pakistan border, and closer at curved reaches, bridges sections, barrage sections or any other hydraulic structure and where there is rapid change in cross-section or gradient.

In the major Nallahs, the river cross section survey is to be carried out at every 500 m, and closer at curved reaches, bridges sections, barrage sections or any other hydraulic structure and where there is rapid change in cross-section or gradient.

For the purpose of determining an appropriate unit rate per cross-section, the estimated number of sections is 390 in the Tawi River (190 cross sections upstream of Suspension Bridge Bhaid Devta and 200 cross sections downstream up to India-Pakistan) and 136 along the major nallahs.

The topographic / bathymetric surveys shall preferably be carried out during the lean flow period, *i.e.* from February, 2019 to April, 2019. Therefore, the Surveyor must initiate the surveys on the early February, 2019. Since Tawi and major Nallahs are seasonal and have low flow depths during lean flow period, the bathymetric surveys (for underwater parts of the cross section) should be conducted by wading. Nevertheless, the survey firm might be prepared to use boat mounted doppler echo depth sounding and RTK GPS methods if required.

Different technical approaches for the topographical surveys could be suggested, such as RTK GPS, ETS, and LIDAR.

Nevertheless, the Surveyor shall demonstrate capability to handle and arrange the necessary authorizations to conduct surveys in Jammu District, and particularly near the Indo-Pakistani border.

3 GENERAL REQUIREMENTS AND TECHNICAL SPECIFICATIONS

The general requirements and technical specifications for the Surveying Services under this RFQ are presented below:

1. Surveys shall be conducted in WGS 84 spheroid Datum, Grid co-ordinates are in terms of Universal Transverse Mercator (UTM) Projection: UTM Zone 43N.
2. Surveys will be conducted in metric units.
3. The topographical / bathymetrical surveys shall include all extensions as defined in section “Area of interest and scope of work”. The survey shall be prepared by a Licensed Land Surveyor, and shall be provided in the manner defined under section “Deliverables”.
4. In the Tawi River, the river cross section survey is to be carried out at every 500 m up to the Suspension Bridge Bhaid Devta (coordinates: Lat: 32°47'24.11"N; Long: 74°58'9.01"E - located around 40 km upstream of the India-Pakistan border), and closer at curved reaches, bridges sections, barrage sections or any other hydraulic structure and where there is rapid change in cross-section or gradient. Downstream of the Suspension Bridge Bhaid Devta, the river cross section survey in the Tawi River is to be carried out at every 200 m up to India-Pakistan border, and closer at curved reaches, bridges sections, barrage sections or any other hydraulic structure and where there is rapid change in cross-section or gradient.
5. In the major Nallahs, the river cross section survey is to be carried out at every 500 m, and closer at curved reaches, bridges sections, barrage sections or any other hydraulic structure and where there is rapid change in cross-section or gradient.
6. Above water, the cross-sections shall be extended as follows (whichever corresponds to a longer extension):
 - across the embankments (where present) for up to 200 m beyond country side toe of embankment where the river is jacketed to one side or on both sides, or up to the top of the river bank where no embankment is present; or
 - extended up to 10 m above the HLF (highest level flood) whenever information is available.
7. The objectives are to collect precise level data at close intervals along the cross-sections. It is anticipated that level data should be collected at least every 5 m along each cross-section. Nevertheless, the levels taken should be closer whenever a significant gradient occurs, being sufficient enough so as to depict the true ground profile (both above and under water parts).
8. Highest flood levels shall be surveyed and marked on the maps for river and nallahs whenever available.
9. The underwater parts of the cross section are to be surveyed by wading or if required using boat mounted doppler echo depth sounding and RTK GPS methods.

