

# CORRIGENDUM 3

Date 24-12-2021

Clarifications for Tender Reference No. 2021\_SOI\_ANGDC\_1 and Tender ID 2021\_SOI\_660318\_1 dated 30-11-2021

of Assam & Nagaland GDC, Guwahati

Answers to Queries raised by the Bidders:-

| SI No | Clause No.  | Page no. | Clause   | Observation / Suggestion   | Reply  |
|-------|-------------|----------|--|--|--|
| 1     | AITB 1.1    | 33       | Planning and Provision of ground control points by either Dual frequency GNSS receivers in relative static positioning mode OR by using existing NRTK CORS with Dual frequency RTK rovers required for Drone survey. | We would like to request clarification from SOI, is CORS active and running in the state of Assam? In case the CORS is not active, will SOI be providing the Base points for drone flying? What will be the grid space of these Base Points? | CORS is not active in Assam and installation is expected in six months SOI will provide the GCPs at 50-60Km apart existing on the ground for Drone Flying. |
| 2     | AITB 4.3    | 33       | The bidders are allowed to form Joint ventures for submission of the bid. The maximum number of Partners in the J.V. can be three.   | We strongly propose that a JV of maximum two bidders be allowed. For tenders floated by other GDCs, a JV of a maximum of two agencies is allowed.  | The maximum number of partners in the JV will be three only.   |
| 3     | Section III | 40       | EVALUATION AND QUALIFICATION CRITERIA  | SOI has been doing the necessary field testing in the past even for drone hiring contracts, therefore the same should be followed in this RFP to ensure that bidders with drones meeting the requirements are only qualified.                | Board will intimate to shortlisted bidders for field testing after the Technical evaluation.   |

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|   |             |    |   | <p>Doing the document assessment first will ensure that SOI does not have to spend extra time on field testing of each bidder's drone.<br/>AUS recommends adding a new section</p> <p>D: Field Trials<br/>SOI should conduct field trials of the drone to evaluate the accuracy and performance of the drone as per the specification given in the RFP.<br/>Only the bidders whose documents and other PQ criteria are as per the requirements will be called for field testing. The financial bid should be opened only for the bidders who successfully complete the field testing.</p> |  |
| 4 | Section III | 41 | Bidders Assets<br>Servers: minimum 01 No. | <p>A lot of agencies are Using MeITY compliant Cloud Based Servers for various applications such as Data processing and Storage.<br/>Since SOI is accepting the MeITY Compliant CSP agreement for workstations and NAS, therefore we request SOI to accept the agreement with MeITY compliant CSP as a proof of capability.</p>   | Minimum 01 server is required as per the tender document.  |
| 5 | Section III | 41 | Manpower                                  | <p>There are multiple typological errors in the Numbers mentioned for capabilities.<br/>Additionally, while SOI says the bidder should own 3 drones, whereas should have 10 pilots with pilot licence as per UAS notification 2021 does not justify the rationale.<br/>Therefore like a drone the pilot and other manpower numbers need to be calibrated.</p>   | <p>a. Pilot: Minimum 3(Three) with Pilot license as per UAS Notification dated 12<sup>th</sup> March 2021 and undertaking is must for 7(Seven) pilots. Pilots also may be asked for 3 (three) on payroll and 7(seven) undertaking</p> <p>b. Operator- Post-processing for generation ORI &amp;DEM:</p> |

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|  |  |  |  |  | <p>At least 5(Five) technical persons having minimum two years' experience in post-processing in projects of similar nature &amp; complexity. Bidder must have minimum 2 person on payroll at the time of submission of technical bid and for the rest the undertaking can be submitted by the bidder</p> <p>c. Ground Controller: At least 6 (Six),technical persons having minimum two years' experience in GNSS observations and computation/processing .Bidder must have minimum 2 person on payroll at the time of submission of technical bid and for the rest the undertaking can be submitted by the bidder</p> |
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| 6  | Section III                              | 43 | Prior Work experience  | As per the RFP, the MSME/Startups have been entirely exempted from the past work experience, considering the critical nature of the project we strongly suggest that SOI should not entirely exempt the startups/MSMEs from the prior experience as we have seen in the past the MSMEs with no prior experience have taken up work without proper understand of scope and requirements and end up not delivering on the project. Therefore, just link turnover, only 50% relaxation in prior work ex should be given. | MSME/Startups will be exempted from past experience as per guidelines given by Govt of India. |
| 7  | SPECIFICATIONS OF UAS/DRONE BASED SYSTEM | 67 | Drone technical specifications:<br>8. GNSS Grade Both PPK/RTK Enabled  | Generally SOI has only accepted PPKGNSS, AUS requests clarification If RTK is also accepted or not. We suggest only PPK based UAVshould be used.  | We accept PPK/RTK enabled GNSS Grade.   |
| 8  | SPECIFICATIONS OF UAS/DRONE BASED SYSTEM | 70 | SSR transponder (Mode 'C' or 'S') or ADS out equipment<br><br>360 degree collision avoidance system<br><br>Detect and Avoid capability | Since the operations will be limited to 400 feet, therefore ADSB is not required for drone operations below 400 feet as per UAS Rules 2021. Therefore should be removed   | No Change   |
| 9  | SPECIFICATIONS OF UAS/DRONE BASED SYSTEM | 70 | The Professional Survey Grade UAV/Drone shall also capable of qualifying EMI/EMC test  | A compliant drone is already tested for these aspects. This may unnecessarily create confusion during evaluation.   | Should be followed as per Tender document.  |
| 10 | SPECIFICATION OF DRONE DATA ACQUISITION  | 71 | As per AoI with 100 m buffer all around.   | Clarification, will SOI pay for the buffer area or not?   | SOI will not pay for the buffer area.   |

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| 11 | SPECIFICATION OF DRONE DATA ACQUISITION. | Page 71<br>Collection condition point 7 | <p>The village should be ready with property chunna markings.</p> <p>Necessary certification regarding the Chuna Marking and Area of Coverage for drone flying shall be obtained from state authorities in prescribed proforma before drone flying.</p>   | <p>How can the Bidder Ensure this?</p> <p>SOI supervisor must take responsibility for this. Checking or coordinating for the Chunna marking must not be within vendor scope.</p> <p>Vendor should coordinate with only SOI officials and not with any state administration</p>  | <p>There is no change in collection condition. SOI will not depute any supervisor to collect necessary certificate.</p> |
| 12 |  | 72                                      | <p>1. Scheme and schedule of observation</p> <ul style="list-style-type: none"> <li>· I base control points must be located on pillars/permanent structures.</li> <li>· The Service Provider shall prepare a scheme i.e. network of I base control stations in advance and get it approved from Survey of India. The network shall be presented on satellite imagery. This should also contain description of proposed I base control stations.</li> <li>· When an observation scheme containing location of I base control stations which is adequately connecting</li> </ul> <p>Existing ground control points forming a network is approved by Survey of India, the Service Provider shall submit schedule of observation indicating tentative date and time of observation at I base control stations specifying their locations.</p> | <p>Considering the aggressive nature of work, it will not be feasible for the vendor to seek permissions each time while making the base as it is a long process. Also, it may pose unforeseen hindrance in the smooth execution of the project and cause unanticipated delays.</p> <p>Vendor shall be allowed to engage in the best practices and choose the most appropriate and viable option available to accomplish the task. This will also ensure the data collection is done in an economical and uninterrupted manner.</p> <p>The same approach is being followed in other states and GDCs</p> | <p>There is no change in scheme and schedule of observation.</p>  |



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| 13 |         | 73 | Minimum 5 Check points every village.                            | <p>Having 5 checkpoints in each village will hinder the productivity of the team significantly thereby defeating the objective of using PPK based drones. Therefore, we recommend that only 3 points per day at random villages be used. It shall suffice the requirements without compromising on the productivity and accuracy of the data.</p>   | Minimum 5 check points required for each village. |
| 14 | GCC 2.3 | 95 | Implementation Timelines for Activities for each Revenue Village | <p>Timelines need to be reviewed. Seems like time required to ship the data from the field to the data processing location is not accounted for. The data shipping will take a minimum of 4 days and it cannot be shipped everyday. Courier services won't be available in remote areas.</p> <p>We suggest that data for one week shall be shipped at once. Therefore data collected at the beginning of a week will reach the processing location in 10 days (almost). Therefore we request SOI to accept data on a fortnightly basis.</p> <p>The data collected in the first 14 days should be submitted within the next 14 days by the service provider.</p> | There is no change in implementation Timelines.   |