10. Obstructions/siltation and bank erosion shall be noted over length and width of the drain in the survey drawing.
11. Dimensions and levels of all bridges, Jammu barrage, embankments, spurs, culverts, bank stabilization works, etc shall be surveyed. All the key features and dimensions shall be surveyed. For Jammu barrage, this shall include: weir coordinates and dimensions, spans, piers, embankments, guiding walls and any other relevant data. For bridges, this shall include: centreline coordinates at both ends and centre of bridge, deck and soffit levels, bridge width, guard rail/guard wall levels, pile cap and pier cap levels, pier dimensions and any other relevant data.
12. Hydrological Stations in Jammu and Udhampur shall be surveyed, including the cross-section survey, water level meters (gauges), flood marks, etc. The inclined water level meter in Jammu gauging station is currently silted below 2.35 m level. Therefore, the Surveyor is responsible for locally desilting the inclined water level meter before carry out the survey.
13. The Surveying Services shall locate and label all waterways within the project limits. Show edge of waterways and water elevation at the date of survey is also required.
14. The Surveying Services shall also include the locate of all buildings and structures and identify materials and all property lines within requested survey area.
15. The Surveying Services shall also include approximate delineation of vegetation, trees, bare soil, etc along the river banks;
16. The Surveying Services shall also include the location of utilities (*i.e.* gas, water, sewer, electricity), both above ground and below ground, including all pipe sizes, material, inverts, rim elevations, etc, including overhead utility wires. The Surveyor may also be required to call relevant governmental agencies to locate underground utilities. The Surveyor shall also provide a list of the operating authority of each utility, including contact names and numbers of the representatives in the survey's general notes.
17. The survey shall include the location and width of all abutting roads, streets, alleys, or drives. All roadways must have names, jurisdiction (city, state, etc) and pavement type.
18. The survey shall include the location of all fencing and walls located in survey area/cross sections. Survey shall include the top of wall elevations, and provide bottom of wall elevations on both sides.
19. The Surveys shall be tied to Jammu and Udhampur Districts permanent markers and/or local authority having jurisdiction, and adequately recorded on produced deliverables.
20. Permanent Benchmark stations shall be fixed at least 250 locations in the project area in consultation with Consultant's Engineers and Supervision Surveyors in charge including construction of bench mark pillars in concrete. The drawing and specification of Permanent Survey Markers is presented in Appendix 5.

21. The establishment of permanent markers must be finalized by the Survey firm in consultation with the Survey of India as per relevant Indian Standards, namely, but not limited to, *IS 5497: Guide for topographical surveys for river valley projects*. The quantity of permanent benchmarks is estimated as 250 Nos at this phase. Nevertheless, the quantity and location of necessary permanent benchmarks stations must be finalized during the Inception Phase, after contract signing and notice to proceed.
22. The bench marks stations shall be established by ATK GPS Total Station Survey/Fly level survey with reference to GTS bench marks available near to or within project area.
23. The new permanent benchmarks shall be uniquely numbered and adequately identified and protected.
24. Establishing semi-permanent Benchmarks within the project area with respect to the known GTS benchmark or a benchmark transferred from GTS as necessary.
25. The selected firms will use their own equipment, materials, supplies, accessories, office space, etc. to perform the required work.
26. The Surveyor shall provide and maintain insurance coverage for claims under Workers Compensation Acts; claims for damages because of bodily injury, including personal injury, sickness or disease, or death of employees or of any other person; and from claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom. The Surveyor's proposal shall state the coverages and limits of liability of professional liability insurance that will be maintained for protection from claims arising out of the performance of professional services. Certificates of Insurance evidencing the above coverages shall be made available at the Owner's request.
27. The Surveyor shall notify appropriate State Agencies and Governmental Departments to arrange and obtain necessary permissions and authorizations to conduct the Surveying Services.
28. All the necessary authorizations and official permission from Governmental Authorities to conduct topographical and bathymetrical surveys in Jammu District and particularly in Line of Control (LOC) near Indo-Pakistani border shall be completely handle and arranged by the Surveyor. The Consultant and the Project Management Unit (PMU), Jhelum & Tawi Flood Recovery Project (JTFRP), will assist the Survey firm as necessary, with work authorizations letters. It is emphasized that this must be done by the Survey firm during the Inception Phase, right after the notice to proceed, in order to avoid any delays associated with permission to conduct work in specified areas.
29. The Surveyor shall be responsible for all necessary research.
30. The Surveyor will be required to submit a draft survey for review within 30 days of the commencement of the contract, and shall be responsible for making any revisions or additions as required.

31. The Consultant reserves the right to redefine or adjust its priorities, modify the process for Surveying Services as it deems necessary.
32. The Surveyor shall work in close coordination with Consultant and other relevant agencies.
33. Surveyor shall return to site at no charge after submittal to correct any discrepancies discovered in the submitted Survey.
34. The Survey must ensure that all workmen and other staff shall take safety precautions. The safety rules cover wearing of safety shoes, helmets, life jackets, belts, etc to ensure safety of personnel. In addition, the Surveyor shall cover all personnel deployed at Site for all statutory insurance.
35. The Surveyor, his employees and agents shall not disclose any information/ drawings/ documents furnished by Consultant for the subject work.