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| 15 | 6. Price Schedule | 59 | Payment on per sq. km   | <p>Since the effort and cost of fixed components such as fixing GCPs, logistics, drone flying is going to be more or less the same per village. Payments on area basis will not do justice to the constant components of effort. Therefore, for ease of assumption of bidders and ease of calculation for the SOI, the price schedule should have provision for payment one per village basis rather than area.</p> | Payment will be made based on sq. km basis.                               |
| 16 |                   | 77 | <p>FINAL DELIVERABLES AND DATA SUPPLY SPECIFICATIONS<br/>Data should be delivered on an External Hard Drive of 20 TB. External hard drives will be retained by SOI.</p> | <p>No requirement of mentioning the capacity of Hard drive. 20TB hard drive for each data exchange might be overkill.<br/>Request SOI to let the vendor choose the HDD storage size based on the actual size of the data being submitted.</p>   | Capacity of Hard drive would be as per requirement but not less than 1TB. |

| SI No. | Page No                                   | Description  | Query   | Reply                                |
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| 17     | Page No 41,<br>a) Instrument and Software | Professional survey grade PPK enabled UAS/Drone – Bidder must have minimum 3 nos. of Professional survey grade PPK enabled UAS/Drone at the time of submission of bid. Further the bidder will submit an undertaking on its letter head with authorized signature in original that they will engage 10 Nos. of Drones as stipulated in the bid document after award of work. Supporting documents should consist of copy of the valid proof of ownership of each drone to be engaged for providing services along with DAN number of each drone. | Can we submit MAF from the manufacturer as ownership proof of 3 UAS/Drone during the bid submission and Undertaking to engage 10 Nos after award of contract.<br><br>Also as per our understanding 10 Nos are very high since the area is only 1500 sqkm. We request to reduce to 4 Nos and ownership proofs for 1 no during bid submission and undertaking for 3 nos.. | Not acceptable                       |
| 18     | Page No 41,<br>a) Instrument and Software | a. GNSS receiver (Capable of tracking and logging Multi frequency& multi constellation signals) (minimum 6 sets) OR RTK rovers. Bidder must have minimum 2 GNSS receiver equipment and for the rest the undertaking can be submitted by the bidder.  | We understand that set means 1 GNSS Receiver is equal to 1 set. Please clarify  | One GNSS Receiver is equal to 1 set. |
| 19     | Page No 41, a)<br>Instrument and Software | e. Minimum 10 no Software for post processing like Px4D or AGI. Bidder must have minimum 3 software licenses and for the rest the undertaking can be submitted by the bidder   | Can we use Open Source Drone data Processing software? Open Source Drone processing software is equivalent to Px4D or AGI. Request you to allow to use Open Source Drone Processing Software apart from Px4D or AGI.  | Not acceptable.                      |



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|    |                         |   | 10 no of Post Processing software is very high since project area is 1500 sqkms only. 10 nos are very high please consider to 4 Nos and also please consider 1 no of software at the time of bidding.  |  |
| 20 | Page No 41, b. Manpower | Pilot: Minimum 10(Twenty) with Pilot license as per UAS Notification dated 12th March 2021  | 10 number of Pilots is very high as project area is only 1500 Sq Km and project completion period is 18 months. Request to revise it to 4 nos.<br>Minimum Number of Pilots required 10 or 20 ( <b>Twenty</b> ). Please confirm Number of pilots required.<br>Do we need to submit Pilot Licenses along with the bid? | No<br><br>Minimum 3(Three) with Pilot license as per UAS Notification dated 12 <sup>th</sup> March 2021 and undertaking is must for 7(Seven) pilots. |
| 21 | Page No 41, b. Manpower | Operator- Post-processing for generation ORI &DEM: At least 5(Thirteen) technical persons having minimum two years' experience in post-processing in projects of similar nature & complexity. Bidder must have minimum 2 person on payroll at the time of submission of technical bid and for the rest the undertaking can be submitted by the bidder | For Post processing operators in Number mention as <b>5</b> and in words it is mention as <b>Thirteen</b> . Please clarify minimum required should be 5 or 13.   | Typing error and minimum operator required should be 05 (Five)   |
| 22 | Page No 41, b. Manpower | Ground Controller: At least 6 (Ten), technical persons having minimum two years' experience in GNSS observations and computation/processing. Bidder must have minimum 2 person on payroll at the time of submission of technical bid and for the rest the undertaking can be submitted by the bidder  | For GNSS Controller in Number mention as <b>6</b> and in words it is mention as <b>Ten</b> , please clarify minimum required should be 6 or 10   | Typing error and minimum ground controller required should be 06 (Six)   |

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| 23 | Page No 71, 2. SPECIFICATION OF DRONE DATA ACQUISITION         | 7. The village should be ready with property chunna markings. Necessary certification regarding the Chuna Marking and Area of Coverage for drone flying shall be obtained from state authorities in prescribed proforma before drone flying.                          | Will Bidder get compensation in terms of time and amount for delay in Chuna marking  | Not acceptable.   |
| 24 | Page No 72, SPECIFICATION OF PROVISION OF GROUND CONTROL POINT | The Service Provider shall prepare a scheme i.e network of I base control stations in advance and get it approved from Survey of India. The network shall be presented on satellite imagery. This should also contain description of proposed I base control stations | It was mentioned as The network shall be presented on satellite imagery, here we can use open source satellite Imagery Like Google Maps, Bing Maps or Clint will provide us the Satellite Imagery.   | Yes, Open source satellite imagery may be used but data security should be ensured. SOI will not provide any satellite imagery.   |
| 25 | Page No 76, FINAL DELIVERABLES AND DATA SUPPLY SPECIFICATIONS  | 2. Digital Elevation Model with accuracy 20 cm or better  | Need to edit the DEM by using Break lines and Editing Tools or processed DEM is enough.  | Processed DEM is enough.  |
| 26 | Page No 78, 8. RESPONSIBILITIES                                | b) The Service Provider shall set up a local office in Guwahati, Assam for coordinating flying and data acquisition, and processing, and interaction with the Sol. Necessary infrastructure for office and technical work will be created in the local office         | Can we setup office in SOI Guwahati Office or we can setup the office anywhere in Guwahati. If we need to work in SOI Office, what are the facilities will provide.<br><br>Can we carryout Drone Data processing at our Head Office or is it compulsory to setup office in Guwahati? | Yes, you can setup the office anywhere in Guwahati and SOI will not provide any office space at Guwahati.<br><br>Data processing centre is also to be set up in Guwahati and SOI will not provide any space for the same. |



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| 27 | Page No 96, GCC 3.8.1  | Delay in completion of the work due to reasons attributable to the Service Provider shall attract Liquidated Damages @1.5% of Contract Price per month of delay to be computed on per day basis. The maximum amount of liquidated damages for the whole contract is Ten percent of the final Contract Price. Pursuant to SCC 2.3, if the project duration is extended, LD clause shall not apply in the extended period. However, LD clause shall resume for delay beyond the extended period | What will happen If delay causes due to bad weather or any issues arises locally.   | Clause is self explanatory and no further clarification is required.  |
| 28 | Page No 96, GCC 3.8.3  | If delivery fails the acceptance test of the Employer, it shall be construed as 'Lack of Performance' and the 100% of cost towards Acceptance Test by the Employer @ INR 1,00,000 for each subsequent delivery shall be imposed on Service Provider towards penalty for 'Lack of performance'.  | It means the agency will have to pay Rs. 1,00,000 of each rejected delivery. We request to reduce it to Rs. 10,000<br><br>Also request for on what basis for "Lack of Performance" will be considered.<br><br>For rejected area the agency have to do rework again? | The agency will have to pay Rs. 1,00,000 of each rejected delivery and for rejected area the agency have to do rework again |
| 29 | Page 2 Para 2: Bid Security Declaration Form as per Section IV<br><br>Page 3: Para 7: Bid Security Declaration Form as per Section XII<br><br>Page 32 ITB 1.1: Bid Security Declaration Form as per Section IV | -----   | Requested to clarify  | Typing error. It should be Bid Security Declaration Form as per Section IV.   |
| 30 | Page 33- ITB 1. The indeed completion Date is Eighteen (18) months from the date of 'Commencement of Service'<br><br>In Tender details uploaded in CPP Portal the period of work is 21 Days.                   | -----   | Requested to clarify  | The period of work should be Eighteen (18) months from the date of 'Commencement of Service'.                               |



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| 31 | <p>Page 96 – Production Centre – The Service Provider will be responsible for setting up secure and high performance Production Centre at Guwahati. The production Center should be adequate to handle and store raw data, key intermediate data, data under process and Processed Data/deliverable. Survey of India will not be responsible for providing space or any other facility for production centres.</p> <p>Page 99- Additional clause 9.0 – The data should be processed by Indian experts in India at the desibnated places within Sol complex.</p> | ----- | <p>Since data procured falls under high security and classified as 'Restricted' it is requested to make necessary arrangements to provide space either in SOI premises or any other Central/ State Government Offices where proper security is available.</p> | <p>The data should be processed by Indian experts in India at the designated places. You can setup the office anywhere in Guwahati and SOI will not provide any office space at Guwahati.</p> |
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**(CH VENKATESWARA RAO)**  
 DIRECTOR