The proponent firms are encouraged to propose additional technical specifications which would increase the quality and output of the Survey Services and which may differentiate it from other proponents.

4 SURVEYING SERVICES SCHEDULE

All work included must be completed and a final product must be received strictly within sixty (60) days from the date of authorization to proceed.

The available time to conclude the topographic and bathymetric surveys is strictly limited requiring completion preferably by the mid of April, 2019. Therefore, the proponent Surveyors must consider carefully the resources required to meet this commitment and proposed a suitable work plan and technical approach/methodology.

Only proponent firms that can demonstrate the availability of necessary human and technical resources to successful undertake the Surveying Services to the standard required within the specified time frame will be considered.

It is anticipated that this contract will be awarded by February 05th, 2019.

It is anticipated the agreement between the selected Surveyor and the Consultant will be executed to allow for commencement of work on around February 08th, 2019. The contract completion date is anticipated as April 11th, 2019.

The anticipated target dates are listed below:

- December 24th, 2018 – Issuing of the RFQ to the Proponent Survey Firms
- January 15th, 2019 – Submission of proposals deadline
- January 22nd, 2019 – Consultant review of proposals
- February 05th, 2019 – Anticipated executed contract date and notice to proceed
- February 08th, 2019 – Mobilization and commencement of the Survey Services
- February 22nd, 2019 – Submission of the Ground Control Points (GCPs) to the Consultant
- March 12th, 2019 – Submission of 50% final draft CAD drawings and raw data for Consultant review
- April 11th, 2019 – Submission of all deliverables. Contract completion date.

Nevertheless, proponent firms are encouraged to propose alternative technologies and approaches which would enable the required quality and output to be obtained in less time.

Time is of the essence in this scope of work. The proponent with the best delivery date will receive due consideration.

5 DELIVERABLES

The successful respondent Surveyor shall prepare and submit to the Contract the deliverables as follows:

- a) Submission of two hard copies of survey report (Word and PDF format) and survey drawings along with the editable soft copy (latest version of AutoCAD format, compatible with civil 3D version) and in GIS format.
- b) Processed survey data in AutoCAD file, shape file and ascii file format (x,y,z or grid).
- c) Survey maps including plans, L-sections and Cross-sections showing all topographical/physical features. The maps shall be drawn to a convenient scale, with that scale clearly indicated with a graphic scale. Additionally, the survey maps shall bear the name, address, telephone, and number of the professional land surveyor who performed the survey, his or her official seal and registration number, the date the survey was completed.
- d) Alignment plans and profiles with control points for the alignments in suitable scale, showing channel and bathymetric cross-section locations and end point reference points.
- e) Structural cross-section and plan diagrams showing dimensions and levels of Jammu Barrage, bridges, culverts, spurs, embankments, river bank stabilization works, etc.
- f) Survey raw data.
- g) Survey Report including:
 - Explanation of the method used for survey and brief note on procedure followed, along with Input parameters, if any.
 - One copy of field notes or data collector information.
 - Summarizing the survey results including survey methods used, equipment used, survey teams employed, survey accuracies achieved, any legitimate difficulties and delays in work execution, etc.
 - Photographic evidences (with geotags) of surveyed cross sections, relevant structures, gauging stations, etc.
 - Map (1:25 000 scale minimum), list and show all field benchmarks, including their elevations and photographic evidence.
 - Summary of coordination efforts with local and national governmental authorities to expedite the survey services.
 - Provide a list of the operating authority of each surveyed utility, including contact names and numbers of the representatives.

- h) Provide weekly progress reports including the schedule of actual work component completion versus original scheduled work plan.

All survey data shall be provided on external hard drive(s) in soft copy format and provided in mutually agreed hard copy format.

All the survey data, survey results, report and recommendations shall be in SI units - metric.

The technical specifications of the survey drawings are presented below:

- a) Drawings shall be submitted in the AutoCAD format with (3D format) X, Y & Z coordinate.
- b) All survey layers shall be indicated by the prefix SURV_.
- c) Surveyed Points and Contours at 0.5 m intervals shall be provided with assigned drawing elevation corresponding to their elevation in the field.
- d) All other entities in the drawing file shall be created on the drawing at elevation 0.00 except contour lines.
- e) The licensed version of AutoCAD shall be used for the submission of drawings in soft copy.

The proponent firms are encouraged to propose additional deliverables which would increase the quality and output of the Survey Services.

6 INSTRUCTIONS TO BIDDERS

6.1 PREPARATION OF PROPOSALS

6.1.1 Language of the Proposal

The Proposals prepared by the Surveyor and all correspondence and documents relating to the Proposal exchanged by the Surveyor shall be written in the English language. Any printed literature furnished by the Surveyor may be written in another language so long as accompanied by an English translation of its pertinent passages in which case, for purposes of interpretation of the Proposal, the English translation shall govern.

6.1.2 Documents comprising the Proposal

The Surveyor must be able to demonstrate previous experience with the type of work described in this RFQ. The submitted Technical Proposal should include the firm's qualifications, project team, resumes, detailed scope of services/tasks, schedule for completing the tasks previously specified.

Therefore, the proposals shall include the following elements:

- (a) Proposal Submission Form** (as per Appendix 2);
- (b) Bid Security:** All bidders must submit a bid security amount of INR 1 lakh in the form of Demand Draft with a validity of minimum 3 months from the last date of bid submission along with the proposal. This security amount will be immediately release for all unsuccessful bidders.
- (c) Operational and Technical Part of the Proposal**, including documentation to demonstrate that the Survey Firm meets all requirements, namely, but not limited to, the following elements:
 - Firm information, past experience, qualification, etc.
 - Technical Approach and Methodology.
 - List of Survey Equipment's available with the Survey Firm (as per Appendix 4)
 - Complete technical specifications of survey equipments.
 - Proposed Work Plan.
 - Manpower allocation.
 - Qualifications and experience of staff.
- (d) Financial Proposal**, with a proposed cost for the work previously described, as detailed below.

The Survey firms have to submit two (2) sealed and separated envelopes as follows:

Envelope 1: (a) Proposal Submission Form (b) Bid Security and (c) Operational and Technical Part of the Proposal

Envelope 2: (d) Financial Proposal

Instructions on Proposal Submission are detailed in the **Section 6.7** of this RFQ document.

6.1.3 Proposal prices

The Surveyor shall indicate on Lump Sum Fee and an appropriate breakdown of expenses to perform the Surveying Services proposed as response to this Request for Quotation (RFQ).

The completed quotation for conducting the Surveying Services shall be provided in format similar to the form presented in Appendix 3.

The quantities indicated in the Section “Area of interest and scope of work” and form included in Appendix 3 are tentative quantities. It should be clearly understood that the quantities to be actually executed may vary from those indicated above to suit the site constraints and as per project requirement. The Consultant reserves the right to modify any aspect of the scope of survey at any time till successful completion of the contract

Therefore, the Payment shall be made as per actual quantity, after approval of any additional quantities by the Consultant’s Engineers and Consultant’s Supervision Surveyors in charge.

The cost of the Surveying Services (including the furnishing of all materials, surveying equipment and computers, labor and any required insurance) shall be based upon a stipulated sum for all services based on this proposal, with adjustments to the stipulated sum being computed in accordance with the Surveyor’s attached rate schedule if changes in the work are authorized.

The cost for providing local transportation, accommodation and incidental expenses for staff deployed for survey shall be borne by Surveyor 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 the Consultant.

All taxes/duties as applicable shall be indicated separately in the Bill of Quantities. The Consultant will not be liable to pay any amount towards the same except for reasons of statutory changes.

The proponent Surveyor is to quote the basic rates excluding GST. GST shall be paid extra as per prevailing rates.

6.1.4 Proposal currency

All prices shall be quoted in Indian Rupees (INR).

6.1.5 Period of validity of Proposals

Proposals shall remain valid for Ninety (90) days following the tender closing date, pursuant to the clause Deadline for submission of Proposals. A Proposal valid for a shorter period may be rejected on the grounds that it is non-responsive.

6.1.6 Suggested Payment Terms

- a) 10% (ten percent) - mobilisation advance
- b) 20 % (twenty percent) - completion of 50% field work.
- c) 20 % (twenty percent) - completion of field work and submission of field data.
- d) 20% (twenty percent) – submission of final drawings and reports.
- e) 20% (twenty percent) – Approval of final drawings and reports.
- f) 10% (ten percent) - approval of all drawings and reports.

Further, The payment terms can be discussed and mutually agreed during the negotiation stage.

6.2 CLARIFICATIONS AND REQUEST FOR INFORMATIONS

The Consultant reserves the right to make clarifications, corrections, or changes in this RFQ at any time prior to the time proposals are opened. Questions and requests for information must be submitted before January 10th, 2018 to:

tawiproject@aqualogus.com ; and

varun@oiltech.in

All prospective Surveyors will be informed of said clarifications, corrections, or changes via an emailed addendum. All proposals submitted must acknowledge receipt of all addenda issued by the Consultant.

6.3 REJECTION OF PROPOSALS

Proposals that are not prepared in accordance with these Instructions may be rejected. If not rejected, the Consultant may demand correction of any deficiency and accept the deficiently prepared proposal upon compliance with these Instructions by the Survey Firms.

6.4 ACCEPTANCE OF PROPOSALS

Proposals submitted are offers only and the decision to accept or reject is a function of quality, reliability, capability, reputation, and expertise of the proponent Surveyor.

The Consultant reserves the right to accept the proposal that is, in its judgment, the best and most favourable to the interests of the Consultant and the Project based on the evaluation factors in this RFQ; to reject the low price proposal; to accept any item of any proposal; to reject any and all proposals; and to waive irregularities and informalities in any proposal submitted or in the request for proposal process; provided, however, the waiver of any prior defect or informality shall not be considered a waiver of any future or similar defect or informality.

This Request for Quotation (RFQ) does not commit the Consultant to award a contract or to reimburse the Proposer for costs incurred in submitting this proposal.

Additionally, the Consultant reserves the right to reject any or all proposals received as a result of this request, to negotiate with any Proposer, or to amend or cancel in part or in its entirety, this Request for Proposal, pursuant to the best interest of the Consultant and the Project.

6.5 ELIGIBILITY CRITERIA

The following criteria must be satisfied to assess the eligibility of the bidders:

a) Incorporation of the Firm:

- The firm should be registered and should be in Survey business for the last five years. In case of Joint Venture both should be in business for last five years.

b) Similar work:

- The bidder should have successfully completed at least one similar work (certificates of completion/ substantial completion issued by the clients to be attached) for an amount not less than INR 40 Lakhs during the last five years.
- Similar work means topographic and bathymetric surveys of large rivers, along an extension not less than 50 km

- The survey works should have been successfully concluded within a period of 6 months.

c) Turn Over:

- Annual average financial turnover of the bidder should not be less than INR 1.5 crores during last 3 financial years

Note: In case of Joint Venture (JV): (i) the lead party should have at least 50% of the JV and other parties should have at least 25%; (ii) all the parties combined should satisfy all the above mentioned criteria.

6.6 EVALUATION OF PROPOSALS

The Financial bid of bidders will be opened only if eligibility criteria was satisfied.

The submitted proposals will be reviewed and selected based upon factors in this RFQ and including the following:

- 1) Experience on similar projects with references (name, title, address, phone, e-mail & fax numbers), within the last ten years only.
- 2) Firm Information (size, location, history, resources, etc.).
- 3) Qualifications (resumes) of personnel assigned to work on the project (project team), organizational chart, etc.
- 4) Ability to meet Survey Services deadlines (availability of staff to perform services).
- 5) Completeness of project technical approach and methodology (detailed scope of services/tasks, etc.).
- 6) Capability to handle/arrange necessary authorizations to conduct surveys near the Indo-Pakistani border.
- 7) Capability and experience in coordinate efforts with local (J&K) and national governmental authorities to expedite the survey work.
- 8) Professional credentials, licenses, etc
- 9) Any additional services/tasks not identified in this RFQ that the Surveyor believes will improve the project, reduce costs and time, etc.
- 10) Overall cost.

Time is of the essence in this scope of work. The proponent with the best delivery date will receive due consideration.

Firms are encouraged to propose alternative technologies and approaches which would enable the required quality and output to be obtained in less time.

Proposals will be evaluated and award of the Contract for Surveying Services shall be made on the basis of the quotation and qualifications that best meet the interest of the Consultant.

6.7 PROPOSAL DUE DATE AND SUBMITTAL PROCEDURE

Financial and Technical proposals will be received until **5:00 pm on Tuesday, January 15th, 2019.**

Proposals shall be delivered to the Consultant's Project Office, Jammu which is located at:

JKPCC Building, 2nd floor, Rail Head Complex
Jammu-180012, Jammu & Kashmir – INDIA

The Survey firms have to submit two (2) sealed and separated envelopes as follows:

Envelope 1: (a) Proposal Submission Form (b) Bid Security and (c) Operational and Technical Part of the Proposal

Envelope 2: (d) Financial Proposal

Please submit two (2) bound paper copies and one (1) electronic copy on USB Flash Drive or CD/DVD (entire proposal as one PDF file) in each sealed envelope.

Each envelope must also include the name and address of the proponent submitting the proposal and plainly marked as follows:

Technical (or Financial) Proposal for Surveying Services

Topographic and Bathymetric Surveys in the Tawi River Basin

Surveyor's full legal name and address

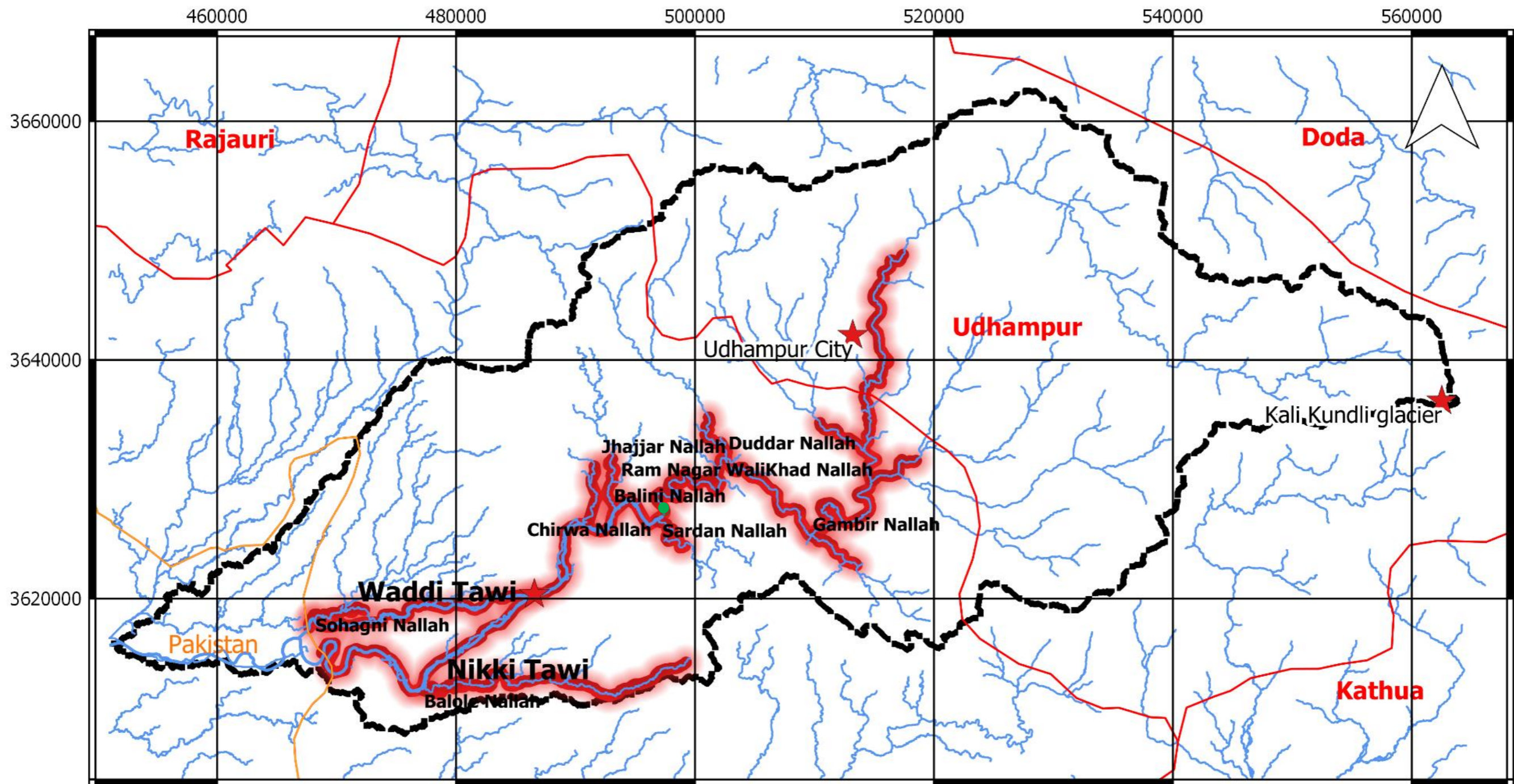
Proposals received after the time specified above will not be considered.

All proposals must be signed by an authorized official. Proposals that contain omissions, erasures, alterations, or additions not called for, conditional or alternate bids unless called for, or that contain irregularities of any kind may be rejected.

6.8 PERFORMANCE BANK GUARANTEE

Successful vendors have to furnish a Bank Guarantee of 10 % of the total contract value with a validity of minimum 6 months from the date of contract award The Bank Guarantee will be returned after successful completion of the assignment.

APPENDIX 1: AREA OF INTEREST: TAWI RIVER AND MAJOR NALLAHS EXTENSIONS TO BE SURVEYED DURING PHASE 1



Coordinate System: WGS 84 / UTM zone 43N (EPSG:32643)

Legend:

- Tawi River Basin
- Rivers
- Topo/Bathymetric Survey
- Suspension Bridge Bhaid Devta

APPENDIX 2: PROPOSAL SUBMISSION FORM

To: Project Coordinator
Joint Venture AQUALOGUS-OILTECH
JKPCC Building, 2nd floor, Rail Head Complex
Jammu-180012, Jammu & Kashmir – India

Dear Sirs,

Having examined the RFQ Documents, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to provide the services for **Conducting Topographic and Bathymetric Surveys of River Cross-Sections in the Tawi River Basin – Phase 1**, in accordance with your Request for Proposal dated ...th January 2019 and our Proposal. We are hereby submitting our proposal, which includes this Technical Proposal and a Financial Proposal sealed in a separate envelope. In conformity with the said bidding documents for the sum of as may be ascertained in accordance with the lump sum price and unit rates attached herewith and made part of this Bid.

We undertake, if our proposal is accepted, to deliver the services in accordance with the delivery schedule specified in the RFQ documents.

We agree to abide by this Bid for period of (90) days from the RFQ closing date, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

We understand that you are not bound to accept any Bid you may receive.

We remain,

Duly authorized to sign the Bid for and on behalf of:

Company/ Business Name:

Authorized Person:

Title:

Contact Number (s):

Email:

Signature:

Date:

APPENDIX 3: QUOTATION FORM

**Topographic and Bathymetric Surveys of River Cross-Sections
in the Tawi River Basin – Phase 1**

The rates should be quoted in format as below:

No	Item Description	Quantity	Units	Unit Rate (INR)	Total Amount (INR)
1	Mobilization and preliminaries (include breakdown)	1	No		
2	Establishing permanent benchmarks with a suitable concrete post as per standards and marking, after transferring level from the closest permanent benchmark (with respect to GTS)	250	No		
3	Establishing semi-permanent markers at each end of cross-section and tie to WGS84 UTM Zone 43N	526	No		
4	Collection of high accuracy ground control points (GCP)	40	No		
5	Topographic and Bathymetric Survey of river cross-sections in the Tawi River	390	No		
6	Topographic and Bathymetric Survey of river cross-sections in the major Nallahs	136	No		
7	Processing data and preparation of Survey Report	1	No		
8	Others (include breakdown of other relevant expenses if found necessary)				
		Total (excluding taxes)			
		All taxes			
		Total (including taxes)			

Note 1: The total sum will be adjusted according to the actual surveyed quantities.

APPENDIX 4: LIST OF SURVEY EQUIPMENTS AVAILABLE WITH THE SURVEY FIRM

**Topographic and Bathymetric Surveys of River Cross-Sections
in the Tawi River Basin – Phase 1**

The Survey Firm should provide information on the available major equipment's proposed to carry out the Contract as per list below:

Item No.	Description	Model	Characteristics	Quantity	Other remarks
1	Global Positioning System (DGPS)				
2	Electronic Total Station				
3	Total Station				
4	Digital Auto Level				
5	Digital Theodolite				
6	Levels and Transit-Levels				
7	Hand Levels				
8	Range Finders				
9	Data collectors				
10	Altimeters				
11	Stream gauges				
12	Mobile mapping and GIS				
13	GPS/GNSS Software				
	Other major equipments (to be specified by the Survey Firm)				

APPENDIX 5: DRAWING AND SPECIFICATION FOR PERMANENT SURVEY MARKER

**Topographic and Bathymetric Surveys of River Cross-Sections
in the Tawi River Basin – Phase 1**

